ISSN : 2320-2971 (Online)

International e-Journal for Education and Mathematics

www.iejem.org vol. 03, No. 03, (June 2014), pp 12-24

EVOLVING SELF INSTRUCTIONAL PACKAGE IN THE SUBJECT OF HOME SCIENCE

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Article Info.

Received on 9 may 2014
Revised on 16 May 2014
Accepted on 16 May 2014

Keywords:

Home Science, Self-instructional package, Teaching-learning Process

A B S T R A C T

Home science is a technical subject that requires various teaching aids for teaching and learning. Self instructional package can be immensely useful in providing individualized and repetitive practice to learner in problem solving exercises as well activities for developing variety of skills required in Home Science. It also permits the learner to spend more time on Instructional tasks. The available instructional packages in this subject are not adequate and very few are in Gujarati so it becomes very hard for average students in Gujarat to cope up. So, the need for developing self instructional package for Home Science was felt strongly. Keeping above fact, the researcher has decided to develop and try-out self instructional packages. The developed self-instructional packages on two units of Home-Science are found more effective in teaching- learning process as compared with traditional approach.

Introduction

Education is very important medium in development and upliftment of any country and its people. Since ages the importance of education has been felt very strongly. So new techniques are discovered and applied to teach new generation effectively.

This is the era of science and technology where daily new inventions are taking place. Result is that Life has become very fast. The world has become very small due to the revolution in communication. The other revolutionary invention of this era is computer that has forced its way in our lives and another fields related to life including education. The life today cannot be imagined without computers. It has brought about a great revolution in this century in every field possible.

Now computer has become a vital part of new education system. Several audio visual aids and other communication media have been introduced in educational field. The new concept of educational technology came into existence. Educational technology is a combination of various audio and audio-visual aids including computers and television that makes learning fun. Now with the new inventions taking place daily in the world, everything is simplified.

According to a definition " Educational technology is a complex integrated process involving people, procedures, ideas, devices and organization for analyzing problems and devising, implementing, evaluating and managing solutions to those problems involved in all aspects of human learning."

According to some people "It includes all components of informational technology used in the delivery of educational materials."

All the students studying in the same class do not have same intellect. Some are slow learners. Students have to keep pace with teachers but it is not always possible. So it is necessary to give them the opportunity to learn at their own pace. That is where the new educational technology comes in. Now several audio visual aids and other communication media have been introduced in educational field. The combination of various media, specially computers, have simplified the hard and complicated topics into understandable form.

Home science is a technical subject that requires various teaching aids for teaching and learning. The effectiveness of teaching depends upon the use of appropriate method and it is found that no single method is adequate to teach all the topics. So a combination of various methods is used to teach Home science. Though in this computer age these methods lack technology so the researcher felt the need for preparing such programmes to help the students to learn better and make the full use of this course and also enjoy learning. The instructional packages in this subject are not adequate and not in regional language so it becomes very hard for average students to cope up. So, the need for developing self instructional package was felt strongly. This is the subject where the individualized instructions are more useful and more fruitful and every student can be made an independent learner.

Self instructional package can be immensely useful in providing individualized and repetitive practice to learner in problem solving exercises as well activities for developing variety of skills. It permits the learner to spend more time on Instructional tasks.

Self instructional package encourages active participation on the part of learner. This package will not only make the learning interesting and effective but also help in creating and maintaining interest of the students.

Keeping above facts in mind and considering rapid changes occurring in the present system of education the researcher has decided to develop and try self instructional package in the subject of Home science

Statement of the Problem

"EVOLVING SELF INSTRUCTIONAL PACKAGE IN THE SUBJECT OF HOME SCIENCE"

Definitions of the used terms

(i) Evolving

"Evolving" may be defined as a course of process of formation or growth with series of movements from a simple form to a more highly organized condition to come forth gradually into being of all living things. Evolving may be defined as a process of development from earlier simpler forms.

(ii) Self Instructional Package

Self instructional Package means combination of two or more media used for self learning by the students. In the present study print, visual and audio-visual aid were used to teach the selected topics of Home science-Clothing and Textiles subject at F.Y.B.A.

1 Basic Techniques of Clothing Construction.

2 Principles of Design.

(iii) Home Science

According to *Ellen Richards* "Home Science is concerned with the well being of individuals, families and the community as also the improvement of the homes and the presentation of values significant in the home and community life".

