

WAYS OF ACHIEVING TECHNICAL EDUCATION IN THE ROMANIAN EDUCATION SYSTEM

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Abstract. Technological education is not vocational technical or scientific education strictly theoretical, but a cultural formation bread from the connection of modern human with technology seen as important component of the basic culture and a coordinate for permanent education. The main purpose of the taken questionnaire concerning the place and role of the Technological education is to analyze the existing situation of the educational reality in point of ownership of some information about the place and role of Technological education in the Romanian educational system.

Within the „new education”, technological education encompasses another perspective based on rethinking, rebuilding and reconsider various issues of school learning what is learned in relation to current developments to knowledge.

Technological education has a particular relevance for the Romanian society and education system after 1990. Between intellectual and technological education there is a close relationship, education technology and progress and technological education - this new component of general human culture - has penetrated compulsory that, subject cultural function, formative and guidance. “

The main ways to integrate “new education” to customize technology education in school are (M. Ionescu, 2001, p 30; M. Marinescu, 2005, p 27):

- **introduction of new disciplines focused on one type of education** (technological education, environmental education, nutritional education, modern health education, education for democracy, human rights education, etc.); advantage of this method is to achieve a comprehensive and unified approach to problems the new discipline with an interdisciplinary character, the difficulty is in charge of educational programs;
- **creation of specific educational modules, i.e. certain special chapters within traditional disciplines** (e.g. an interdisciplinary module: computer and technology developments - the Technological Education), has the advantage that it does not lead to overloading school program for students, is interdisciplinary training required for teachers or groups of teachers to work in the organization of these modules;
- **infusing (introduction) the classical disciplines with educational messages encompassing specific contents to „new education” (*approche infusionnelle*);** method that does not require radical transformation of school hours for students; many technology education goals can be achieved by harnessing all educational situations outlined within disciplinary, technological education, biology, geography, chemistry, physics, civics and so on; way it is

prevented from forming a global vision and a coherent attitudes and behaviors. Following multidisciplinary approach, is difficult to specify clearly the role and responsibility of each teacher in implementing technology education. Each school subject has a special importance in the issue of moral responsibility, that man can be both author and victim of possible catastrophes.

Attaining a survey among schoolchildren on issues of technology education content, to the question: “*What modern knowledge would you like to be included in Technological Education?*” were recorded following situations, we present hierarchically:

- first place stands informatics, microcosm, macrocosm and conquest, research and discoveries in the peak fields (technology, biotechnology, genetics, computer science, nuclear physics, etc..) nanotechnology;
- second place are: professional fields, new energy, modern transport;
- third place experience: industrial design, illnesses, first aid for medical emergencies;
- fourth record: environmental education (radioactive pollution, greenhouse effect, environmental law, etc..), Agricultural and wood technology, human nutrition healthy and sick.

In conclusion, we remark student’s concerns to computer science, new technologies and top sciences.

We present results from a questionnaire administered to teachers in Bihor County, regarding the place and role of Technological Education. The questionnaire aims to surprise teachers’ opinions regarding the place and role of Technological Education in the education system of the Romanian school.

We used indirect survey by self filling in. After justifying to the subjects the need of the questionnaire, the explanations and the recommendations for filling it in were made insisting on the importance of the honesty and sincerity of the answers.

The main objective is to analyze the situation at the educational reality level regarding the ownership of some information concerning place and role of Technological education discipline in the educational system of Romanian school.

The sample of subjects was represented by a group of 80 teachers Questionnaires (Appendix 1) were administered to teachers in secondary education. The questions aimed evaluating information from different areas (general and specialty didactics, pedagogy, teaching practice, etc.) of the respondents, their intellectual and professional concerns regarding broadening the horizon of knowledge / information / skills (and their application in everyday situations) in activity in the classroom.

Interpretation of responses:

Many of the issues need to be discussed and solved by the resort bodies. Processing data an "x-ray" regarding the place and role of the *Technological education* discipline within the teaching process has been done (a portray of the teacher's answers has been made concerning this theme; a portray of the current issue considering the education in the local communities; a portray of the teacher teaching *Technological education in the Romanian society*)

The first item of the questionnaire (appendix 1) concerns the motifs of the student's options regarding the Technological education related to the other disciplines.

We will reproduce in percentage order those preferences:

- 40% stress the practical character of the lessons;(1)
- 20% use of the computer in the teaching-learning-evaluating process;(2)
- 15% paying attention to the practical skills and applying them in daily activities; (3)
- 25% various answerers (using some modern teaching and evaluating methods, concerns regarding the informatization of the technical education and for modern teaching endowments, attention to the continuous learning of the Technical education teachers, attention to permanent education, etc.)

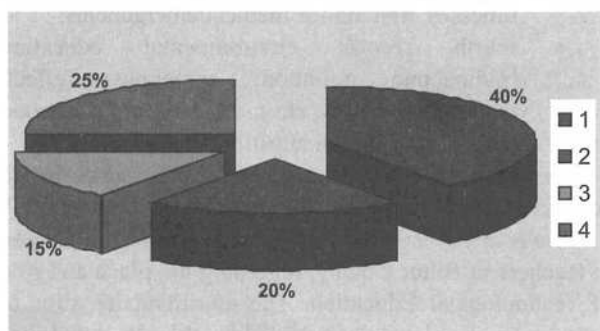


Fig.no.1 Graphical representation concerning the preferences of the students for the Technological education discip

The second item captures responses referring to the statement of the place and importance of the Technological Education in the community and a modern society. Here are the percentages:

