



معهد الدراسات التربوية
قسم تكنولوجيا التعليم

أثر برنامجين كمبيوترين على تنمية مهارات تكنولوجيا التعليم لدى معلمي المعوقين سمعيا واتجاهاتهم نحو استخدامها في اليمن

رسالة مقدمة للحصول على درجة دكتور الفلسفة في التربية
قسم تكنولوجيا التعليم

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تكنولوجيا التعليم

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جامعة القاهرة

٢٠١٠م / ١٤٣١هـ

**تشكيل لجنة المناقشة والحكم
على رسالة الدكتوراة في التربية
قسم تكنولوجيا التعليم**

للطالب/ أمين أحمد حسن الزقار

عنوان الرسالة : " أثر برنامجين كمبيوترين على تنمية مهارات تكنولوجيا التعليم لدى معلمي المعوقين سمعياً واتجاهاتهم نحو استخدامها في اليمن " .

قد وافق السيد الأستاذ الدكتور رئيس الجامعة على تشكيل لجنة المناقشة والحكم على الرسالة على النحو التالي :

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قرار اللجنة : قررت اللجنة بعد مناقشة الباحث مناقشة علنية بمقر معهد الدراسات التربوية بجامعة القاهرة، منح الباحث درجة دكتور الفلسفة في التربية تخصص تكنولوجيا التعليم مع طباعة الرسالة وتداولها مع الجامعات والمعاهد المختلفة



معهد الدراسات التربوية
قسم تكنولوجيا التعليم

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رسالة دكتوراه الفلسفة في التربية

مقدمة من الباحث اليمني

أمين أحمد حسن الزقار

إشراف

أ.د/ مصطفى عبدالسميع محمد

مدير المركز القومي للبحوث التربوية والتنمية

وعميد معهد الدراسات التربوية سابقاً

أ.د/ سميرة علي ابوغزالة

أ.د/ أمل عبدالفتاح سويدان

أستاذ بقسم الإرشاد النفسي بالمعهد

أستاذ مساعد ورئيس قسم تكنولوجيا

التعليم بالمعهد

٢٠١٠م - ١٤٣١هـ



**Institute Of Educational Studies
Department of Education Technology**

**The Effect of Two Computerized Programs upon the
Development of Education Technology Skills of Teachers
of the Acoustically Handicapped and their Trends towards
their Use in Yemen**

**A Ph.D. Dissertation in Education
Introduced by the Yemeni Researcher:**

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2010

Dissertation Abstract

In light of the scientific concern with the care, rehabilitation and integration of special needs population, and as a result of scientific, legal and democratic foundations, the current study sheds light upon one kind of special needs population, namely the deaf students. It is concerned with their characteristics as well as their best communication and education strategies. In addition, it is concerned with the quality standards in their education including teacher training, educational environment preparation and the most appropriate technological and educational aids.

The current study has established two computerized programs introduced in two different ways to the teachers of the deaf in Yemen. The first program is introduced to the teacher on a CD in addition to educational counseling lectures introduced to them in a training course. The second program is introduced to the teacher on a CD from which teachers can practice self-learning. Both programs intend to raise the skills and trends of teachers of the deaf in Yemen towards the use of educational technology appropriate for teaching the deaf students.

The two programs have been applied and statistical treatments have been conducted. The researcher has realized the importance of such programs in raising teacher skill levels in the use of such educational technology and improving their trends towards their use. That is what has been recommended by the current dissertation.

Feeling of the Problem

The researcher has reviewed previous literature, books and the recommendations of various conferences in the field of special needs and realized the importance of designing specialized programs for the preparation and training of teachers in general and teachers of the acoustically handicapped in particular in relation with educational technology.

Moreover, the researcher has worked in the field of special needs at Ministry of Education and some Yemeni universities and as a consultant of the Social Fund for Development in the same field. He has held meetings with special education officials in Yemen in order to prepare for the current topic of study.

In addition, he has reviewed various studies and researches that emphasize the use of educational technology with special needs students. However, there are no sufficient studies that have introduced such skills based upon teacher self-learning using contemporary technologies. In addition, Ministry of Education has declared the need for a more profound preparation and raining of special education teachers.