"Home Science is the science of the home and is concerned with the maintenance and enrichment of human relationships through the development and judicious of all available human and material resources to achieve a maximal satisfying life for all members of the family and the community." ***--Rajmal Devdas (1978)***

In the present study the term delimit to the selected topics of Home science-Clothing and Textiles subject at F.Y.B.A.

Objectives of the Study

1. To develop self-instructional packages in the form of Computer Multimedia presentation in Power point on selected two topics of Home Science for F.Y.B.A. Students.

2. To study the level of academic achievement of students taught the topic-'Basic Techniques of Clothing Construction' through self-instructional package-I.
3. To study the level of academic achievement of students taught the topic-'Basic Techniques of Clothing Construction' through Traditional method of teaching.
4. To compare the level of academic achievement of students taught the topic-'Basic Techniques of Clothing Construction' through Traditional method of teaching and Self-instructional Package-I.
5. To study the attention and appeal of the students during teaching through Self-instructional Package-I
6. To study the level of academic achievement of students taught the topic-'Principles of Design' through self-instructional package-II.
7. To study the level of academic achievement of students taught the topic-'Principles of Design' through Traditional method of teaching.
8. To compare the level of academic achievement of students taught the topic-'Basic Techniques of Clothing Construction' through Traditional method of teaching and Self-instructional Package-II.
9. To study the attention and appeal of the students during teaching through Self-instructional Package-II.
10. To compare the academic achievement of the students after treatment through Self-instructional Package-I and Traditional method.
11. To compare the academic achievement of the students after treatment through Self-instructional Package-II and Traditional method.
12. To get the opinions of the experts on developed Self-instructional Packages.
13. To get the opinions of the students on developed Self-instructional Packages.

Questions and Hypotheses of the Study

1. What is the level of academic achievement of Experimental group taught through Self instructional Package-1 on 'Basic Techniques of Clothing Construction'?
2. What is the level of academic achievement of Replication group -I taught through Self-instructional Package-1 on 'Basic Techniques of Clothing Construction'?
3. What is the level of academic achievement of Replication group-II taught through Self-instructional Package-1 on 'Basic Techniques of Clothing Construction'?
4. What is the level of academic achievement of Control group taught through Traditional method of teaching, the topic- 'Basic Techniques of Clothing Construction'?

5. What is the level of academic achievement of Experimental group taught through Self-instructional Package-2 on 'Principles of Design'?

6. What is the level of academic achievement of Replication group -I taught through Self-instructional Package-2 on 'Principles of Design'?

7. What is the level of academic achievement of Replication-II group taught through Self-instructional Package-2 on 'Principles of Design'?

8. What is the level of academic achievement of Control group taught through Traditional method of teaching, the topic- 'Principles of Design'?

9. What are the opinions of Experts on developed Self-instructional Packages in the subject of Home Science?

10. What are the opinions of Students of F.Y.B.A. on developed Self-instructional Packages in the subject of Home Science?

Hypotheses

(1) 'Self-instructional package-1 on 'Basic Techniques of Clothing Construction' will not be able to sustain continuous attention and appeal of the 75 per cent of the students in Experimental group'

(2) 'Self-instructional package-1 on '"Basic Techniques of Clothing Construction" will not be able to sustain continuous attention and appeal of the 75 per cent of the students in Replication group-I

(3) 'Self-instructional package-1 on "Basic Techniques of Clothing Construction" will not be able to sustain continuous attention and appeal of the 75 per cent of the students in Replication group- II'

(4) 'Self-instructional package-2 on 'Principles of Design' will not be able to sustain continuous attention and appeal of the 75 per cent of the students in Experimental group'

(5) 'Self-instructional package-2 on 'Principles of Design' will not be able to sustain continuous attention and appeal of the 75 per cent of the students in Replication group-I '

(6) 'Self-instructional package-2 on 'Principles of Design' will not be able to sustain continuous attention and appeal of the 75 per cent of the students in Replication group-II '

(7) There will be no significant difference between mean scores of post test of the Experimental group taught through Self-Instructional package-1 and Control group

taught through Traditional method on the topic 'Basic Techniques of Clothing Construction' of Home Science.

(8) There will be no significant difference between mean scores of post test of the Replication group-I taught through Self-Instructional package-1 and Control group taught through Traditional method on the topic 'Basic Techniques of Clothing Construction' of Home Science.

