

# The Contribution of Science & Technology Integration in Science and Technology Curriculums

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*Abstract:* It is very important that understand the mobile technology content for bring up the new century students' technology equipment, and it is the headstone of technology development. The mobile technology include handle mobile device, digital transmission modes, mobile information software and so on. The mobile technology realized the perpetual contact, the network tools of teenagers' social intercourse. In the science and technology curriculum, the students had to learn something, such as: what is mobile technology? How did the things execute? What kinds of value and belief effect influenced the mobile technology? What idea foster the mobile technology? How did we put idea into practice? What influence between mobile technology and sociality? The more important is to promote the students' adaptation to the new environment via technology instruction. The mobile technology content integrated into instruction could apply instructional strategies of dissemination, facilitation, inside collaboration, outside collaboration, apprenticeship, generative development an so on. Therefore, there are perplexities and countermeasures in the paper by theory exploration and experience of teaching. The result will provide administrations and teaching to refer.

*Keywords :* Digital Learning Technology, the Science and Technology curriculum, Technology integrate into instruction

## 1 The times meaning and value of E-learning science integrated technology education in times

Since 1993 the time of new economy is oncoming, the United States has been influencing the development of global economy and competition ability continuously. The OECD(2000) points out new economy is attributed to the rapid development of information and communication technology(ICT). Eight country leaders in Ryukyu Islands summit conference adopted the charter of the information technology (IT) recognizing that IT creates one of formidable strengths on 21st century[1], and the union education and the

technology is the important subject which the audiences recognize.

The rise of the internet lets people experience the convenience of information non-national boundary; the fast development of the Mobile Communications lets people enjoy the pleasant sensation which communicates anytime and anywhere. These two products all is developing in the science & technology at present and growing to be the most fast industry. However, the Mobile Internet aptly combines both of advantages, and creates an environment which has no region restriction and communication convenience. Also therefore, the time of the Mobile Internet which integrated IP(internet communication pact) and TELECOM(communication) is changing everyone's communication mode and the type of

life and work by extremely sudden and swift speed. [2]

Along with the close combination of E-learning science & technology with wireless communication, data communication and internet, this world just is developing quickly to be the Mobile Messenger society. In the future, the major part of individual communications, including a cell phone, data image, and even scene image transmission ...etc., will get into the times of motion wireless

Impelling the strength of this new Mobile Messenger society isn't science & technology, but is the application of technology. The third generation E-learning of science & technology opens new business opportunities for the network operators, also brings new competitors. For example, the content providers also got into the Mobile Multimedia market, and provided new service and application. Many services and application are the inconceivability at present, also therefore enriches our life and learning activities.

E-learning of science & technology changed the method of traditional teaching method. Traditional dictation curriculum or the manual homework have already been replaced by automated procedure gradually. The E-generation's teachers will induct the concept of "computerization" and "paperless" in educational mode, which is all for making the teaching resource reach the highest application value and promot whole teaching effect. However, E-learning of science & technology created diversified attribute and raised an efficiency for the education, but it must need to be strengthened actually at the aspect of humanized. Therefore, what "science and technology always comes from human nature " the mainstream trend of development currently is to emphasize how to make E-learning of science & technology provide more needs for learners under the situation that reserves current good teaching mode. How to make E-learning of science & technology integrate an education more completely and satisfy a teacher whose different needs because of teaching mode will be a key point in new century teaching innovation.

Making use of E-learning of science & technology can encourage students to carry on a learning anytime, and foster students' habit which students can learn everywhere and through their entire life[3]. The learning environment under the influence of information of science & technology produces great impact to the learners. Those who will make use of information of science &

technology to assist learning are majority of persons who have strong learning motive and are active. At present the application of information system still also has the growth space in the education. And the E-learning of science & technology will soon change current conditions, letting the teaching information no longer be limited in classroom and also reduce teachers' burden effectively. Therefore, for realizing along with the immediate information prospect, the academic organization has the necessity to research to develop motion system, and the E-learning of science & technology is an indispensable important item for the study and application of the technical education.