- 75% - always
- 20% - of mostly
- 5% - sometimes

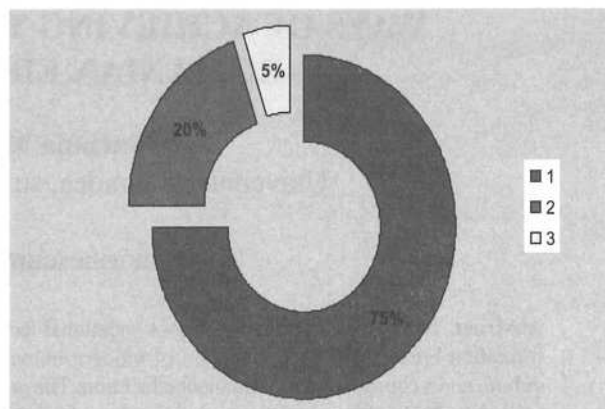


Fig. No. 2 Graphical representation of the ansers given by the students regarding the place and importance of the Technological Education discipline

The third item on the activities carried out which are the most relevant for the formation of technical ability in students:

1. group activities and small groups made during lessons - 35%
2. individual activities performed during lessons - 5%
3. practice practical skills training lessons - 35%
4. computer use in teaching - learning - 25%

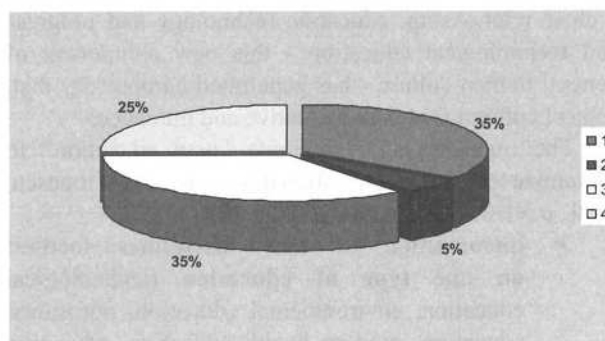


Fig. No. 3 Graphical representation of some activities regarding the

Item four reported to the identification of factors that influence positive and negative respectively Technological Education in promoting the educational system in our country is as follows:

- Positive factors:
 - 40% - use of computers in teaching, learning and assessment of discipline;
 - 35% - increased practicality-applied in the teaching-learning-assessment of discipline;
 - 15% - use practical skills training lessons;
 - 10% - making practical work with students in groups and small groups.
- Negative factors:
 - 45% - frequent use in teaching the lesson mixed;
 - 25% - non-existence of a laboratory Technological Education;
 - 15% - is based more on training than practical intellectual skills;
 - 15% - do not apply interdisciplinary

Question: To what extent do you prefer Technological Education students compared to other subjects taught?
 5. Very much 4. Than 3. Least 2. Very little 1. at all
 The following results were obtained: 60% very much + much, much less than + 38%, 2% not at all.

Conclusions

In the current curricular reform, each teacher is given the freedom and responsibility in designing and organizing educational activities, given that current programs are focused on objectives / skills rather than content. Correlations needed to achieve each teacher is required systemic picture, overall, well built, the entire curriculum corresponding to a year of study in order to achieve the necessary correlations. Building a system image and a clear education disciplines is also achieved by identifying major issues and organizing content around them. Currently there are efforts to design support documents for educators, including referrals substantial design issues of educational approaches at the micro level. In modern vision, the emphasis is on teaching design and construction foreshadowing as careful learning experiences and educational situations that take place efficient cognitive activities. New curriculum design involves switching from fixed sequence of existing content in unique manuals authentic reflective practice in teaching approaches customized to exploit personalized curriculum, personalized reading textbooks alternative to selecting and structuring content by the teacher (through storage, adaptation, addition, substitution or omission of the manual). Under the new curriculum, the teacher is free to have its own vision regarding the forms of class (types of interactions of human resources), public education, allocation of time, and any other items you consider useful in teaching the scenario.

The new curriculum has as purpose training students in the skills of functional type, ie structured sets of knowledge and skills acquired through learning, which allows identifying and solving contexts different approach to specific problems addressed.

APPENDX NO. 1

Name and surname:
 Professor of specialty:
 Academic degree:
 Seniority:

QUESTIONNAIRE

By expressing your own views in completing this questionnaire will contribute to the formation of a real image of Technological Education place in the education system of the Romanian school.

1) To what extent do you consider that your students prefer *Technological education discipline* to others?

.....

2) Do you tell your students about the place and importance of the Technological education within the community and a modern society?
 4. Always 3. Mostly 2. Sometimes 1. Never

3) What activities do you believe are most relevant for the formation of technical abilities in students?
 1. group activities and small groups made during lessons
 2. individual activities performed during lessons
 3. practice practical skills training lessons
 4. computer use in teaching – learning
 5. Other (specify)

.....

4) What do you think are the factors that influence positive and negative the promoting of the Technical education discipline within the educational system of our country?

.....

5) To what extent do you think your students prefer Technological Education, compared to other subjects taught?
 5. Very much 4. Than 3 Least 2. Very little 1. At all

Thank you for collaboration!

References:

[1] Ionescu, M., (2001), *Pedagogy. Support for teacher training*, Cluj-Napoca, Romania, Cluj University Press Publishing.
 [2] Marinescu, 2005, *Highlights for optimization of educational*, Oradea, Romania, University of Oradea.
 [3] Marinescu, M., (2011), *Perception of teachers and students of Technological Education curriculum* “in *Studies and research in social and human sciences*, vol 20, Cluj-Napoca, Romania, Argonaut Publishing, pp . 183-195
 [4]*** [www. Education-oradea.ro](http://www.education-oradea.ro), *Education magazine of today’s man for tomorrow’s world*, no. 7, 8, 9, accessed February,2013.