

# The Personal Digital Assistant Promoting the Teacher's Instructional Innovation

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*Abstract* : This study intends to investigate Digital Assistant (PDA) is net devices and its application in education. The study went through literature review and staged interview. The interview process targeted on students and parents from an experimental primary class located in Kaohsiung County, southern Taiwan, They all joined the digital experimental project in that specific primary school. In the experimental period each parents in that class were distributed a PHS phone. Through message transmission and mobile net communication, parents discussed and shared feelings with teacher and other parents through using mobile devices (pros & cons). Finally, as reference material, it concludes by making suggestions for educational government authorities, primary school administration departments and teachers who utilize PDAs to achieve teaching innovation.

*Keywords* : Digital Assistant (PDA) , Teaching innovation.

## 1 .Introduction

In recent years, with the emerge of Internet, Information Appliance (IA) has become the hot product in new Internet population has made net surfing a part of daily life activities. More and more updated versions of mobile devices are going to bring rapid expansion of wireless network. According to eTForecasts report, the number of Internet users surpassed 1 billion in 2005 globally among which connection via the wireless takes 365 millions; the U. S. continues to lead with nearly 200 million at year-end 2005, followed closely by Japan, China, Germany, and U. K., Taiwan ranking as the 15th sion, videotape, radio, etc. Having witnessed that, the PDA is expected as another tool incorporated into education, enhancing students' diverse contact and application of the cutting edge, and then further analysis and comparison in order to create new or convey the information acquired. This study intends to demonstrate handheld mobile net devices application on education, to

provide reference opinions and information for teachers and educational officials in charge.

## 2 .Definition and Condition

The wide distribution of internet services made it an indispensable part of daily life. Trends of digitization, broad-band internet, and interaction promote integration of conventional consumer electronic products with computers and the internet. People increasingly access audio and video data or search for information via the world-wide web, while the out-of-date way of connecting onto the net through a computer is complex and expensive. As a result, 'informational appliances (IAs)' discard the PC's complicated architecture, presenting as simple, low-price, and consumer-oriented (Lynch, Patrick Horton, & Sarah, 2005). There hasn't been yet an explicit standard as to what exactly is IA; however, all those which have internet functions and are able to exchange and process information with other devices can be named IAs.

Casio Inc. But the Apple announced Newton, HP and Sharp also made public their versions in August 1993, two months earlier than Zoomer, and then Zoomer didn't sell well. Besides, too big size and lack of practicability so far, the market response wasn't good, so gradually many companies stopped investing in PDA development until 1996 Jeff Hawkins introduced the prototype Pilot 1000 of the Palm family with Graffiti the handwriting identification system and pocket size and single item sale price 299 dollars, which was well-received in the market. While developing Pilot 1000, the Palm Computing Inc. was bought by U.S.Robotics which was merged by 3COM in 1997. As a result the Palm Computing became a department of the 3COM. The 3COM announced Palm III's entry into the market in 1998 spring, which with good marketability established Palm Pilot market share ever since [8].

## 2.1 Definition situation

Due to the complex and expensive conventional connection onto the Internet via computers and for meeting specific demands, the Information Appliances do away with the PC's complicated architecture and occur as simple. According to IDC, an information technology market research firm, the so-called smart or intelligent hand-held devices come in various types low price and consumer-oriented. At present time there hasn't been a clear definition of the Information Appliances but as shown by existing related products all which can be networked or exchange information with another IA device can be described as IAs. one device can be said to be a PDA as long as it provides some sort of personal digital assistance. United States leading these world hand-held mobile net devices market, followed by Japan, etc. [2] Taiwan does not possess much of proportion of the global market, though, the number is stepping up [4] [5].

It once possessed twenty-six percent in the American retail market in less than six months. The second large market is Japan, where according to survey the sale was 994,000 units in 1999, about fifteen. Now the US is the main market of PDA [1], occupying around seventy percent, among which the retail has thirty to forty percent, indicating the PDA has been gradually accepted by the public. In view of this the Handspring, after being authorized for OS by the Palm, quickly entered the consumer market

and caused hot purchase all the way from cyberspace net shops to large computer sale shops [6], percent in the global market. But in 2000 its global share decreased to twelve percent despite global rise of some forty percent to one million and two hundred sixty four thousand units. while domestically in Taiwan there have been the Acer, Asus, etc. joining PDA manufacturing.