Therefore, it plays an important and essential role for the content knowledge of the E-learning of science & technology in the present education environment. It has already planted deeply in our life, and we have already been using it as well. The understanding of the E-learning of science & technology learning of science and technology is necessary to develop the science & technology cultivated manners of new generation students. It will be a cornerstone of development of science and technology in the future.

## **2 The meaning of the E-learning of science & technology**

The meaning and content of the E-learning of science & technology describes as following:

### **2.1 The meaning of the E-learning of science & technology**

[4] defines science & technology as "the tool, technique or method for the mankind to reach some purposes, including not only thing but also service".[5] then define science & technology as "Aiming at the beneficial purpose carrying on the systematic application knowledge; especially with the related phenomenon of the physics, chemistry and system". He also points out service technology not only in the information of science & technology, but in service function which specially developed or applied system homework and soflectiont & hardware technique.

[6]points out : Science & technology enhances study, and delivers, shares a curriculum but non-traditional study.

[7]points out that the introduction of any new communication technology will become important and profound impact to the particular social culture and the interpersonal relationship. The

new science & technology affects individual psychology, then affecting individual thought and the motion, changing humanity's sense consciousness and viewpoint gradually.

According to the Ovum definition, the motion marketing is "making use of wireless media communicates with consumers, promoting to sale its product, service or principle for taking advantage of this the creation profit." Then Wireless Advertising Association (WAA) defines the wireless advertisement as it is a way which is through non-leases internet to transmit the advertisement to the wireless communication equipments, like cell phones or PDAs etc., to achieve the effect when the advertisement broadcasts. [8,9]. Therefore, messages which regard writing as principle are one kind of media of the motion advertisement. In the research of [10], it explains the characteristic of the motion advertisement as " it is high effective and has evernet and can deliver a personalized instant message; because the size of wireless communication screen is too small, it only can carry on the simple advertisement messages which is promotion sales and type of brand advertisement.

In the future, there are some important technologies, including GPRS 、EDGE 、WCDMA 、Mobile IP and the Wireless LAN etc., will lead us into the society of E-learning of science & technology[11]

■GPRS(General Packet Radio Service): it will enhance high efficiency link between the Internet and the company interior network, almost instantaneous building up link. And the high speed material transmission will also cause the innovation of individual and the commercial utilization.

■WCDMA(Wideband Code-Division Multiple Access) : Meanwhile it provides the brand-new and appealing motion multimedia for individual and the company users.

■WLAN(Wireless Local Area Network) : it extends company's network, and provides the high reliable communication, also provides the high velocity company network acceptance.

■WAP(Wireless Application Protocol) : it mobilizes the Internet. The cell phones also can provide the interaction service.

■WWW : MMM(Mobile Media Mode) : it is general marketing sign which integrates the Internet and the motion communication.

■Bluetooth : it can let the users link various electronic equipments.

■EPOC : The new generation operation system makes the telephone of speech appropriation become to even surmount a multi-media telephone.

According to above, we can discover the current motion media, mostly including wireless communication equipments like cell phones and PDAs etc., to let the users deliver or receive the data or the message which includes the writing or video with digital transmission mode under the situation which network on-line can move at any time. The users also can make use of the characteristic of its interaction, carrying on instant response. The message dissemination which mainly embarks from the personalized characteristic on the motion media sends writing or the pronunciation messages to the individual specific object, but sometimes also makes use of the function of broadcast (like message group transmission) deliver the information to particular communities in the meantime. Therefore, the E-learning of science & technology includes the hand-hold wireless motion vehicle, digital deliver mode and motion information software etc..

## 2.2 The connotation of the E-learning of science & technology

Nowadays the teachers should understand that the present teaching role is totally different from the teachers' own experience when they were students. Students who are compared to their teachers will accept more technical education. The teachers who want to inspire students' learning interest and acquire the best learning result have to follow the trend of the times and absorb the advantage of the new technologies [12,14]. [13]also indicates that the launch of the E-learning of science & technology (for example: cell phones 、PDAs) makes motion business become to have a hopeful future development direction.