(9) There will be no significant difference between mean scores of post test of the Replication group-II taught through Self-Instructional package-1 and Control group taught through Traditional method on the topic 'Basic Techniques of Clothing Construction' of Home Science.

(10) There will be no significant difference between mean scores of post test of the Experimental group taught through Self-Instructional package-2 and Control group taught through Traditional method the topic 'Principles of Design' of Home Science.

(11) There will be no significant difference between mean scores of post test of the Replication group-I taught through Self-Instructional package-2 and Control group taught through Traditional method the topic 'Principles of Design' of Home Science.

(12) There will be no significant difference between mean scores of post test of the Replication group-II taught through Self-Instructional package-2 and Control group taught through Traditional method the topic 'Principles of Design' of Home Science.

(13) There will be no significant difference between mean scores of post test of the Experimental group and Replication group - I taught through Self - Instructional package-1 on the topic 'Basic Techniques of Clothing Construction' of Home Science.

(14) There will be no significant difference between mean scores of post test of the Experimental group and Replication group - II taught through Self - Instructional package-1 on the topic 'Basic Techniques of Clothing Construction' of Home Science.

(15) There will be no significant difference between mean scores of post test of the Replication group -I and Replication group - II taught through Self –Instructional package-1 on the topic 'Basic Techniques of Clothing Construction' of Home Science.

(16) There will be no significant difference between mean scores of post test of the Experimental group and Replication group - I taught through Self - Instructional package-2 on the topic 'Principles of Design' of Home Science.

(17) There will be no significant difference between mean scores of post test of the Experimental group and Replication group - II taught through Self - Instructional package-2 on the topic 'Principles of Design ' of Home Science.

(18) There will be no significant difference between mean scores of post test of the Replication group -I and Replication group - II taught through Self -Instructional package-2 on the topic 'Principles of Design ' of Home Science.

Design of the Study

The present study is developmental-cum experimental in nature. The study is divided into two parts. The first part consisted of development of self-instructional package in the form of computer multi- media presentation in power point on selected two units of Home Science covered under the subject Textiles and Clothing for F.Y.B.A. college students. These units are:-

1 Basic techniques of Clothing Construction.

2 Principles of design.

The second part of the study is concerned with the experimental try-out of the developed self-instructional package. Since the study is experimental The researcher has selected the 'experimental approach' for evaluating the effectiveness of the developed package. The researcher also wanted to compare the two methods that is teaching by traditional method and by using the self- instructional package approach. So, there was one controlled group, one experimental group and two replication groups. The groups were allotted by using lottery system. In all four groups were formulated.

To know the effectiveness of the treatment Post test was administered and effectiveness of treatment was evaluated. Thus, the research design for present study is:-

Randomized Post test comparison Group design with Replications.

T O

R : ---------- with Replication I & II

C O

For conducting this experiment all the four Arts colleges of Veer Narmad South Gujarat University, Surat teaching Home Science subject were selected. Each group was consisted of 17 students and in all 68 students participated in the experiment. The students of Control group were taught by demonstration and lecture method within the limited time. In experimental group self-instructional packages were used. The same self- instructional packages were given to two replication groups belong to Z.F. Wadia Women's College, Surat and Smt. J.P. Shroff Arts College, Valsad. After the experiment all the four groups were given post test. After treatment to experimental and replication groups opinionnaire were given to know their opinion about the self instructional package.

Research Tools

To conduct the experiments for the research the investigator prepared following tools for research for the selected units.

1. Self Instructional Package –I (Basic techniques of Clothing Construction) consisted of PPT with video clips.

2. Self Instructional package-II (Principles of design.) consisted of PPT.

3. Criterion Test (used as post test)

4. Evaluation Sheet for experts

5. Opinionnaire for Students

Major findings of the study

1. In the present study the self- instructional package was developed in the subject of Home- Science consisting of two units. Self- instructional package – 1 was on 'Basic Techniques of Clothing Construction'. The package was developed as computer multimedia power point with video clippings.

2. Self- instructional package – 2 was developed on "Principles of Design". The package was developed as computer multimedia power point.

