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The evaluation of modular education programmes developed for the "modernization of vocational and technical education project"

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Abstract

Restructuring vocational and technical education have been framework in Turkey throughout membership process of Turkey to EU. The project entitled "Modernization of Vocational and Technical Education (MTEM)" was one of these studies related to this process. The project was based on a collaboration between Turkish Republic and European Union Commission. The objective of MTEM project was to develop a modern and effective teacher training system. Within the scope of the project, teacher proficiencies regarding vocational courses were determined by using the DACUM method in order to educate qualified teachers in various fields. Modular educational programmes were developed in the project based on proficiency. Even though programmes were implemented in 2004-05, no research was conducted to evaluate the programmes. The purpose of this study is to evaluate the modular education programmes within the framework of MTEM project, in terms of the views of the academic staff. The quality of the modules were evaluated in terms of "definition, purpose, content, teaching-training process, assessment and evaluation" dimensions.
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Keywords: Modular education; programme evaluation; vocational education; the MTEM project; Teacher training.

1. Introduction

Training of qualified personnel equipped with appropriate knowledge and skills as required by contemporary labour market and new technologies make significant contributions to the development of country's economy and to ensuring social harmony. Development of the country's economy production capacity, employment opportunities,

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increasing its competitive power in the international free market, and raising the level of social welfare depend on the level of the knowledge and skills of that country's workforce, in other words, on high quantity and quality of vocational education (Gok&Simsek, 2005:98). Vocational and technical education can be defined as educating qualified human power who can convert knowledge into production, adapt to innovations, know contemporary and scientific methods, make comments, find solutions to problems, also assume authority and responsibility in the production by improvement of goods and services (Saglam&Kus, 2003:81). Although the Modernization of Vocational and Technical Education Project (MTEM), which was initiated within EU adaptation process to eliminate problems in vocational and technical education, ended in 2006, application of the project experience was continued in the faculties. One of the programme supported within the scope of the project was the Clothing/Ready-Made Clothing Programme in the vocational education faculties at Gazi University and Selcuk University. No research has been conducted so far to evaluate the effectiveness of the modules developed to train high qualified personnel for vocational education, but an evaluation of programmes to see how effective they were is of high importance to develop new programmes. An evaluation of all of the modular programmes implemented in the 2004-2005 academic year among all the Clothing/Ready-Made Clothing Programme requires a long-term and a comprehensive research. In this study, a module group belonging only to one school subject was evaluated to have a general view of modular programmes, as well as its contribution to efforts aimed at programme development by serving as an example in the evaluation of modular programmes. The Modules for Men's Clothes Making Course, which constituted the subject matter of the study, was among the Clothing/Ready-Made Clothing Modular programme, and it was administered to the 3rd graders in the 2nd semester of the 2006-07 academic year. The module group for Men's Clothes Making was one of the module programme that students find hard to master and it requires the most complicated knowledge and skills of the Clothing/Ready-Made Clothing programmes as well as the use of technological tools and equipment. The purpose of the present study is to evaluate the quality of the dimensions like "definition, objectives, content, educational situations, and evaluation" of the "Men's Clothes Making" Course modular programme group implemented within the scope of the MTEM Project, which covered the Clothing/Ready-Made Clothing modular programmes in the Vocational Education Faculties in Turkey. The study is based on the views of the academic staff working at these organizations.

2. Method

General survey model was used in conducting this study and it is a qualitative research. A total of 12 academicians, 7 from Gazi University Vocational Education Faculty and 5 from Selcuk University Vocational Education Faculty, which implemented the "Men's Clothing Making Module Course Programme Group", were included in the study. 9 of the academicians were working 21+ years, 3 of them were working between 6 and 15 years. All of the academic staff who participated in the study were female. Of the academic staff, 3 were assistant professors, while 9 of them were lecturers. All of the academic staff remarked that they had not received any in-service training regarding the modular education programmes that began to be implemented within the scope of the MTEM Project. The data of the research was obtained from the interview with the academic staff by videorecording and the solution of this record.

3. Findings

The findings obtained in accordance with the goals of the study were given below.