Problem of Study

The problem of the current study can be crystallized in the fact that there are no specialized programs for the training and skill development of teachers of the acoustically handicapped in Yemen in the field of using educational technology in light of the needs of their children and especially such devices specialized in dealing with this population in particular. In addition, there are no programs for training them upon deciding the suitable teaching aids. Therefore, it has bee necessary to conduct the current research and study the design and production of computerized programs to develop such skills using two different patterns of learning, namely self-learning and trainer-assisted learning.

Based upon the above outline, the main research question can be illustrated as follows:

What is the effect of two computerized programs upon the development of educational technology skills of teachers of the acoustically handicapped and their trends towards using them in Yemen?

From the above main questions derive the following sub-questions:

- 1- What are the skills of using educational technology necessary for teachers of the acoustically handicapped?
- 2- How does the computerized program look like according to self-learning pattern for developing such skills?
- 3- How does a computerized program look like according to the trainer-assisted learning pattern for the development of such skills?
- 4- What is the effect of the proposed computerized program according to the self-learning pattern upon the development of the skills of using educational technology by teachers of the acoustically handicapped?
- 5- What is the effect of the proposed computerized program according to the trainer-assisted learning pattern upon the development of the skills of using educational technology by teachers of the acoustically handicapped?

Objectives of Study:

- 1- To recognize the best technological teaching aids for deaf students.
- 2- To develop deaf student teacher skills in using the appropriate educational technology.
- 3- To establish two distinctive computerized programs for developing skills of using educational technology.
- 4- To improve teacher attitudes towards using such technological aids.

Importance of Study

The importance of the current study can be illustrated as follows:

- The development and training of teachers of the acoustically handicapped upon the use of appropriate

educational technology with their students through a computerized program.

- The current study can also benefit the regular classroom teacher who has integrated special needs children.
- The current study will cover all the aspects overlooked by previous literature devoted to educational technology skill for both special education and regular classroom teachers.
- The current study is considered one of the few or rare studies dealing with the preparation of computerized programs for the development of educational technology skills for teachers of the acoustically handicapped.

Instruments of Study

- 1- A questionnaire for identifying the skills of using educational technology by teachers of the acoustically handicapped.
- 2- A questionnaire for arbitrating the proposed program.
- 3- An observation card for listing the performance aspects of the skills of using educational technology by teachers of the acoustically handicapped.
- 4- A trend scale prepared by the researcher.
- 5- An academic test for the cognitive aspect of the skills of using educational technology.

Limitations of Study

The current study is committed to the following limitations:

The skill: The skill of using appropriate educational technology with the acoustically handicapped population.

Program Types: A computerized program (a training course) and a computerized program (self-learning).

Place: Governorates of Al-Amana, Sana'a, Omran and Al-Mahweit of Yemeni Republic.

Sample: Teachers of the deaf students in the above governorates.

Hypotheses of Study

- 1- There are statistically significant differences between the scores of the first experimental group on the pre- and post-measures of study instruments in favor of the post-measurement.
- 2- There are statistically significant differences between the means of the categories of the first experimental group and the control group on the post-measurement of study instruments in favor of the experimental group.
- 3- There are statistically significant differences between the scores of the second experimental group on the pre- and post-measures of study instruments in favor of the post-measurement.
- 4- There are statistically significant differences between the means of the categories of the second experimental group and the control group on the post-measurement of study instruments in favor of the experimental group.
- 5- There are no statistically significant differences between the means of the categories of the first and second experimental groups on the post-measurement of study instruments.

Methodology of Study

The current study utilizes the following two research methodologies:

First: Descriptive Method

- 1- Reviewing literature relevant to the current study.
- 2- Studying the reality of the education of the acoustically handicapped in some governorates of Yemeni Republic including Sana'a, Ta'ez, Aden and Ebb as well as teacher skills in designing, producing and using appropriate educational technology with them.

Second: Quasi-Experimental Method

The researcher has selected some special education schools in the governorates of Sana'a, Omran and Al-Mahweit. Then he has selected a random sample of teachers of the acoustically handicapped at those schools.

