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# AXIOLOGICAL CATEGORIES FOR DESIGNING THE SYSTEM OF TECHNICAL EDUCATION

*Wojciech Walat*

*Pedagogical Faculty, University of Rzeszow, Rzeszow, Poland*

## *Abstract*

The article presents a systemic approach to axiological categories in the model creating a coherent and co-existing hierarchy. The proposed solutions constitute a clear indication for seeking criteria of human life quality beyond the categories which are exclusively economic defining only the state of possessing ("having"), pushing the personal – subjective and autonomous development of a human being to the second place – i.e. "being". The mentioned categories of notions – constituting the basis for developing humanity – are internal dimensions of human ethics. The determinants of human life quality may encompass the axiological categories appearing in psychology, philosophy, sociology as well as in pedagogy, i.a. subjectivity, responsibility, self-realisation, tolerance, moral imagination, creativity.

## *Key words*

technology education, axiological categories: subjectivity, responsibility, self-realisation, tolerance, moral imagination, creativity

## **1. Proposal of axiological category for technology education**

The determinants (criteria) directing the development of life quality of students within the framework of designing a common system of technology education, I propose to assume the following pedagogical categories (fig. 1):

- **subjectivity** – awareness of own value and participation in actions (various phases and forms of technical actions);
- **responsibility** for conducting technical actions and towards other people and the natural and social environment (sense of creation);
- **self-realisation** – independent taking and implementing technical actions (obtaining happiness – satisfaction by own effort);
- **tolerance** – respecting other people's attitudes, likes and technical actions
- **moral imagination** – co-participation in the given and changing system of moral values;

- **creativity** – restructuring of previous social systems, states of things, elements of environment allowing the human life /1/.

## **2. Subjectivity – knowing oneself and own value**

Subjectivity is defined as an internal source of any causality. It means that a subject is not determined in its actions by independent factors but this about the intentions coming directly from the subject inside and it has an influence on actions. This is a really important criterion of human quality for technical education, as it contradicts a technocentric determination of human actions.

Subjectivity is expressed in individuality, thus school education, to be effective and relating to subjectivity to develop it, it must individualised. Humanist education does not only rely on passing knowledge, values and developing skills. Humanist education respects individuality of each child, extracts creative possibilities and finally, refers to human subjectivity as an expert in deciding what is good and not good for a human being.

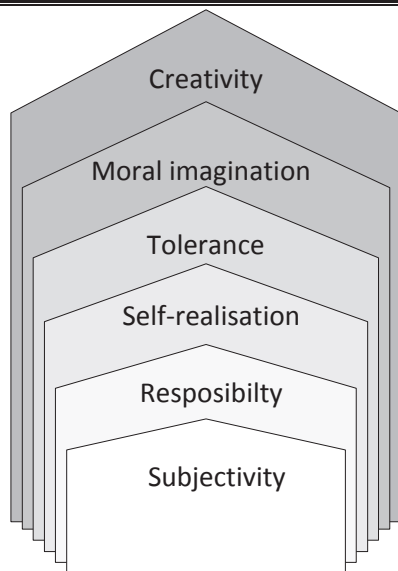


Fig. 1. Criteria of life quality create a given hierarchy determining and dynamising the development of a human being.

The hermeneutic and critical perspective is a completely new approach towards the subjectivity in pedagogy. It does not function as the aim or the value which is pedagogically precious but as a certain perspective of an approach to the relationship of a human with his past and seeking a new place in reality.

Reality of a contemporary human is a saturated, to previously unknown extent, with technical creations, thus, it is indispensable to perform hermeneutic and critical reference to subjectivity in general education. Thus, the basic notion of a theory creating technical education is the notion of humanist technology.

### 3. Responsibility – sense of causality of undertaken technical actions

The notion of “responsibility” refers both to the things, processes as well as values. An individual, who performs or annihilates values, bears responsibility for their actions. The values themselves does not have a time structure, but they refer to human actions which last in time. Responsibility may be talked about if the following four conditions have been met:

- 1) a subject have capabilities of performing the selection of values among positive and negative values which are ontically connected;
- 2) a subject has to be identical with itself, it means that in every action, he has to find his personal identity;

- 3) a human may be responsible for not only such actions which comes from his own will – he is the subject of this action;
- 4) human actions, for which he bears responsibility, are located in time and they may be defined by means of time only.