In the third generation of the E-learning of science & technology, everyone can take the service which is based on ones' habit by a personalized mobile portal. Such personalized hypothesis also can change along with the acceptance condition. Because all communications and the users do not have the direct connection in the position, the demonstration of message content will depend on the terminal device ability to decide. All users can create own content, including the image, the animation, the picture, the pronunciation and the writing.

The society of the motion message may let many persons make a profit because of three factors by the new way integration. These three factors include : digitalization of all content, the Internet becoming a worldwide message transmission media, as well as cell phones and wireless equipments achieving mobility.

The bigger freedom in life is in the pleasure. No matter where you are, you can enjoy a personalized service. Such service further transfers the passive service content to the dynamic function. The service providers also make a profit plentifully.

The digitizing content must be suitable on the suitable equipments. So Media Phones, Laptops, PDAs and various other equipments can connect to take a multi-media message anytime or anyplace. The cell phones have become an individual faith equipment, and also have met each person's unique need.

Any users hold a handheld action equipment(as cell phones 、 PDAs 、 the Smart phones etc.) through the way of the third generation wireless communication(3 Gs)to pick up the information, the transaction or the shopping as the 3 Gs(as: E-mail 、 message...etc.), entertainment information(as: The download of the bell ring and sketch 、 wireless games etc.) in the category of motion business. The 3 Gs phones own many functions that the 2 G cell phones do not have them, such as walkman、camera、personal certification 、 remote control 、 E-Wallet 、 long-distance operation and surveillance...etc., and can also surf the Internet by wireless anywhere to obtain information and overturn the usage ecosystem of a wired network at any time. [4]Because the motion tools are accepted by individual and the enterprise gradually, they manages mobile device management also better and better. According to the IDC's research, due to multiplicity of the motion tool and the work system, the enterprise and individual must use desktop computers to manage many kinds of the motion tools, like simultaneously connecting cell phones, PDA, the computer and so on. Therefore, it impels the software which manages the motion tools.

### **2.3 The characteristic of the E-learning of science & technology**

[13]point out the logic of the personal communication of science & technology is "perpetual contact". Katz thinks perpetual contact

is the sociologic of the communication of science & technology, the communication for idealizing is a pure communication, which is the hope to share with the others' mind. Katz thinks the image of pure communication is rooted in the logic of perpetual contact, supporting people how to judge, invent, use communication of science & technology; the development of the personal communication of science & technology is toward perpetual contact.

[14]studied the relations between the Finnish children and the young people and the cell phones. They point out that for the teenager and the person about 20 years old, a cell phone has already become an importance and nature part of daily life. To the teenager of Finland, the function of cell phones is a tool which constructs social network and defines the relationship of individual and the others.

[15]pointed out that teenagers' brief messages extremely widely used the spoken language and the word game. [16]discovered teenagers' brief messages mainly were used in peers' and in the home to deliver. The length restriction of brief message makes the user change the conversation custom and the reduction time. Communication can be concealed and quiet by using the brief messages. The brief message changed the teenagers' communication motive, but non- content. They exchanged a shorter, but more abundant message. The communication of the brief message is instant, letting the teenagers be able to be noticing to change a project right away by that time. Their research demonstrated even if in the family which has a leases telephone (and usually not to need a teenager to pay expenses), a teenager still loves to deliver the brief message. The teenager has already used the interface of cell phone, using slang and abbreviation according to their need. Evolving continuously message language is an important part in the message culture.

[17] think the teenagers adopt communication and information technology (CIT) quickly, so gradually liberate from organizations, such as the family and the school. They believed that this has already caused Thomas S. Kuhn's paradigm shift. The teenagers had the antenna which the whole world extends, and the cell phones then make them keep a contact no matter where they were. The fast adoption of cell phone promoted alternative social construction, and also influenced the property of the learners in school. They pointed out the telephone may be one of the media which be used for constructing ego. The

importances of these media are that they combine electronics or science & technology to expand environment to experience amusement and educational entry-level scenario. One of the characteristic of this kind of environment is to increase the global antennas which had broken the geography border, and weakened the value which the traditional organization taught. CITs' global extension antennas enhanced amusement and education to reduce the pressure of deinstitutionalization. The change to the relation between the family and the education can be a part of " boundary crisis " which brings by the ability of world extension. In the culture, this tendency can be spreaded and broadened by the friction of digital world.