The random sample has been divided into two experimental groups (A) and (B) in addition to a control group. He has achieved homogeneity and equity among the three groups in their chronological age, cognitive level, skill level, gender and governorate. Then he introduces for the two experimental groups as follows:

- Experimental Group (A) to experiment the trainer-assisted learning pattern using the computerized program (A) on a CD to develop their skills in using educational technology appropriate for their deaf students.
- Experimental group (B) to experiment the self-learning pattern using the computerized program (B) prepared on a CD including all the information, multimedia and sign language to develop their skills in using educational technology appropriate for their deaf students.
- The control group will not be introduced to any experimental variable.

Procedure

The current study goes along the following steps:

- 1- Reviewing literature in the field of special education and educational technology in order to find out the initial list of skills necessary for regular classroom as well as special education teachers in general and teachers of the acoustically handicapped in particular in the field of using educational technology.
- 2- Finding out the final list of skills necessary for teachers of the acoustically handicapped through the arbitration of experts using a questionnaire of such skills.
- 3- Designing an observation card to list the performance aspect.
- 4- Designing an academic test to measure the cognitive aspect.
- 5- Designing a scale for measuring teacher trends towards using educational technology with the deaf students.
- 6- Controlling measurement instruments through measuring validity, reliability, discrimination and difficulty level for the test.
- 7- Designing and producing two computerized programs for developing the skills of using educational technology with the acoustically handicapped, the first program with self-learning and the second one with trainer-assisted learning, and arbitrating them by experts.
- 8- Selecting the random sample of study and dividing them randomly in a homogeneous way into three groups, namely a control group and two experimental groups (A & B).
- 9- Inviting sample members to attend a course in Sana'a the capital on Wednesday 20/1/2010.

- 10- Applying the pre-measurement instruments upon the control group and the two experimental groups (A & B).
- 11- Experimenting the proposed computerized program using the trainer-assisted learning pattern on the first group teachers (A) through holding a training course for them on the next day and in the same place on Thursday 21/1/2010.
- 12- Experimenting the proposed computerized program using the self-learning pattern on the second group teachers (B) to get the training personally.
- 13- The researcher will make field visits to schools in the governorates where sample teachers are teaching.
- 14- Applying post-measurement instruments upon the control group and the two experimental groups (A & B).
- 15- Listing results, treating them statistically, discussing them and finding out study recommendations and suggestions.
- 16- Passing the conclusion and English abstract.

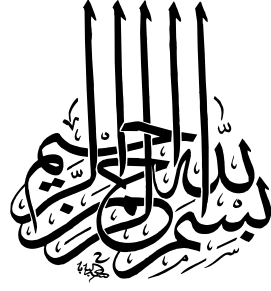
Findings

Here are the main findings of the current study:

- 1- The current study proves the great importance of the two programs and emphasizes the statistically significant differences between the two experimental groups on the post-application on the control group.
- 2- The current study proves that there are no statistically significant differences between the two experimental groups (A & B) on the pre-application even if the first group rates were slightly higher.

Recommendations

The current study recommends the importance of being concerned with the acoustically handicapped population and the preparation of their teachers theoretically and practically through holding training courses for them in the field of modern education technology appropriate for this population and equipping their schools as well as integration schools with modern educational technology aids appropriate for deaf students.



﴿وَأَنْ لَّيْسَ لِلْإِنْسَانِ إِلَّا مَا سَعَى (٣٩) وَأَنَّ سَعْيَهُ سَوْفَ يُرَى (٤٠) ثُمَّ يُجْزَاهُ الْجَزَاءَ الْأَوْفَى (٤١)﴾

سورة النجم (٣٩-٤١)

الإهداء

إلى بلدي الحبيبة اليمن:

إلى أسرتي الصغيرة والكبيرة والممتدة

إلى الشقيقة الكبرى مصر:

إلى أساتذتي وزملائي وكل من ساهم معي

إلى كل من يريد أن يرتشف من المعرفة خدمة لذوي الاحتياجات الخاصة

أهدي هذا الجهد المتواضع