A Model of The D-Learning way on science and technological course

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Abstract: This Model aims at probing into meaning and purpose of the Nature and Science Technology course, studying the way, and implementing the tactics concretely, combining information science and technology and applying every discipline teaching actually.

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1 Preface
The short distance goal is mainly to continue and develop every key work of the first three plans. The long-range goal hopes to set up an omni-directional information teaching environment, and popularize the whole people's information education[1].

In the plan, the main execution projects are to substantiate information teaching, improve the organized system, train adjustment teaching, improve the apparatus, extend the academic network of Taiwan, and popularize the accomplishment of information.

In improving teaching way, the short distance goal is to employ the pluralistic teaching material of the technological construction of the computer and academic environment to implement information and employ teaching[2]. The long-range goal should incorporate the computer assisted instruction into every subject, combine the resources of the network and separate the empty academic environment, implement pluralism and study melting individually. So, combining information technology in every discipline teaching will offer one of the major policies that every school improves the teaching way in the future[3].

There are a lot of teachers at the seminar who put forward different views to apply in information technology to every discipline course at present. They think: that present lessons are arranged. No more information technology should be taught. As to the present stage before changing, these topics about dealing with teaching of school in the present stage and the way of teaching in future, and offering the way to incorporate every subject teaching in information technology are really important to promote information education.

[4]The abilities to use technology and information include: correct, use effectively with technology, collect, analyze, study and judge, combine, and use information, improve the learning efficiency and quality of the life.

Therefore, promoting the scientific and technological level is one of the spirit of this new course. The abilities are not only to use science and technology and information in Nature and Science Technology, but to combine with various other fields. So, the teaching activity in every field use science and technology to relate to the ability of information, and it was netted with every field just like interweaved in any case[5].

Successful media teaching is like this. The spirit of using science and technology and information is like this, and the method to carry out new course is only like this, too.
2 LITERATURE DISCUSSION

To deal with the pressure of global competition and educational intensity changes in the 21st century. A lot of countries have put forward a lot of concrete education reform schemes. In the past five years, countries such as Sweden, Britain, U.S.A., Australia, Japan, South Korea, etc. have announced the nationwide education reform scheme. They emphasize: basic capacity replaces the knowledge direction to deal with the societies of democracy, pluralism, information in future[6][8].

Taiwan wants to deal with need of information age, the changes of the society and situation of world, positive response about the trend of educational reform. Meet all kinds of future challenges, improve the national competitiveness.

The focal point of the course reform is that the primary school always connects to course of junior middle school in nine years. Study the interconnected system of subject and combine into seven universities and practice the field. Another focal point is to maintain educational restrictions. Let the teacher implement the teaching of intention, and then train creative students.

Traditional school education only pays attention to inculcating with knowledge, and lets students become the machine of the examination. So, the core that course is designed is to rely mainly on student, regard experience of life as center. Train the basic capacity that modern people need, replace traditional discipline knowledge. Hope students learn to explore and study, think independently and solve the problem voluntarily.

In teaching, it is whole that it is changed into an interconnected system that the characteristic of the course reform is branch. Break the course type attitude of middle and primary schools' subject standard of the beginning. Hope the teacher breaks with the traditional matchmaker the material and course of the form of expression are designed. Combine the life of course and student, cooperate with native soil, folk custom art and the characteristics of the community, area to carry on teaching[9].

At the same time, The value of the teaching media let teaching turn into more convenient and more smooth, make teaching obtain the good achievement[10]. So, the application that the teaching media can be appropriate, the implementation of new course can unquestionably obtain the good achievement too.

3 THE CHARACTERISTIC OF STUDY THE ROUTE ACROSS THE FIELD

With the arrival of times of the digit, the media products in the past have been all turned into a material. These materials must be through reprocessing the finished product that could be turned into new era, and that is a digit media. In this case, the computer is a machine processed, the course of processing is known as digitisation, and the teacher is the person processing it.

The teacher only possesses the ability of making of digit science and technology. New style and features of teaching material of era can appearing out easily. Several important directions in which the teaching media that prepares digitisation makes are as follows.

3.1 Collect teaching material and materials to transfer to the shelf:

First of all, the teacher should possess ability to change the teaching material into a script. Because the script is only a piece of vision teaching notes, and the following work is according to the teaching notes to collect the relevant materials. When it is finished that the materials are collected, can transfer to and store into a computer file. It is convenient to use directly or process indirectly. Different kinds of digitisation materials, can used alone with the sheet, can used together with other medias too. The following is a commonly used materials type.

Teaching material of the characters: The source of collecting materials of characters includes textbook, teaching materials, campus publication, community's materials, network materials, etc., input into and file (For example: .doc).

The teaching material of the static picture: The source of collecting materials of the static picture includes photo, picture, slide, projection slice, network materials, etc., and file (For example: .jpg).

The teaching material of the dynamic image: Collect the source of the materials of the dynamic film including VHS record film video-tape, V8 making video recording, network materials etc., and file (for example: . Avi, .mpg, etc.).