[18] The research of iscoveriesd that cell phones between the teenagers had toolize function and also were used to express the social group which they belonged, managing hypercoordination. What so-called " hypercoordination " is the foundation which surmounts the businesslike connection, including the public relations and the emotion interaction coordination. In this special stage, the teenagers are eager for contacting the peers but keeping certain distance with parents.

In summary, the E-learning of science & technology is ideal realization of perpetual contact in the modern society; it is the tool for the teenagers to construct a social network and interact with the others; it is a part of language culture which was nurtured by teenager's peers; it is the extension of global limitless boundary; it is hypercoordination which contacts the peers, displays that the cognization of E-learning of science & technology is necessarily at present.

## **2.4 The development and impact of the E-learning of science & technology**

The development of the E-learning of science & technology can be divided into two kinds, mobile devices and technology of motion communication, as follows:

### **2.4.1 The development of mobile devices**

In 1993, Apple Computer announced Newton PDA which is the first ancestor of PDA. Newton wasn't set as an omnipotent small computer, but only as an electronic notebook which provides some functions of personal digital assistant. The time of its promotion was too early, and it was too big, heavy and expensive. Thus it did not attract

manyconsumers. Apple Computer in 1998 gave up Newton.

PDA's started popularly because an American company, Palm Computing, made efforts. Establishing in 1992, Palm announced Pilot 1000/5000 series in 1996 and made a success in one stroke. The successful reasons are its graceful shape and its moderate size. It only has four functions : address book, calendar, task and memo. The buyers knew very clear about PDA's which is not a PC, and did not think its function is too few.

Palm's operation system (OS) opens completely. There are a lot of people to write software. And other famous factories, like Visor and TRG, join to develop a compatible model and additional hardwares.

Comparing PDA's and cell phones, both of the difference lies in that appearance of PDA's is bigger and PDA's can link with personal computer and order function. In regard to appearance, the appearance of cell phones is smaller and shows just enough several words, but the PDA has bigger appearance and can show image. Because the appearance of PDA's is bigger, the PDA can show static image and dynamic image which conform to the users' need relatively. In addition, PDA's may unifies with the personal computer and can provide the method which is different from the application of the cell phone. The cell phones usually use ten keys to input a writing, therefore is not suitable to input the massive materials. But PDA's can input the data into the personal computer by keyboard, then do the data synchronous way with computer to achieve the goal which inputs massive writing. The cell phones can't respond personal need and order function, but PDA's can install an applied software by themselves. Therefore, PDA's can become different kinds of tools. At present, there are many applied software. The users can respond on own need to order function and use PDA's as game machine, photo album and e-book. In the future, the more PDA's' function, the more PDA's' use, and the cheaper PDA's' cost. Hence, we can foresee that the operation of PDA's in any where any time will come true.

### **2.4.2 The development of technology of motion communication**

The entire evolution of technology of motion communication may roughly divide into the analogy-like first generation of motion communication system (1G), digital-like second generation of motion communication system (2G), the enhancement digital data service 2.5G system

as well as the third generation motion communication system (3G), as shown in Fig 1.

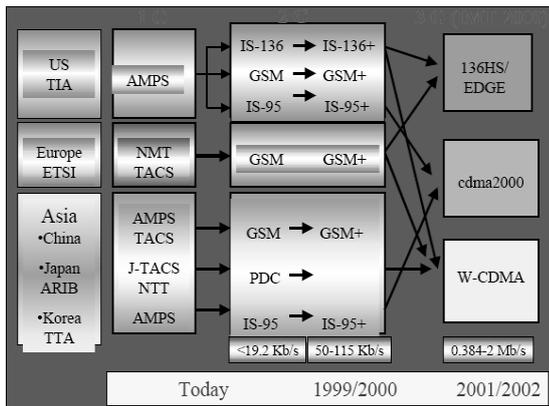


Fig 1. The evolution chart of technology of motion communication[4]

Judging from the development of technology, the motion data communication is divided into two kinds, analog and digital. Nowadays the major part of motion data communication has already developed toward digital-like direction. Because digital network enhances the capacity and transmission speed, and the transmission quality is more reliable and also easily connects with the Internet.