3.1.1. The views of the academicians regarding the quality of the "definition" of the module programmes of the Men's Clothes Making Course:

Half of the academicians who participated in the study found the definition of the modules sufficient and the other half found it insufficient. The academicians who found the definition insufficient stated that;

- The definition did not adequately reflect the scope of the job,
- The phrases "it makes mass production appropriate for industry, research on design, makes models and patterns, and makes men's wear in accordance with the set standards" need to be included in the definition,
- It was not clear in the definition whether it was underclothing or outwear, and it was not understood what was meant by the phrase 'various kinds of clothes', so these issues need to be clarified.

3.1.2. The views of the academicians regarding the quality of the "objectives" of the module programmes of the Men's Clothes Making Course

Whereas only one-fourth of the academicians who participated in the study found the objectives of the modules appropriate and sufficient, three-fourth of them found it inappropriate and insufficient. The academicians who found the objectives' definition inappropriate stated that**;**

- The objectives of the modules did not encompass the changes and developments in the field,
- Some objectives contained statements that could lead to ambiguity and different speculations,
- Some of the objectives could not be implemented,
- Objectives regarding history of men's clothes making, school-industry cooperation, contemporary designs and trends of the time, pattern check and sample clothes making need to be included.

3.1.3. The views of the academicians regarding the quality of the "content" of the module programmes of the Men's Clothes Making Course

Whereas only one-fourth of the academicians who participated in the study found the content of the modules appropriate and sufficient, three-fourth of them found it inappropriate and insufficient. The academicians who found the content definition inappropriate stated that;

- The content was not up-to-date and did not cater to students' needs; only three topics were covered in content, i.e. classic jacket, classic trousers and classic shirt, but reorganization of the content in accordance with the current fashion would meet students' needs and appeal to them,
- The content conflicted with the principles of general education (from simple to complex, from known to unknown),
- Its scope was not sufficient (subjects such as neck-tie, men's waistcoat, bow-tie etc. were not covered, and the scope of the topic of interlining (wadding) was limited),
- Some of the topics included in the content were impossible to carry out given the current facilites like preparing for shipment.

3.1.4. The views of the academicians regarding the quality of the "teaching-training process" of the module programmes of the Men's Clothes Making Course

All of the academicians stated that what was written regarding the teaching-training process of the modules was appropriate and sufficient but explanations made in the module about this process could not be implemented owing to certain reasons. The following are listed among these reasons:

- There are no guidelines for teachers and students developed for effective teaching-training process of the programmes,
- We do not have sufficient information about modular education, we did not receive any in-service training in this regard and we are in need of education seriously,
- Although the programmes were developed in a modular manner, the teaching-training process is conducted in traditional fashion,
- There is no effective feedback mechanism to solve problems encountered by academicians and students,
- The number of academicians is insufficient,
- Academicians were under heavy burden of classes (about 40 hours a week),
- Workshops, tools and equipment are either insufficient or do not exist at all,
- Classrooms are overcrowded,
- Time allocated for the teaching-training process of the programme is not sufficient; the modules should be implemented in two terms,
- It is not known whether some modules, which were suggested in the teaching-training process and recommended to be associated with men's clothes making modules (cutting fabric, ironing and fixing modules) exist or not.

3.1.5. The views of the academicians regarding the quality of the "assessment and evaluation process" of the module programmes of the Men's Clothes Making Course

While qne-third of the academicians found the explanations regarding the assessment and evaluation dimension of the modular programmes appropriate and sufficient, two-third found it inappropriate. The academicians who found the assessment and evaluation dimension inappropriate stated that;

- There are ambiguities in statements made about assessment scales, check list, observation form, work test included in the module programmes.
- The way academicians interpret assessment scales may turn out to be different; these scales should be stated in clearer terms in the module programmes and in fact there should be sample forms.
- I found the explanations in the assessment of the module programmes inaccurate.
- Most of the assessment scales recommended in the module programme were not used.
- It is impossible to implement the suggestions made in the assessment because classes were overcrowded and time was not sufficient.

