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SOCIAL AND PEDAGOGICAL TASKS OF TECHNICAL SKILLS SUBJECT IN PREPARING YOUTH FOR THEIR FUTURE JOBS

1. Introduction

The necessity of widespread technical education of youth, comprehensible as delivery to them the basis of a technical culture, is the consequence of a very quick spreading of technology and its growing importance in all contemporary activities of a human being. Introduction still new technical appliances into the everyday life creates for an individual the extensive demand on a related knowledge.

Therefore, the dynamic development of science and technology as well as following these the intellectualisation and technicalization of all spheres of life and human activities demand, with the still growing force, from the present school ensuring to all the youth a sound basis of technology education. This education should be understood as an inherent part of a modern general education, complementing the basis classic education as well as education in mathematics and natural sciences. Such situation sets a new part to the subject technology education which should fulfil the leading and integrating function in the general secondary school.

The following arguments, pointed out the necessity of a general technical education, emphasise the need for:

- a) understanding the technology and its use considering the fact it comes wider and wider into our everyday life,
- b) familiarise the students with a technology as an element of general preparation to a further vocational specialization,
- c) forming in the student minds an understanding of the social role of a manufacturing, the most common sphere of human work.

The teacher should fulfil these rather generally described aims of technology education with a concrete essence, showing their application and the means of utilisation in the education process.

Such attitude in the determination of education targets puts an individual as a consciousness centre, in which there is subjective knowledge on the world, the focus of feelings and aspirations as well as all system of activity knowledge.

The education of citizen contains itself a preparation to the family life, to a cooperation in different local communities and social organizations and for functioning as a nation member and citizen. There is not satisfactory thereby the education using only the related knowledge, but there is necessary such development of skills which will give to the citizen not only the knowledge how to act but also the willingness to activity.

The preparation of a young man to the professional activity, treated as a one of the educational targets, represents a certain system of the more detailed targets. Their consideration enables an orientation in the essence of the targets system, qualifying the preparation to occupation.

The partial targets become evident in the range of conscious, motivation, skills as well as some behaviour, which the traditional psychology expresses as habits.

In general terms, the first sphere of preparation the young generation for working life needs forming in their conscious the intellectual layer, including the knowledge on human work and its importance to social life. Therefore should be the aim of the first stage to enrich the individual relatively early with the knowledge, creating the basis of vocational orientation and a choice of future profession. This first stage should be realized already on the level of primary school.

The second sphere, supported by the first one, should include the intellectual motivation as well as feelings, desires and aspirations, determined the directing of the individual activity to positive aims. Here is a need for attach importance to the development of permanent interests and persistence in tenacity of purpose.

The third sphere includes the executing mechanisms, means and procedures of activity, elaborated in the course of learning and training as well as accompanying structure of habits. The undivided attention should be given to the flexibility of skills for making it possible their transfer to the different situations.

Above mentioned targets need then answer the question what is the role of the subject technology education in realization of these targets. Putting this problem seems to be correct in the view of the earlier mentioned role of the technology teaching in the education of present

human. This human being should be able to influence the “destiny” of technology through his ability to master still new abilities and his commitment and creativity.

2. Tasks of technology education in development of students awareness

“The highest form of activities by which human being controls his relations with the outer and inner environment are conscious activities”.¹

In the human being activity the consciousness plays a basic orientation function. This can be fulfilled due to its dynamic character. Human being is able, going beyond the limits of his own individual existence, be aware of his relation to the world and the other people. Also he is able to be responsible for all he did and he gave up to do as well as able to lay himself down tasks without limitations resulting from the necessity of adaptation to the present life conditions.

The development of human awareness is connected with the organized people's activity - the work - and is realized on its base. The work needs to become aware of its results as its targets, where as in the work process the awareness is created.

In the work process, influencing on some objects by other objects with tools, the objects designated specially for treatment other objects and moving all objects into the state of interaction, human being more and more recognise their objective attributes.

Becoming aware of something assumes the existence of some set of informations, by correlation with it the environment became aware. So, the awareness is a knowlege functioning in the reality recognition process. Therefore, during the course of life, contacting and training, the human being acquire such set of more or less generalised knowledge, by means of which one can become aware of the environment and themselves, learning the reality phenomena in their relation to the acquired knowledge.

Three spheres of the human awareness development can be distinguished:

- 1) complication and intensifying the cognitive activity, i.e. transition from the mirroring of phenomena to the mirroring of their merit,
- 2) change of child's attitude to the environment and to itself (creation of the attitudes system),
- 3) improvement of its activity, consisting in that accidental, separate activities gradually change into a consistent chain activity.

Also the merit of activity became more complicated. A pupil gradually become more aware of the course of its behaviour, targets and procedures and the results obtained. Learns

forecasting and planning, better and better estimates the motives and targets of its activity. With a pupil there is formed an aware relation to its own behaviour.