In view of the process of development, the motion data communication is divided into three major realms, the first generation of motion communication system (1G) is the analogy-like honey-comb system, using frequency division multiple access(FDMA) which means that the assigned spectrum is divided into several channels to provide the use of the motion communication. The second generation of motion communication (2G) is digital-like honey-comb system is constructed by the technology of a digital transmission specification, and the technology of radio frequency transmission taking time division multiple access (TDMA) and code division multiple access (CDMA) as a foundation. At present, global system for mobile communications (GSM) is mostly constructed in the 2G network. The principle of TDMA is that each telephone is assigned the channel and the time. The signal of each telephone is cutted into a fixed time effectively and deliver crisscross on the same channel. CDMA cuts the telephone signal into different fragment which has the unique code, then using different channel to send out in the meantime. Transmission method of these two kinds of technologies makes communication digital signal calculating and decoding in the receiving terminal. The merit of the this kind of technology is that there is no misgivings for

digitize interception. Comparing with analogy-like type technology, its pronunciation quality is clearer and few disturbances. General packed radio service is a product which was made in hand over to connect a period between the traditional wireless pronunciation electric circuit switched network (2G) and packet switched wireless pronunciation and the data network (3G). The original design construction of GSM can deliver data on pronunciation transmission system, and its basic data transfer speed is 9.6 Kbps, also it has the more advanced code technology to be possible to reach bandwidth of the 14.4Kbps. GPRS has the further strengthening data transmission function. This technology will seal and pack data which is inputted from different communication process. In view of the situation of channels using, it makes the best disposition to the packed capacity. The transmission speed of this technology theoretically may reach 170Kbps, and its speed after the general commercialization reaches 56 Kbpses~115 Kbps as same as the speed of fixed lines modem. The third generation mobile communication(3 Gs) constructs on W-CDMA, founding on packed switch technology. In the Internet agreement of communication level utilization standardization, this technology is the data network which founds on packed switch technology, can take along pronunciation information and is different from the second generation of motion communication with taking along data imformation pronunciation.

#### 2.4.3 The development of E-learning of science & technology impacts to the development of our country's science & technology

It is no debate problem that the E-learning of science & technology has changed the human life and the social state. The E-learning of science & technology is also an important part of the whole organic structure, simultaneously responses historical vein and social situation in the development process of science & technology. The E-learning of science & technology makes a contribution to humanity, including the change of the time and space, the obtainment and store way of the lately information, the new work type, and it also changes the human relation, thinking mode and sense experience. On the other hand, the use of E-learning of science & technology causes negative result, including the new crime type, excessive dependence and command of information, estrangement of interpersonal

relationships and ego, alternative type of cultural nurtures.

[19] pointed out that the development of technology is influenced by social cultural vein. When the invention is accepted, developed and applied, the result just probably appears. Thus, judging from consideration of monopoly of technology, it is actually impractical.

### **3 Connotative Meaning of The E-Learning of Science & Technology**

#### **3.1 technology in our primary school science and technology curriculum in the future**

The content of traditional course has been unable to deal with the fast vicissitudinous social environment, and teaching design and teaching method have to renew to ascend development of whole environment. [19] The successful factors of "valid teaching" are not only teacher's psychology, behavior and professional level. At present, all things requesting efficiency in the development of the E-learning of science & technology, how to make use of the knowledge content of the E-learning of science & technology to promote teaching effect in the primary school science and technology teaching activity becomes a very important part of reaching prospect.

On September 30, the Ministry of Education announced "Grade 1-9 Curriculum Guidelines" which has ten items " the basic educated capability". The eighth item is " the utilization of science & technology and the information : The science & technology is utilized correctly, safely and effectively, and promotes study efficiency and life quality by collecting, analyzing, judging, integrating and applying information. The general outline summary makes the stage curriculum be divided into seven realms, like language, health & athletics, society, art & humanities, mathematics, nature and science & technology and comprehensive activity.