The teaching material of the recording: The source of collecting materials of the recording includes card type tape, music CD, network materials, etc., and file (for example: .wav, MP3, etc.).

The teaching material of the cartoon: The source of collecting materials of the cartoon includes picture library of relevant software, Clip Art Library or Data Base, network materials, etc. The teacher
can utilize software of relevant cartoons to be made by oneself too, and file (for example: .gif, etc.).

3.2 Plan to make the materials of the teaching material of PowerPoint:

The teacher can make use of PowerPoint software to make teaching material. Because this software can combine the digit materials of a lot of types. At the same time, it can be used for broadcasting and showing the teaching material of every discipline domain too. It is a simple and easy multimedia software, very suitable for teaching.

Utilize PowerPoint software to make the digit materials that teaching material needs. Its input and treatment way can be slightly stated as follows.

The component of the characters: We Can type in PowerPoint software, or can be written into Word file too.

The component of the figure: We can use PowerPoint or other mapping software, or can be taken from Scanner and sweep the figure shelf that took aim too, or utilize the figure shelf that Digital Camera shot, or can use the materials of the network.

Other components: We can utilize PowerPoint or other software to record and produce various results, including sound, cartoon, specially good effect, film, etc.

3.3 Prepare the teaching material materials of the CD:

The teacher can store and implement commonly used teaching material and form of using up the disc of the materials. Because the preparation of teaching of the teacher of these work planned, it is very important with growing up oneself. After appearing as burning the optical drive recorded repeated lying, it becomes anything feasible simple and easy to store a large number of materials. So teachers can collect commonly used teaching software, tool software, and store the useful teaching material materials at ordinary times. Deal with the main point of the CD materials as follows.

The source of the teaching material: The source of the CD teaching material includes the teaching material bought among teaching material and workshop that the teacher made by oneself.

The way to deal with: The source of the materials of the image usually including VHS record shadow putting machine, V8 and take a photograph of the video cassette recorder, VCD and put shadow machine, DVD and put the shadow machine etc.

Import the image materials to the computer via the computer at first, then utilize computer video-information to deal with the software to sort out, file. Burn with CD person who record pigeonhole smooth disc can be used ed to make image materials that handle well and then.

3.4 Prepare the teaching material materials of the network:

When the teacher prepares network course, must consider first whether the teaching material needs upgrading frequently, the design of the network teaching material cooperates with teaching activity each other, and network teaching can reach factors such as the anticipated result, etc.

In addition, the teacher should make the Net surfing material needed first, and transmit on the server as soon as possible, for not avoiding preparing temporarily thoroughly. Only prepare the clicking and dividing a explanation of the network teaching material below.

The teacher should observe the courses of the networks of domain of different disciplines and teaching method more at ordinary times, collect the network activity of whole course of the interconnected system to design. All these facilitate designing the network interdynamic way to relatively suitable for.

So, A lot of teacher with familiar with software as information indicator of basic capacity in U.S.A. In fact, The picture and text are combined, the teaching materials are made, the projection is shown. All preparation and thing that will often do in development activity of teaching.

4 ALWAYS THE IMPLEMENTATION PRESENT SITUATION OF COURSE IS IN TAIWAN IN NINE YEARS

With the change of course and gradual progress of science and technology, one chalk write blackboard, one mouth bar era to study in textbook already pass by. But with which kind of method should the teacher carry on teaching, how can be just regarded as the last era when is caught?

In fact basic scientific and technological ability can be through studying and promoting. So it might not be too difficult to make and use media technology. So, teachers should expect from me on the following several directions..

4.1 Because people are best software and hardware all the time, can't neglect the teacher's function:
The teacher's lecture skill is a focal point all the time. Narrate from the skill of giving lessons, the teacher's basic capacity will not be different because of development of science and technology. So the basic capacity in skill, control of time, weight taught that demonstrate, etc., the teacher needs to require by oneself.

4.2 Don't neglect low science and technology, it is convenient to go to deal with the shortage of resources:

Science and technology is not omnipotent. If teachers can deal with the breaking down of electricity, the system halted of the computer, lack situations such as resources, etc., and the appropriate level of adjusting science and technology, that will be the best media teaching tactics.

On one hand the teacher should get used to using the apparatus of Hi-Tech, on the other hand can even go to make use of low science and technology method to carry on teaching. So as everybody is discussing that builds and constructs the fictitious real border (Virtual Reality) Hi-Tech academic environment. A wall map may have been learnt quickly by students, changes his life.

4.3 Make the best of various fields and apparatus, can change the media and show the method whenever and wherever possible:

In order to cooperate with different course properties, teaching material type attitude, and teach the way. The teacher can use the medias of different types, and the characteristic of the digit materials can make use of medias of different different types to present the teaching material. So, the teacher can change different digital data format rapidly of ability, convenient in different digit platforms, cooperate with different apparatus on effective teaching.

4.4 Promote the ability designed in teaching, facilitate whole course and science and technology of the interconnected system:

Use teaching media and science and technology. Its purpose is to promote the teaching result. But how to reach this goal? It needs to rely on successful teaching to be designed. In the consistent course structure in nine years, the ability designed in the teacher's teaching is the basic ability to reach course with whole interconnected system. Carrying on the teaching design of course with whole interconnected system and respect of the teaching activity. Must through study with communicating, discussing revision idea and practice at any time constantly.

