

Summary

Introduction:

Industrial education contributes a great deal to advancing production and economic progress, and achieving development in different societies. It is entrusted with the task of preparing the human element capable of dealing with the different dimensions of the age and the leadership of development.

One of the aims of industrial education is to prepare the skilled technical worker capable of carrying out the required activities in the industrial fields that contribute to the development of the economy and prepare the individual to be qualified to deal with the rapid development of technology and technical sciences.

The curriculum is one of the tools of the community in the education of its children intended purposeful education; it is also one of the most important tools for instilling citizenship in children, so it needs constant review to identify its efficiency in carrying out its mission in the light of successive global developments at all levels of science, technology and intellectual. The need to deal with these developments and prepare the children with the facts of the age in which they live. Therefore, the development of these curricula is the real beginning to prepare the current generation to deal with the data of the age and its variables.

It is therefore necessary to develop industrial education curricula, methods and means in the light of scientific and technological developments, the challenges of the age and globalization, the nature and characteristics of society and the demands of development.

Therefore, the students of industrial education in general and the specialty of ready-made garments - in particular - need a distinctive type of education and training that helps to mobilize their own energies and explode their potential so that they can play a creative role in the world of work and technology development and absorption, protection of the environment and available resources and conservation of energy.

UNESCO-UNEVOC issued the 17 April 2010 bulletin on the development of TVET systems, which focused on the following issues:

- Development and teaching methods of technical and vocational education and training curricula.
- Research and innovation in the transition from school to work.

It also stressed the important role of TVET in supporting productivity, social development, citizenship and sustainable development, and the opportunities and

responsibilities of governments, corporations and educational institutions to support and promote TVET (UNESCO, 2010)

Research problem:

The problem of the current study is that "the present textile curriculum of industrial secondary students does not take into account the requirements of sustainable development." Therefore, there is an urgent need to conduct a scientific study to determine the requirements of sustainable development, To develop the curriculum of textile raw materials in light of these requirements, and to identify the effectiveness of the unit of the curriculum developed in increasing the achievement and development of the trend towards sustainable development of students of industrial secondary school (specialty ready-made garments).

The current research attempts to answer the following questions:

1. What are the requirements of sustainable development that should be available in the curriculum of textile raw materials for industrial high school students?
2. To what extent are the requirements of sustainable development in the curriculum of textile raw materials available to industrial high school students?
3. What is the proposed scenario for developing the curriculum of textile raw materials for industrial high school students in light of the requirements of sustainable development?
4. To what extent is the teaching of one of the modules of the developed curriculum to increase the achievement of industrial secondary school students (ready-made clothes) and develop their attitudes towards sustainable development?
5. What is the effectiveness of teaching one of the units of the curriculum developed in increasing the collection of students of industrial secondary school (specialty ready-made clothes) and develop their attitudes towards sustainable development?

search limits:

Your current search is limited to:

- Some of the requirements for sustainable development, which specialists agreed on the importance of students of industrial high school.
- Application of one of the units of the curriculum developed to the second-

grade students at Damietta Industrial Secondary School in Damietta (specialty ready-made clothes).

research goals:

The current research aims to:

1. Identify the most important requirements for sustainable development in the curriculum of textile raw materials for industrial secondary school students.
- 2 - Study the effectiveness of the curriculum of textile raw materials developed in light of some requirements for the sustainable development of students in the specialty of ready-made clothes.
3. Development of cognitive and emotional aspects in the curriculum of textile raw materials developed for students in the field of ready-made clothes.

research importance:

The importance of the current research stems from the following:

1. To shed light on the current state of the textile raw materials curriculum by specializing in ready-made garments and the availability of sustainable development requirements.
2. This research is in response to the recommendations of conferences, research and studies in the field of education for sustainable development.
3. Reorient existing education programs by reviewing education programs from kindergarten to university to include more skills, values, principles and knowledge that relate to sustainability to preserve the human, the environment and the future of generations, and to cope with contemporary global trends.
4. The research can benefit from the designers, developers and designers of ready-made garment curricula in industrial secondary education.

Research Methodology:

The researcher used the current research:

1. The descriptive approach: To determine the requirements of sustainable development that must be included in the developed curriculum and also when analyzing the contents of the current curriculum and laying the foundations of the developed curriculum of the objectives, content, activities and methods of teaching and evaluation.
2. Experimental Method: To experiment with one of the modules of the developed curriculum.

search tools:

1. A questionnaire to identify the opinion of specialists on the requirements of sustainable development required for industrial secondary school students.
2. Content analysis tool for the textile materials curriculum in light of the requirements of sustainable development.
3. Testing the collection of the information included in one of the units of the curriculum of the developed textile materials.
4. Measure the trends of students of the Division of Ready-Made Garments towards sustainable development.

• Research hypotheses:

In light of the results of previous studies and research literature, the following hypotheses can be formulated:

1. The level of the requirements of sustainable development in the curriculum of textile raw materials for industrial secondary students is less than 75%. " There is a statistically significant difference (α 0.05 0.05) between the mean scores of the research group in the tribal and post-application applications to test the achievement in the textile raw materials approach for the post-test application.
3. There is a statistically significant difference between (α 0.05) between the mean scores of the research group in the tribal and remote applications of the trend scale towards sustainable development in the textile materials approach for the post-test application.
- 4- There is a statistically significant effect of one of the units of the curriculum on the developed textile materials on increasing the achievement of the students of the research group and developing their attitudes toward sustainable development.
5. One of the modules of the developed tissue curriculum has been effective in increasing the achievement of the students of the study group and developing their attitudes towards sustainable development.