3. The developed self- instructional package was found significantly effective in teaching the topic 'Basic Techniques of Clothing Construction' to the students of experimental group. In terms of academic achievement students were categorized in three groups. The result showed that 59 percent students came under the bright category, 41 percent came under average category. So it has been established that teaching and learning using self- instructional method is more effective for the unit-1 'Basic Techniques of Clothing Construction'.

4. Students were found very attentive while watching the presentation. Almost all the time the percentage of the students attending the presentation was 75- 100 percent. Most of the time the percentage was oscillating around 80 percent. This shows that the package was effective in sustain the attention of the students.

5. The developed self – instructional package was found significantly effective in teaching the topic 'Basic Techniques of Clothing Construction' to the students of replication group- I. In terms of academic achievement students were categorized into three groups. The result showed that 65 percent students came under the bright category and 35 percent came under average category. So self- instructional method is found more effective for unit-1 'Basic Techniques of Clothing Construction'.

6. Students were found very attentive while watching the presentation. Almost all the time the percentage of the students attending the presentation was 75-100 percent. Most of the time the percentage was oscillating around 85 percent. This shows that the package was effective in sustain the attention of the students.

7. The developed self – instructional package was found significantly effective in teaching the topic 'Basic Techniques of Clothing Construction' to the students of replication group- II. In terms of academic achievement students were categorized into three groups. The result showed that 65 percent students came under the bright category and 35 percent came under average category. So self- instructional method is found more effective for unit-1 'Basic Techniques of Clothing Construction'.

8. Students were found very attentively watching the presentation. Almost all The time the percentage of the students attending the presentation was 75-90 percent. Most of the time the percentage was oscillating around 90 percent. This shows that the package was effective in sustain the attention of the students.

9. In the control group students were taught unit-1 'Basic Techniques of Clothing Construction'. through conventional method. In terms of academic achievement students were categorized into three groups. The result showed that 12 percent students came under the bright category, 65 percent came under average category and 23 percent were found below average. Thus, the self- instructional package is found more effective than teaching through conventional method.

10. On comparing level of academic achievement of the students of Experimental Group, Replication group-I and replication group- II with control group, it has been found that the developed self- instructional package-I on 'Basic Techniques of Clothing Construction' was relatively more effective for bright students than the conventional method of teaching the same content.

11. The developed self – instructional package was found significantly effective in teaching the topic 'Principles of Design' to the students of experimental group. In terms of academic achievement students were categorized into three groups. The result showed that 76 percent students came under the bright category and 24 percent came under average category. So self- Instructional method is found more effective for unit-II 'Principles of Design'.

12. Students were found very attentive while watching the presentation. Almost all The time the percentage of the students attending the presentation was 75-100 percent.

Most of the time the percentage was oscillating around 80 percent. This shows that the package was effective in sustain the attention of the students.

13. The developed self – instructional package was found significantly effective in teaching the topic 'Principles of Design' to the students of replication group - I. In terms of academic achievement students were categorized into three groups. The result showed that 65 percent students came under the bright category and 35 percent came under average category. So self- Instructional method was found more effective for unit-II 'Principles of Design'.

14. Students were found very attentive while watching the presentation. Almost all The time the percentage of the students attending the presentation was 75-100 percent. Most of the time the percentage was oscillating around 80 percent. This shows that the package was effective in sustain the attention of the students.

15. The developed self – instructional package was found significantly effective in teaching the topic 'Principles of Design' to the students of Replication group. In terms of academic achievement students were categorized into three groups. The result showed that 71 percent students came under the bright category and 29 percent came under average category. So self- Instructional method is found more effective for unit-II 'Principles of Design'.

16. Students were found very attentive while watching the presentation. Almost all The time the percentage of the students attending the presentation was 75-90 percent. Most of the time the percentage was oscillating around 80 percent. This shows that the package was effective in sustain the attention of the students.

17. In the control group students were taught unit-II 'Principles of Design' through through conventional method. In terms of academic achievement students were categorized into three groups. The result showed that 29 percent students came under the bright category, 59 percent came under average category and 12 percent were found below average. Thus, the self- instructional package is found more effective than teaching through conventional method.

18. The comparison between experimental group and control group shows the 't'Value (7.73), which is significant at 0.01 level signifies that the, developed self-Instructional package-I on 'Basic techniques of clothing construction' is more Effective than the conventional method of teaching. Thus, the self- instructional Package- I for the students has performed in the way, it was purported to, thereby manifesting its validity.