4.5 Plan to accept new science and technology at any time, develop the new teaching method:

With the development of the network and popularization of computer, a lot of courses will use the computer in the ordinary classroom, but not have a class in the computer classroom. At the same time, a lot of courses are not linear of develop the way, but by exceed and hyperlink method come appear. So every teaching method of studying domain will change.

5 IMPLEMENT THE TEACHING COURSE OF STEPPING FIELD STUDY

Information science and technology is to utilize the new system coming out in media development of the digit. The teaching of discipline usually includes teaching goal, student's characteristic, content of courses and environment, teaching method, teaching activity.

We discuss the different attitude in the environment of the school of science and technology of information separately: Application of PC, computer classroom, regional network, internet network, etc.

(1) The PC combines the media of seeing and hearing

Because information science and technology has characteristic of tool application, the information that teachers can deal with, create, propagate individuals and educate through the PC.

In addition, If install television, putting shadow machine, projector, and recorder, etc. each classroom, the teacher can transfer to the way of NTSC through VGA, change the editor's teaching material into a TV signal, make the general classroom make the elasticity. In the activity course of whole teaching (cause the motive, develop the activity, commenting amount activity) at the same time. The teacher can choose the appropriate teaching software too, and give an oral account of or the picture will pass the way of the cartoon or simulation, carry on more vivid teaching. In other words, Information science and technology has characterized circulation way of combining teaching, let study to enable it within scheduled time, reach greater result.

(2) Broadcast teaching of the computer classroom

Employ the tutoring system of radio in the computer classroom appropriately, adopt the software teaching material of appropriate discipline. Combine the teaching activities of the computer classroom and every discipline. It can reach the goal of teaching and accord with the demand for study that melt individually effectively.
These functions can fill the deficiency of the static materials of the blackboard. Through the computer assisted instruction software of various disciplines, carry on dynamic teaching, for example: The flow of the blood, planetary operation, the relation between the sun and the moon, the figure of mathematics is changed etc.. It can give play to the efficiency of strong study.

In addition, in broadcasting the tutoring system, the function discussed in groups can be in order to reach the study goal studied and created together in cooperation. It will be a kind of most effective practice: Information science and technology is channeled into every subject teaching activity to teach in the way for the current stage.

(3) Application of the audio-visual server of the regional network

The regional network links the information apparatus in the campus together through the line of network, in order to reach the sharing of information software and hardware resources, and the one that promoted information system should exert oneself.

(4) Application in teaching of internet network

Because the growing vigorously fast of network population, make the business opportunity on the internet network limitless. No matter public beneficial or commercial websites all have surprising quantity. It forms the biggest network resources databases in the whole world in succession too. How to employ so huge a network database appropriately in every subject teaching activity, it will be one of teacher's important efforts projects.

At this stage, every discipline teacher (for example: Chinese, mathematics, natural department, social subject, artistic skill subject) Extensive collection relevant teaching materials, there is systematic classification. Then take charge of the management websites that make teaching material by teacher of the computer speciality, unify using interfaces of the resources of the network, in order to help the teachers and students of the whole school consult.

The second stage is to regard internet network as teaching resources, also transform the internet network into a ring of the teaching activity. To use E-mail as teachers and students with transmission of message between being of the same generation mainly in this stage, discussion that divide into groups, to remit whole materials, and the homework one is handed over to.

During this stage, especially encourage cooperation to study. Through the teacher's grouping and designated study, require the special project that the group enters into cooperation to study. The members of the group are when exchanging materials, the duplicate of the E-mail must be conveyed to the teacher's e-mailbox. The teacher can grasp the progress of the group. Meanwhile, the teacher offers the consultation immediately too. The ones that let students' study change melted stereoscopically, and let the learning aid give full play to the result through this way.

The third stage is to channel the internet network into teaching resources, namely development and study of internet network course (Web _ title) . Through development and application of internet network course, break through the space and restriction of time, really give play to the spirit of network teaching of internet.

6 CONCLUSION

Institute of education of Columbia University of R. McClintock point out , Digital library, multimedia, personal materials treatment technology, make education of the information-intensive society there are new appearances. That is to say information science and technology, digit resources and the multimedia appear, the great change emerges between the learning aid to make. Among them lead to the fact the main reason changed is the use of the information science and technology.

Sincere like Thomas(1998)said, Information development and application of science and technology, let the past a lot of difficult discipline teaching material that appear, or the phenomenon that can not appear at all, has presented new learning method and chance, implement and study even more too.

So, though the examination stress and course progress of the school in the present stage are limited. However, design through appropriate teaching, information science and technology is applied to the teaching of various disciplines to take action, and improve benefit of studying.

The application of information science and technology is a way that can not be avoided. So, how to deal with the future education trend? The grinding of information science and technology drafts with the design, and use it to channel into every subject teaching application way. It will be one of the extremely important subjects in the future.

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