Search terms:**1. Curriculum development Textile Materials**

The researcher defines it as "a comprehensive and dynamic process aimed at accessing the textile raw materials approach to the best image in order to achieve the required purpose of it with full efficiency and achieve some of the

requirements of sustainable development in an economical manner in time, effort and costs."

Is the curriculum that is taught within the program of preparing the students of industrial high school system of three years to prepare professionals skilled in the specialization, so that they are able to carry out the tasks entrusted to them and contribute to the production sites.

4. Sustainable Development:

The development that leads the society to use clean technology industries that use the least amount of energy and natural resources by adopting the best means to achieve optimal investment of material and human resources in development processes, without harming nature or the interests of future generations."

Search procedures:

To answer the research questions and verify the validity of his duties, the researcher will:

1. Preparation of a list of the requirements of sustainable development to be available in the curriculum of textile raw materials for students of industrial secondary school, using the following means:

- Previous studies and research in this field.
- Conference recommendations.
- References and specialized books.
- Open interview with experts and specialists in textile and environmental sciences.

2. Display the list in the form of a questionnaire to a group of experts and specialists.

3. Amend the list in light of the opinions of the arbitrators and their proposals and prepare the final picture.

4. Analysis of the content of the textile raw materials curriculum for industrial secondary school students using the previous list as an analysis tool.

5. Recording results and processing them statistically.

6. Develop a vision for developing the curriculum of textile raw materials for industrial high school students in light of the requirements of sustainable development.

7. Presentation of the proposed scenario for the developed curriculum on the

experts and arbitrators and amend it in the light of their opinions and proposals and prepare the curriculum in its final form.

8. Selection of the research group randomly from the students of the second grade secondary industrial (specialty ready-made clothes).

9. Selection of one of the units of the curriculum developed for experimentation and preparation of study tools include:

- Test the collection of information contained in the unit.
- Measure trends towards sustainable development.

10. Show both the collection test and the guide scale for the arbitrators to make their suggestions and make appropriate adjustments.

11. Apply both (achievement test and trend scale) to the students of the research group.

12. Teaching the unit of the curriculum developed for the research group.

13. Reapplying both the (achievement test and the trend scale) to the students of the research group.

14. Recording results and processing them statistically.

15. Make recommendations and proposals.

research results:

1- There are shortcomings in addressing the requirements of sustainable development in the curriculum of the current textile materials for the first and secondary grades - the specialization of ready-made garments.

2 - The developed curriculum has an effective effect in increasing the level of students' achievement of the requirements of sustainable development in one of the curriculum units (Smart Textile Unit).

3. The developed curriculum has an effective impact on the development of students' attitudes towards sustainable development.

4 - The teaching of one of the units of the curriculum developed (Smart Textile Unit) has achieved a great effectiveness in the development of the collection of the research group of students in the second grade industrial secondary - the division of ready-made clothes to the requirements contained in the unit.

5 - The teaching of one of the units of the curriculum developed (Smart Textile Unit) has been very effective in developing the trend towards sustainable development. The research group of secondary industrial secondary students - the ready-made clothes to the requirements contained in the unit.

• **Research Recommendations:**

In light of the results of the present research and its interpretation, the researcher developed a set of recommendations, the most important of which are the following:

1- Reviewing the objectives of the program of preparing the students of the industrial secondary school.

- Emphasize the goals that develop the cognitive, skill and emotional aspects when developing the curriculum of clothing specialization in light of the requirements of sustainable development.

- Emphasize the acquisition of students to innovations in specialization and follow-up developments.

- Emphasizing sustainable development as an input to the selection and teaching of subjects.

2- Reviewing the contents of the program for the preparation of students of the industrial secondary school.

- Review the scientific content of the preparation program and update it to keep pace with developments in the field of specialization.

- Include issues and topics that develop the requirements of sustainable development.

- The interest of the content by presenting the problems and environmental issues related to the garment and textile industry and allowing the participation of students in the discussion of the issues and emphasis on the activity of the teacher planning courses and include parts that allow students the opportunity to do the activity.

3- Reviewing the methods of teaching the program of preparing the students of industrial secondary school.

- Diversification of teaching methods and non-emphasis on one method.

- Employment of modern technology in curriculum teaching.

- Linking teaching to the environment through field visits to factories and production sites.

- The need to use teaching methods that emphasize the activity of the learner and his participation in educational situations.

4. Reviewing the educational activities of the preparatory program in the industrial secondary school.

- The use of scientific and research activities that help to acquire information and the formation of trends identified in the current research such as writing reports and the use of the Internet.

- The need to include in the curricula a range of activities that allow linking education to the surrounding environment.

5- Reviewing the evaluation methods in the preparatory program in the industrial secondary school.

- The need for diversity of assessment methods to include the educational aspects (cognitive - skills - emotional).

- The evaluation of students should include activities in their environment that support sustainable development.

6 - Supply schools with a set of books on the requirements of sustainable development for teachers and student's information necessary to them.

• **Proposed research:**

During the research, the researcher saw the importance of conducting studies for the following subjects:

- A study aimed at evaluating the approach of technical drawing and practical applications in light of the requirements of sustainable development.

- A proposed program to train teachers of ready-made clothes in industrial secondary schools to teach curriculum of textile raw materials in light of the requirements of sustainable development.

- Effectiveness of a proposed approach in the industrial design curriculum for industrial secondary school students specializing in clothing in the development of responsible environmental behavior.

- A parallel study of the current study in other fields that can contribute to achieving the requirements of sustainable development.