4. Discussion, Conclusions and Suggestions

In order to educate qualified human power through vocational and technical education, first of all, institutions that train teachers for vocational education should themselves be qualified. Although the rationale behind the establishment of vocational education faculties was to train technical teachers to be employed at secondary vocational schools, today, this goal mostly can not be attained due to various reasons. The existing institutions that educate teachers for vocational education faces with problems such as not being able to keep pace with change and development required by globalization and the new world order, fall behind recent technology, lack of tolls, equipment, staff and sources, insufficiency of scientific research activities, lack of desired qualifications on the employees and inefficiency of educational programme to accomplish the set of goals. It is important that these teacher-training institutions should be restructured in accordance with the demands of the present conditions and continue their activities within this perspective in order to find solutions to the problems mentioned above and ensure efficiency (Erisen 2001). Although the Modernization of Vocational and Technical Education Project, which was initiated to eliminate these problems, ended in the year 2006, applications of this project are in process in the faculties at present. One of these applications concerns modular programmes, which were introduced to educate better qualified teachers. Modular education can be defined as "a learning component that is consistent in itself and can be used effectively in the education of individuals who demonstrate the learning goals behaviorally, determine the activities needed to attain the goals, allow to check to what extent the set of goals have been accomplished, and who are in different learning environments" (Alkan&Teker, 1992:43). According to Taspınar (2006), on the other hand; "modular programming is a programme where learning-teaching activities are so organized as to enable individuals to learn by themselves, that are internally consistent and complement with one another, and the education that is implemented in accordance with this is called "modular education". The objective of modular education programme is to have a student acquire the skills, qualifications and behavior required to perform a profession, a task or a function (Yesilmen,1998). It can be stated that within modular education, approaches such as individualized education, education based on proficiency and effective learning are of particular importance. Modular education is a more flexible educational approach that increases teaching efficiency by making use of especially other teaching forms. Modular education finds extensive fields of application especially at vocational and technical education thanks to its aforementioned characteristics. In order for programmes prepared in a modular to be implemented successfully, the infrastructure required by the system needs to be prepared and effective applications need to be performed. However, the results of this research, which evaluated the quality of the dimensions of "definition, objectives, content, educational situations and assessment" of the "Men's Clothes Making" course module programmes implemented within the framework of the MTEM Project indicate that the infrastructure required for modular education is not ready and effective applications have not yet been implemented. For example, there are insufficiencies with regard to the scope of the task in the definition of the evaluated modules, and there are indefinite and ambiguous phrases. However, one of the most important stages that will serve as a basis in determining the scope of a module is the definition of the module (Sezgin, 1994). There are problems regarding the objectives of the modules such as not encompassing the changes and developments in the field, some objectives being impracticable, and the existence of phrases that may lead to different interpretations. It can be said that when the module

programme is regarded as a system, the most important component that will guide other components of the system is the objectives. Such problems regarding the objectives constitute a major obstacle to educate qualified teachers. In order for the objectives to be accomplished effectively and to improve qualified teacher behaviour, the content, which provides the answer to the question "what shall we teach?", should also be determined appropriately. Unfortunately, the content of the modules consists of problems such as not being up-todate, being unable to meet the needs of the students, being limited and being in conflict with the general principles of learning. Although the suggestions of the evaluated modules regarding teaching-trainig process are considered to be appropriate and sufficient, various problems are listed that negatively affect the quality of this process. The most important of these, perhaps, is the lack of sufficient information concerning modular programme on the part of the academicians who implemented the modules. Although the programmes were developed in a modular fashion, their implementations are realized through traditional methods due to the lack of required infrastructure, which could be considered to best indicate the incongruity with the quality of modular programme. Serious inefficiencies also exist in the assessment and evaluation dimension of the programmes, and the scales developed for assessment are not generally used and the suggestions are not followed by the academicians. As can be seen, problems are experienced in modular programmes, which were developed within the scope of the project to attain quality in teacher education for vocational education and in the implementation of these programmes.

On the basis of the findings of the study, some suggestions have been listed below that could assist in eliminating the problems in question:

1. Faculties should be so structured as to allow for implementation of modular programmes (providing certification, allowing students to choose between modules in accordance with their needs, laying emphasis on individual learning, etc.).
2. The dimensions of definition, objectives, content, teaching-training process, assessment and evaluation of the Men's Clothes Making module programme group need to be revised considering the problems determined during application.
3. It should be ensured that academicians receive in-service training regarding modular education.
4. The equipment and facilities in the faculties where the programme is implemented need to be improved so that the objectives of the module group can be attained.
5. The number of students per academician needs to be reduced in order for the objectives of the module group to be attained.
6. In order to increase success in the application of the module programme, guidebooks should be prepared for academicians and students.
7. Other modules prepared within the scope of the MTEM Project should also be analyzed and assessed.

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