Responsibility regards all of the people and includes the entire personality, treated as an undividable entirety functioning in certain social and natural conditions. Proper education of a responsible person assumes the necessity of his multiple development, referring to various techniques of simulation. As responsibility also refers to future /2/.

### 4. Self-realisation – gaining happiness by own effort

The notion of self-realisation and self-development means the process of using own developmental potential. The realisation of this potential relies on self-development, creative update of potential capabilities of the subject. Self-development may be called as any internal impulses of an individual directed at updating its potential mental strengths however, self-realisation is called this part of self-development which is directed at creating and experiencing values. An individual performs actions pursuant to the accepted system of values along with his moral conscious. The values are connected with living the life. They are an imminent component of individual's experiences.

A human being functioning in a social group, takes various values from other members. Some of them are accepted, others are fought against. There is a conflict between an individual and group. Its effect is an existential drama, which is experienced by many people, entering in the adult period of its development. They see their difference of their viewpoint and experience of reality. They discover various worlds subjectively, included in one real world. The measurement of self-realisation in a group is a process of breaking barriers of early socialisation, releasing natural capabilities and creative predispositions /3/.

The process of preparing for self-realisation is performed within the course of the entire of human life. Both in childhood, when parents stimulate an individual for creative behaviours as well as in school education when teachers release potential capabilities of

a student, enriching his personality. There are mechanisms launched which release creativity and self-development. Here, it is close to obtain a high level of self-realisation.

In technical education, the problem of human self-realisation is connected with a gradual introduction of pro-vocational education. Students systematically acquire professions, key competences which people must possess to work with them as well as an educational way leading to obtaining required professional qualifications.

### **5. Tolerance – respecting the differences in other people**

Tolerance is also connected with knowledge about this, which this phenomenon is as well as the knowledge of the subject of tolerance. These expressed attitudes are the index of human tolerance towards the subject, about which he communicates to some else. The knowledge of this what tolerance is not always goes along tolerance in thinking, in expressing attitudes as well as tolerance of expressed opinions and convictions /4/.

In pedagogical activity, the idea of educating tolerant people has also been underlined. In this statement, it was about developing the attitude of tolerance. However, in other words of great social importance are also assumed such as: education for tolerance by tolerance. Here, it is underlined that there is no possibility to develop the attitude tolerance in the conditions of intolerance. A person becomes tolerant then, when tolerance constitutes the sense of life of the persons existing next to him and this word does not constitute just a void word. A person learns tolerance freely, without bandying great and lofty words around, breathing tolerance within the group of tolerant people.

Tolerance constitutes an important idea for technical education with the accent stressed on informatics and information education as a possibility of counteracting globalised homogeneity of local cultures. The possibilities of pedagogical use of this moral category are really broad. However, the manner of implementation of these capabilities depends on concrete performers of educational curricula.

In the IT society gradually being built, in integrating states within the framework of the European Union, upbringing for tolerance via

tolerance is one of the basic criteria not only for educational systems but also many educational fields.

### **6. Moral imagination – thinking before actions**

The moral imagination is understood by the capability of a human for predicting the results of undertaken actions and bearing responsibility for them. In this bio-mental approach, the source of moral imagination is disposition for creating new images and ideas, the content provides the experience of the subject. Here, is important another element, i.e. the sense of responsibility for the things thought or may be slightly felt, images and ideas.

The subject of internal imagination performs preconscious selection of possible variants, thinking about those which are pursuant or at least possible to be accepted by the system of moral values. This is not something rigid or stable, it may be rather treated as a dynamic structure relying on the constant transformations but developing and focused around a clearly visible axis of superior values determining the direction of actions and existence of each man. In normal conditions of social life, this axis is stable enough and provides the area of morally permissible current actions. In the extremely difficult conditions, destructive for the entity, this axis undergoes changes, sometimes pertains to the conditions of the environment, and the conduct of the individual is determined by the instinct of survival (for example in the situations of extreme hazard of own life or the life of the closest people).