The Science and Technology Curriculum should cover following main factors[22,23,24] :

##### **3.1.1 content**

The mankind resolve main factors 、 system and procedure with the problems of science & technology. As Process and handle of the material, information or energy. In which : material processing contains the shape or the property of changing the material; The processing of information can include coding and store 、 delivery 、 reception and decoding; The processing

of energy converts a function form (as mechanical energy—electric energy)

##### **3.1.2 process**

On the problems of science & technology, designing its process which is from distinguishing, questioning, investigating information, developing solution, making, testing, evaluating to improving solution is easy for students to cut into problem, ponder many kinds of solutions and try to resolve it.

##### **3.1.3 system vien**

The learning activity must closely connect with real world, and cannot " Not see the forest for the trees". So the problem of science & technology have to be confirmed and selected by the system vein under family, school, community, leisure, business circles.

##### **3.1.4 development**

The learning of electronic literacy needs from simple to complex, developing students' awareness and understanding to personal, region, country, and global science & technology.

##### **3.1.5 integration**

In more lower grade, science and technology curriculum integrates all subject realms to enrich learning experience of school-children through thematic. In more higher grade, science and technology curriculum can adopt the cross branch activity to develop the education function of science & technology, letting the students apply in other subjects.

##### **3.1.6 document-based**

The evaluation of E-learning of science & technology emphasizing content and procedure can not only stress the simple test in students' remembering ability. To evaluate students' procedure and performance of know, behavior and think in the process, it is necessary to request student to record down the development of creation and analysis in the process of design and produce.

### **3.2 The discussion of integrated teaching strategy in the meaning of the E-learning of science & technology**

The integrated teaching strategy in the meaning of the E-learning of science & technology applies dissemination, facilitation, inside collaboration,

outside collaboration, apprenticeship, generative development to reach the goal, describing as back :

### **3.2.1 The dissemination of the teaching strategy**

The purpose of the teaching strategy of dissemination is to spread information, making use of super chain and the information on network as the resource of curriculum data to spread the meaning of the E-learning of science & technology. Its main teaching activity is : release a curriculum message, organize and arranging resource and chain of the network and provide digital data based on the way of traditional classroom teaching.

### **3.2.2 The facilitation of the teaching strategy**

The purpose of the facilitation of the teaching strategy is to help students understand the meaning of the E-learning of science & technology. Its main teaching activity is : provide the direction, guide the discussion, and suggest the related resources.

### **3.2.3 The inside collaboration of the teaching strategy**

The purpose of the inside collaboration of the teaching strategy is to understand the meaning of the E-learning of science & technology through inside collaboration for students' interaction and communication. Its main teaching activity is : provide an environment that can support students to ask the question, distinguish a direction, suggest or provide a related resource and carry on cooperating a project.

### **3.2.4 The outside collaboration of the teaching strategy**

The purpose of the outside collaboration of the teaching strategy is to assist students to interact the meaning of the E-learning of science & technology with outside. Its main teaching activity is : invite outside people to participate classroom teaching, connect homepage to outside resource, and participate other website clubs.

### **3.2.5 The apprenticeship of the teaching strategy**

The purpose of the apprenticeship of the teaching strategy is to invite the scholars near school district to provide to guide the meaning of the E-learning of science & technology. Its main teaching activity is : instruct learning activity of the meaning of the E-learning of science & technology by the scholars near school district

### **3.2.6 The generative development of the teaching strategy**

The purpose of the generative development of the teaching strategy is to announce the meaning of the E-learning of science & technology by students. Its main teaching activity is : to the subject of the meaning of the E-learning of science & technology, reach the goal of assimilation, interaction and reorganizing information through creating, organizing and reorganizing. The feasible activity is to compose article or announce commentary.