Just an education in the primary school makes the important period in the formation of pupil's awareness and the development of its personality. The consciousness of targets and life tasks is then developed, appears the possibility of selfvaluation and a critical look on its own behaviour as well as on other peoples activity.

Here comes a question what role in the formation of pupil's awareness should play the subject Technology Education?

Looking for the main factors, having decisive influence on the subject, it should be considered three layers of tasks, which this subject has to fulfil in relation to the developing pupil's personality, so also to its developing awareness.

The first layer consists in the expression in a non-verbal material. The aim is that child could establish contact with a material and could learn expression through this material.

Marked in this way the tasks layer of technology education should lead to the conscious and creative constructive activity. To attain this goal pupil should master many means of activity, according to the suitable didactic schedule. This creates the second layer, characterised by the command of executive abilities.

Based on the two layers should be build the third one, making the continuation of the latest. Again it is the expression, not a "free" one but subordinated to the science and technology principles. The focus of activity is here the construction process, beginning from the idea, implementing into the graphic projects and improving in the course of the activity, progress and finishing as the realization in the suitable material.

As it is seen from the above considerations, the subject technology education can engage the whole personality of a pupil and gives the area for the reality cognition, expression and the development of awareness. Just in the sphere of awareness development this subject delivers an elemental knowledge on the work as well as on the changes in the individual professions due to the technical progress. The cognition of raw materials, tools, machinery, management and economy accompany this process.

The essential element of the youth's technology education in the awareness development sphere is also their technical and vocational initiation. Its aim is to familiarise the pupils with technical phenomena, characteristic for the specific culture as well as development of critical outlook on the technical progress "gifts". Apart of this, the intellectual activity of technology education in the trend toward partial goal in preparation to the vocational activity is not limited only to the general knowledge on the social process of work and its principles but puts a goal

for familiarise with some most popular professions. This activity is to help the pupils in the more conscious choice of the further way of life. This require the delivery of informations about professions and the possibility of vocational training.

The awareness of work necessity, knowledge of division of labour and some professions as well as fairly general knowledge on the basic forms of the management, planning and accounting, are all aims for enriching the pupils awareness. Never the less,all these do not exhaust all the targets in preparation to job on the level of pre - vocational education within the subject technology education.

3. Tasks of technology education in the formation of desirable motivations

With every man is active a psychic action which determine his activity and determine when the work has to be undertaken, in which way realized and when finished. This is a motivation action which together with other factors influences every kind of a man activity.

The correct functioning of learning motivation action depends on different factors. Two of them seem to play the basic role: pupils goals and needs. Conscious goal causes the simulation of motivation action activity and the eagerness after satisfaction of a desire became also the impulse to learning, and has an influence on the motivation force, either weakening or strengthen them.²

So, talking about the motivation for learning we have on mind the inner factors which motivate a man to the activity aiming at assimilation of any informations or skills. These factors are connected with the interests, ambitions and creative anxiety. There are the factors which are in close relations with the individual needs, stimulate to the activity aiming at their satisfying.

Because the needs, which a man satisfy by learning are different, therefore also the motivations stimulating pupils to activity differ. Asking pupils what decides to take the endeavours to learn something, we obtain very differentiated answers. We learn that the essential motivation is the willingness to acquiring new, interesting facts and informations, vocational qualifications, need for satisfying notes in school, to satisfy its ambitions or eliminate conflicts or anxiety of ill-success.

In the most frequent situations not only one kind of motivations decides on the pupil's endeavours but whole complex of motivations. Sometimes some motivations prevail over the other and then it can happen that one individual is learning for most because of the interest in

subject and feels strong cognitive needs, whereas somebody else does not experience such needs.

So if we take that different kinds of motivations have different value as to the results, what is more probable, understandable became the interest of the possibility of forming the most desirable motivations.

In order to meet the requirements imposed by school and the social system, pupil has to be engaged in the learning process. The way and kind of such engagement depends on motivations during the specified period of education. The motivations are the force moving to learning, acquiring knowledge and its good command. Of course, the motivations for learning could not be isolated from the other factors (both in and outside of school), however are the direct impulse for learning. They depend also on the goals and necessities of youth, on their desires and life plans.

Consequently, the learning becomes the mean to reach the goal and its value depends on the level of fulfilling the pupil expectations.

Exactly the subject technology education, due to its specific character, can perform, if not dominating, certainly very positive function in the shaping of desirable motivations with pupils.

The closer evaluation of the program essence of subject technology education in Poland leads to the conclusion that the base for the program realisation is practical activity of pupil, the activity of manufacturing character. In the course of learning the pupils acquire specific scope of knowledge on materials, tools and machinery, study the basic principles of management and the rules of efficient work.

The main task of this joint action is linking the theory with practice, and therefore realise to pupils the mean of utilisation of theoretical knowledge in different workshop activities.

The practical preparation, acquired in the course of technology education, will enable them different look on human activity and will make easier the choice of further education. Due to such education the pupils can practically master some skills and through the study, go into an essence of different agricultural, industrial and trade professions.