## 2.2 Type application on education

According to American website K12 Handhelds (2002), educational uses for handheld information devices include:

### 2.2.1 Administrative applications:

Keep your schedule; Track student progress on specific skills; Use a calculator; Instantly access student information, such as schedules, demographics, or parent contacts; Organize your reading lists.

### 2.2.2 Communication and collaboration applications:

Send an email; Send or receive a fax; Make a phone call; Distribute school activity information to students and parents [2]; Exchange information with a colleague; Share a downloaded web page with someone. Send assignment information home to parents

### 2.2.3 Teaching and learning applications:

Take and store digital photos for a project; Make a spreadsheet; Draw a picture [3]; Make a concept map summarizing a chapter; Form, visualize, and solve equations; Keep track of your class schedules, assignments, and grades; Record observations on a field trip [7].

## 3. Study method

This research went through concerned literature and chose a class in a Kaohsiung county participating in digital learning special case, and then every couple of the parents was assigned with a PHS handset. After experiencing sending messages and mobile net function, their feelings and opinions were discussed and conclusions were made. Later those reference material will be sent for educational officials in charge.

## 3.1 Subject background

The research procedure of this research, after probing into relevant documents, through time of focus group interviews, understand it utilize implement palm type individual several assistant on teaching gains that practice work. improve the transition situation innovated in teaching.

### 3.2 study of the case

Research this have eight case in all, individual several user of assistant all at ordinary times, and apply it to teaching. So, these eight teachers become this representative case of research.

#### 3.2.2 the interview outline result spends the target

During this time they just began to get familiar in PDA's various operational functions. "An idea pop to my mind that the digital gadgets may be useful in students' management and record keeping. For the first time, I was not used to it, sometimes I found it even more troublesome than writing down on paper expert in order to set up the interview outline of research result degree, have deep use experience and research via PDA to individual.

## 4 Analysis and discussion

Analysis via the interview text, divide and state it as follows:

#### 4.1 the case teacher is using in PDA in the early phase of using digital assistant it's of little help.

The case teacher is using individuals in the auxiliary teaching initial stage of PDA, PDA' every application function is waiting to be familiar with to individual; So, it is unable to innovate teaching helpfully. Sometimes even than bring paper is it take a lot of trouble to write down.

#### 4.2 Accumulated using experience

The teachers will do some good to use experience with growth of time while using individuals PDA, relevant websites offer the consultation of various fields and get in touch, irritate the teachers and carry on the try innovated in teaching.

#### 4.3 PDA individual apply to teaching, it has not already been rare, the users have already utilized and promoted teaching to innovate.

The PDA have been assisting a personal technological assistant all the time, the teachers use individuals although the proportions of PDA are not high, with the facility of the internet network, these use past master to concentrate it in the network, form application of a share agitation, haranguing it to apply to gains on teaching, teaching innovates to using PDA teachers, it is no longer a fresh noun. PDA share the gains to individual on the case teacher now, analyse that descriptings as follows:

too, is really interesting, students think it very fresh (hh05) too.

teachers that use technology, introduce the technological products at the teaching scene, use technology to assist the learning aid, let the

children can reflect the intention of technology in the technological society. The case teacher proposes that the evidence is as follows:

## 5 Conclusion

The interview To summarize from documents of the interview we discovered, one initial stage such as assistant such as individual, innovation in teaching almost there is no help. individual several assistant apply to teaching, it has not already been rare. except innovating in teaching, lead the teacher to be exposed to and use technology, it is a fountainhead innovated in teaching even more. echnology product utilization brings additional value for teachers. From the beginning, lack of proficiency may cause inconvenience, but insistency and determination of trying new things is really rewarding. PHS PDA is just a tool, persons who using it is the deciding factor. Features of multimedia adjust for personal need and make it portable can be useful on different areas and will broaden the scope of information technology. Through this experiment, research team received good response and effects are proven to be useful, which will be rendered as references for people who willing to attempt cutting-edge technology in education.

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