Moral imagination, similarly as self-realisation, is embedded in the structure of individual values of a human. This hierarchy may be directed at the good but also towards the evil. People use imagination in various moments of their lives. Sometimes in everyday, routine activities, sometimes during thinking about strategy of actions in the future or even the strategy of surviving in the changeable, dynamic or even cruel social reality for the subject.

### **7. Technical creativity – seeking new and valuable solutions**

In pedagogy, people seek effective methods of stimulating and releasing imagination

of people and at the same time, they treat creativity as a category of a change and social reconstruction. The creativity of others may be well developed those, who are creative persons. Being creative, they constantly perform the restructure of previous social systems, states of things, complexes of environment elements. Psychology provides numerous methods of stimulating creativity. There has been performed special courses, schools and workshops in which people learn how to stimulate creative behaviours and by means of sheer participation in these workshops, they release new ranges of creativity.

In pedagogy, creativity is talked about as an aim and condition for developing education. Education of creative people, knowing how to shape the reality is a popular slogan undertaken by various pedagogical orientations. They crystallise around such educational elements as: creative atmosphere, creative teacher, creative education or creative school class. Particularly popular slogan is creative education. It encompasses two essential elements. The first is connected with the aim of education, the second with the methods of its obtaining. One of the aims of education is i.a. developing the creative attitude of students, revealed in the creative approach to reality, in openness to new experiences, in accepting this what is new and unknown. The educational methods for creativity are used by a creative tutor. He provides the conditions of free development of a child, provides the child with the material for creative actions, provides for

discussion, opens his mind and sensitivity to the world. It is important to design the system of technical education so as there has been potential possibilities of the best stimulation of technical creativity.

### Conclusion

The discussed determinants (criteria) of life quality constitute the assumptions for designing the system of technical education in grammar schools as well as in any methodological works – both for students and teachers. They are the binder (the basis for the relation) with other “surfaces” of technical education: psychological (developing technical thinking of students), factual (technical activity of a human as the model of educational content) and didactic (organising of learning of students based on the cycles of technical actions).

It seems that making life quality a superior axiological category in designing the system of technical education, will lead to developing all those potentials in a human, which will decide about his “being” before “having”.

### Notes

- /1/ Walat W., *Modelowanie podręczników techniki-informatyki*. Wyd. UR, Rzeszów 2006.
- /2/ Suchodolski B., *Podmiotowy i przedmiotowy świat człowieka [w:] Podmiotowość jako problem filozoficzny, społeczny i pedagogiczny* Red. B. Suchodolski. Wyd. PAN, Warszawa 1993.
- /3/ Górniewicz J., *Kategorie pedagogiczne*. Wyd. UW-M, Olsztyn 2001.
- /4/ Ibidem

## AKSIOLOŠKE KATEGORIJE ZA PROJEKTIRANJE SUSTAVA TEHNIČKOG OBRAZOVANJA

*Wojciech Walat*

*Pedagoški fakultet, Sveučilište u Rzeszowu, Rzeszow, Poljska*

### *Sažetak*

U članku se predstavlja sistemski pristup aksiološkim kategorijama u modelu stvaranja koherentne i supostojeće hijerarhije. Predložena rješenja predstavljaju jasan pokazatelj za traženje kriterija kvalitete ljudskog života izvan kategorija koje su isključivo ekonomski definirane kroz posjedovanje ("imanje"), gurajući osobni - subjektivni i autonomni razvoj ljudskog bića na drugo mjesto. Spomenute kategorije pojmova - čine osnovu za razvoj čovječanstva - su unutrašnje dimenzije ljudske etike. Determinante kvalitete ljudskog života mogu se obuhvatiti aksiološkom kategorijama koje se pojavljuju u psihologiji, filozofiji, sociologiji kao i pedagogiji, npr. subjektivnost, odgovornost, samospoznaja, tolerancija, moralna mašta, kreativnost.

### *Ključne riječi*

tehnologije obrazovanja, aksiološke kategorije: subjektivnost, odgovornost, samospoznaja, tolerancija, moralna mašta, kreativnost