Through the reproduction of adult's production problems, the pupils gradually find their own production problems. They build more and more complicated things, shape restive material and use different tools and machines. Further, they have to master more and more the hands, movements, think over and use the complicated procedures.

As a result of such activity one can expect the widening of pupils by introducing them to the world of work, technology, tools, products, methods and production processes, of course

on the propaedeutics level. These should be favourable to develop the interests and fondness of practical activities and build up practical skills and, finally, develop the positive motivation to the vocational education.

The precisely settlement of tasks in the sphere of shaping the desired motivation within the subject technology education is a very complicated matter.

4. Tasks of technology education in skills development

The problems of preparation the youth to professional activity are not exhausted in the previously described points on the development of awareness and formation of desirable motivations. Necessary is here one more element of this preparation, namely the abilities. Some notices on the role of skills were previously signalised, however the problem is enough essential to dedicate it more place.

On the basis of qualifications used in pedagogical literature it is evident that the skill bound some theoretical knowledge with the specified activity. Writing about the activity skills it should be stated that it contain first and foremost the knowledge on what and how can be done as well as some proficiency in taking opportunity of knowledge for the realisation of necessary activities.

Formation of specific skills in the process of learning, in performing professional job and in everyday life has specific aim, not only cognitive but also practical. The formation of these skills is an active process. It could be known how and what from said thing is made or how said activity has to be done, yet not be able to make this thing or to perform the activity.

On the basis of above considerations and for the purpose of this paper it is made assumption that the skills is a series of consecutively realised processes, including individual perception, making aware and understanding impulses or series of informations, mental creation of the behaviour structure on the basis of certain knowledge as to the objects and phenomena, connected with conscious performance of activity together with obtaining the right result. Depending on kind of activity, the skills appear only in the activity sphere of mind or the mind activity is accompanied by the work of hands and senses.

In the face of rapid development of technology and its different social and economic consequences, the technology education could not be limited only to familiarise the youth with general principles of production processes and acquire the skills in using simple tools, but has to include also development of mental skills and interests in this scope. So comprehended

technical education is in the present pedagogics acknowledged not only as supplement of some kind to the traditional spheres of general education, but as its inherent integral part on the primary and secondary school level - part equivalent to the classic education (mathematic, natural sciences, arts, a.s.o.).

Technology education as a subject on the primary level have in principle at its disposal all conditions necessary for the realisation of these tasks. As to its nature the technology education is very close to the manufacturing work because it contains both the elements of practical technical activity (transforming materials into things and using tools and technical equipment) and the mental activity - construction designing, planning of realisation procedures, improving technical activity and organisation of manufacturing process.³ The essence of technology education contains also capture some knowledge on technology, technical equipment and machinery as well as organization of work. The basic knowledge and skills on technical drawing makes a substantial complement to these essence.⁴

So, it can be seen that realization of the said subject has to help the pupils develop quite wide system of skills, both in the mental and practical sphere.

On the base of research work⁵ it can be distinguished two areas within which the technical education should form the following skills:

- a) from the manufacturer's view point on technical culture:
 - skills in measurements with the use of measuring equipment and instruments, by calculations on the basis of formula or standard charts and as estimations,
 - skills in materials treatment by using the most common tools and machines and skills in basic technical processes,
 - skills in assembling and disassembling simple mechanical, electrical and electronic appliances,
 - skills in organisation of work place;
- b) from the customer's view point on technical culture:
 - skills in selection of the right technical product for specific needs,
 - skills in put specific appliance into service,
 - skills in estimation the right performance of this appliance,
 - skills in its maintenance according to manufacturer instructions.

Mentioned above kinds of skills make the base to forming specific skills on the vocational training stage. Thus there are the basic skills, commonly necessary. Teaching of using the acquired theoretical principles can be further facilitated by their development.

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**SPOŁECZNO-PEDAGOGICZNE ZADANIA PRZEDMIOTU TECHNIKA
W ZAKRESIE PRZYGOTOWANIA MŁODZIEŻY DO PRZYSZŁEJ PRACY
ZAWODOWEJ****Streszczenie**

Nasilony rozwój nauki i techniki stwarza konieczność dostosowania dydaktyczno-wychowawczej działalności szkoły do wymogów współczesnego życia. Wyznacza to nowe zadania przedmiotowi technika, który w szkole ogólnokształcącej na poziomie podstawowym spełniać winien przodującą i integrującą rolę w zapewnieniu młodzieży podstaw kultury technicznej. Stać się ona winna elementem składowym przygotowania młodzieży do przyszłej pracy zawodowej.

Zapewnienie młodzieży podstaw kultury technicznej nakłada na nauczyciela techniki obowiązek realizacji w ramach przedmiotu takich zadań, które obejmowałyby swym oddziaływaniem sferę intelektualną, emocjonalną, motywacyjną i sprawnościową osobowości ucznia.