19. The comparison between replication group- I and control group shows the 't' Value (7.77), which is significant at 0.01 level signifies that the, developed self-Instructional package-I on 'Basic techniques of clothing construction' is more Effective than the conventional method of teaching. Thus, the self- instructional Package- I for the students has performed in the way, it was purported to, thereby manifesting its validity.

20. The comparison between replication group II and control group shows the 't' Value (8.19), which is significant at 0.01 level signifies that the, developed self-Instructional package-I on 'Basic techniques of clothing construction' is more Effective than the conventional method of teaching. Thus, the self- instructional Package- I for the students has performed in the way, it was purported to, thereby manifesting its validity.

21. The comparison between experimental group and control group shows the 't' Value (4.15), which is significant at 0.01 level signifies that the, developed self-Instructional package-II on 'Principles of Design' is more Effective than the conventional method of teaching. Thus, the self- instructional Package- I for the students has performed in the way, it was purported to, thereby manifesting its validity.

22. The comparison between Replication group- I and control group shows the 't' Value (2.44), which is significant at 0.05 level signifies that the, developed self-Instructional package-II on 'Principles of Design' is more effective than the conventional method of teaching. Thus, the self- instructional Package- II for the students has performed in the way, it was purported to, thereby manifesting its validity.

23. The comparison between Replication group- II and control group shows the 't' Value (2.85), which is significant at 0.01 level signifies that the, developed self-Instructional package-II on 'Principles of Design' is more effective than the conventional method of teaching. Thus, the self- instructional Package-II for the students has performed in the way, it was purported to, thereby manifesting its validity.

24. The comparison between experimental group and replication group-I shows the 't' Value (0.88), which is not significant at 0.05 level shows that the, developed self-Instructional package-I on 'Basic techniques of clothing construction' is equally Effective in both the groups.

25. The comparison between experimental group and control group shows the 't' Value (1.41), which is not significant at 0.05 level shows that the developed self-Instructional

package-I on 'Basic techniques of clothing construction' is effective. In both the above groups proving its validity

26. The comparison between replication group-I and replication group-II shows the 't' Value (0.30), which is not significant at 0.05 level signifies that the, developed self-Instructional package-I on 'Basic techniques of clothing construction' is equally effective in both the groups.

27. The comparison between experimental group and replication group-I shows the 't' Value (0.70), which is not significant at 0.05 level shows that the, developed self-Instructional package-II on 'Principles of Design' is equally effective for both the groups .

28. The comparison between experimental group and replication group-II shows the 't' Value (0.69), which is not significant at 0.05 level signifies that the, developed self-Instructional package-II on 'Principles of Design' is equally effective for both the groups.

29. The comparison between replication group- I and replication group-II shows the 't' Value (0.08), which is not significant at 0.05 level shows that the, developed self-Instructional package-II on 'Principles of Design' is equally effective for both the groups.

Suggestions with reference to findings

The present study is an experimental in nature which brings out the learning abilities of the students to its optimum level. The developed self-instructional packages on two units of Home-Science are found very effective in teaching- learning process. There are some suggestions based on the findings of the study.

1. The result of the study showed that self-instructional packages are found more Effective so teachers should be encouraged to use such packages.

2. Teachers should be encouraged to prepare self-instructional packages.

3. Students should be encouraged to make use of such self- instructional packages and computer assisted instructional programmes.

4. Colleges should provide computer lab facilities to the students along with the internet.

5. Teachers and students should be encouraged to have at least basic knowledge of computer.

Implications of the Study

This study is based on evolving self- instructional package. This is one of the methods used in new educational technology. This method is self- learning method that is very fruitful for giving individualized as well as mass instructions. With the development of Science and

Technology it is inevitable that at the college level self- instructional programme should be used. Students can use these packages by themselves at their own time and pace. They can easily learn by watching these multi- media packages.

The present self-instructional package is found very beneficial in teaching- learning process.

1 The self- instructional package is found to be more effective than traditional method of teaching.
2 It is found effective in learning the practicals in basic technique of clothing construction so it can be used effectively to teach practicals in other subjects also.
3 Students find this method very interesting. They can remember the subject more by watching.
4 The second unit is theoretical. When presented in an innovative way the learning becomes more interesting and the achievement is more.
5 The students can learn by themselves and can save time.

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