## **4 The difficulty and strategy of The E-Learning of Science & Technology Integrated into The Primary school Science and Technology Curriculum**

The difficulty and strategy in student level, teacher level and administration level describ as back :

### **4.1 student level**

In students' psychology, they might not accept newly arisen science & technology. Because the national elementary school students still were at the underage stage, did not have right to independence of the belongings, they couldn't integrate the high tech knowledge of the E-learning of science & technology into their life. The strategy : Technology Acceptance Model (TAM) [1,5,6,18]. This mode has two special persuasions, Perceived Ease of Use (EOU) and Perceived Usefulness (U). EOU means that individual to the certain particular information system has a cognition degree of use easily. U means that individual to the certain particular information system has a cognition degree of enhancing its work achievements. For EOU, when individual to EOU of the certain particular information system uses more high, it will present more a positive attitude. Likewise, when individual to U of the certain particular information system has a positive evaluation, it is more possible to embrace a positive attitude to that systems. TAM discusses that for the certain particular information system, the relation of EOU, U, using attitude, using behavior intention and actual use is guided its importance through the school education or the society.

The students may lack of prior knowledge. on the teaching, it is not easy to lead in the meaning of the E-learning of science & technology. The strategy : Teach related

knowledge integrated teaching at ordinary time, and give the students own experience and opportunity of getting in touch with the E-learning of science & technology. After practicing the former strategy, it has to give teaching on the insufficiency of the cognition of meaning of the E-learning of science & technology.

Another difficulty that may suffer is : Whether do all students' qualities fit to receive an education? At present, the national elementary schools all are normal class grouping, carrying out normalization teaching. But the meaning knowledge of the E-learning of science & technology belong to advanced sophisticated science & technology, it is not suitable for all students[2,10,11,16]. The strategy : Choose the talent students to experiment or actually teach, if the result is good, then expand to the ordinary class students.

#### 4.2 Teacher level

The teacher psychology to accept the emerging science & technology is not possibly the same. Therefore, in the integrated teaching of the E-learning of science & technology, it is not easily carry out. Its strategy[18,20] : The application of science & technology accepts mode theories which is educated or guided by school administration. With the current time, we should establish suitable meaning of the E-learning of science & technology, and encourage teachers to make use of professional conversation and ego think to enhance teachers' acceptance to the E-learning of science & technology.

In the aspect of teacher official duty, the curriculum of cultivating teachers should bring into the meaning of the E-learning of science & technology, letting teachers study by themselves. In the professional training aspect for present-post teachers, the professional training curriculum is responded to the knowledge request of the E-learning of science & technology.

#### 4.3 Administration level

The acceptance of administrative personnel psychology to the emerging science and technology is possibly lower. The application of the lately E-learning of science & technology to practical life is not high. Therefore, the understanding of the E-learning of science & technology is also uneasily accepted. Its strategy: Administrative personnel can obtain a mutual recognition by attending correlation seminar of the E-learning of science & technology. By

professional training or importing the application of lately science & technology product, we can enhance the administration efficacy and the new technical accomplishment of administrative personnel.

Information science & technology changes with each passing day, the best solution of technology which was even thought has to promote to respond the demand which increases constantly. At present, the system which is adopted by most domestic educators takes desktop computers as primary. Although this kind of system has already resolved the majority of problems, the development of the E-learning of science & technology has already got into our daily life silently. For the cognition of the E-learning of science & technology, it is not insufficiency in general, especially in the application of education. By the following viewpoints, it can see that the general systems which support teachers are insufficient.

On the other hand, the administrative personnel queries the investment reward of lately science & technology, and thinks that the price of technical product and the rate of change are high. Applying technical product on education causes easily the situation with high cost but low result. Its strategy: Although early return on investment which carries out newly arisen science and technology teaching may not be high, in view of enhancing national competition and foreseeing the future of newly arisen science and technology, it can increase return on investment by communicating with administrative personnel to get to a common view that the education is the long-time important matter.

## 5 Conclusion

In recent years, the booming development of not only represents that personalization mobile devices are gradually popular, and means that the times of internet combination has already arrived, becoming gradually an indispensable part of consumers' life. The application service of the communication network of the E-learning of science & technology are portable, movable, personal-based and so on. Along with the development of 3G, the individual product of the E-learning of science & technology is of progress, and the structure and technology of communication is of promotion, even expands to the entire information industry possibly.

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