ICT Education: Digital History Learners
Lee Bih Ni, Elvis Fung

Abstract—This article is to review and understand the new generation of students to understand their expectations and attitudes. There are a group of students on school projects, creative work, educational software and digital signal source, the use of social networking tools to communicate with friends and a part in the competition. Today's students have been described as the new millennium students. They use information and communication technology in a more creative and innovative at home than at school, because the information and communication technologies for different purposes, in the home, usually occur in school. They collaborate and communicate more effectively when they are at home. Most children enter school, they will bring about how to use information and communication technologies, some basic skills and some tips on how to use information and communication technology will provide a more advanced than most of the school's expectations. Many teachers can help students, however, still a lot of work, "tradition", without a computer, and did not see the "new social computing networks describe young people to learn and new ways of working life in the future", in the education system of the benefits of using a computer.

Keywords—ICT Education, Digital History.

I. INTRODUCTION

Information and communication technology should be an ongoing part of the curriculum from early childhood. Information and communication technology has become an important tool for teaching and learning. It allows a more personalized learning in schools and greater flexibility. Millennium newborn significant impact on research in the emerging digital home education students will encounter, we need to consider the cognitive skills of digital technology and the impact of learning expectations. Moreover, social values and lifestyles of the evolution of important issues All this will have an impact on education, we must take into account in the design of a new syllabus should also be noted that the increasing use of information and communication technology will also affect the valuation techniques. Using ICT throughout the academic year and then providing end of year pen and paper tests are not a compatible exercise and will affect adversely the pupil performance. Therefore, the evaluation should also be mirrored, ICT in the classroom and how general education has been used. STEP study [1] funded by the Lifelong Learning (LLL) Programmed provides interesting results, according to the hope of the report's recommendations:

a) Eighty seven percent students to use information and communication technologies more motivated. The impact

of information and communication technologies in digital literacy not only for students, but also for communication, language, social skills and cognitive them. Driver, in order to increase the impact of information and communication technology in primary education teaching and learning tools, support and content. However, the information and communication technology-based teaching cases have a huge impact. Recommendations came out in June to attend the seminar 2009 STEPS research experts, ICT expert groups and other stakeholders in the discussion.

b) ICT in secondary schools usually doubled, information and communication technology is used as a tool throughout the course depends on the device and access to resources, but also as an independent discipline in its own

c) Intelligence. According to the experts who met at this year's International Information Plovdiv Olympics (2009), [2] the programming is a very important lesson. It has a student who does not pass the efficiency of the development of other disciplines, and possibly information on students to choose their future careers impact.[3]

II. EDUCATION MUST RESPOND TO NEW DIGITAL MEDIA

Not all students will have the opportunity at home or elsewhere, digital resources, there are several reasons. In some countries, the most advanced computer from home is almost 100%, but there are still some homes without. Some people do not have access to the Internet (or broadband), because of where they live or their socio-economic status. Schools should provide students with the opportunity to develop digital literacy.

A. Use of Digital Media and Learning Personalized Learning Center

ICT and learning environment may lead to greater personal learning, in which an individual student for his or her own learning to take greater responsibility. In this case, the teacher / coach promoters are needed to involve in the practice. This allows each student to work at their own pace or promotion of the development and preparation stage. This is a student-centered model, based on the individual prerequisites and needs of each student and cultural changes, the teacher / coach asked students along different pathways to promote independent learning. Technology provided new environment for community to learn easily. This includes adult learners, lifelong learners, migrants and early school leavers. In the personal space of education and training will create the future of digital media by different authors, including teachers, students, and commercial production of the material.

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Teacher’s digital content is very rich potential source. In many cases, they started and schools to share and collaborate [4]
• the use of information and communication technology as a teaching and learning aid must be integrated into virtually every subject curriculum. It is not enough, because the students need to learn how information and communication technologies with the help of digital tools for learning to teach the operation.
• In teacher education and in-service training for teachers should be familiar with a variety of teaching methods, especially thanks to the implementation of digital media learning process. Learning, a more open end on the contrary, today's trend is more oriented standards.
• personalized learning, encourage teachers / instructors and students work together. Information and communication technology in learning provide a good tool for students and teachers. Personalized learning, allowing students to take their own experiences into the learning process (not externally defined).
• Information and communication technology-based learning, can benefit from a large pool of content available on the Internet, but not just based on that. Subject-oriented and didactic organized, targeted and customized digital content is urgently needed. Demand for software is basically necessary policy throughout the country to provide professional instructional development.

B. Bottlenecks and Challenges
Many teachers / coaches still do not practice application of information and communication technology in their classroom activities. However, many other teachers’ application of information and communication technology challenges in their repertoire of teaching methods has risen to. They realize that information and communication technologies in education and training aspects of teaching potential and everyday use of information and communication technologies in teaching and learning of their programs.

Learning environment, in the early stages of development, and in the work and life of most schools should be integrated. The purpose of education is not well-known online teaching. They can support a variety of independent and can promote their work, this is a face-to-face conversation and online learning blended combines
• some teachers in e-commerce matures and intentional use of ICT in teaching first step. The next step needed is to allow students in their classrooms use of information and communication technologies.
• graduate school in a basic electronic skills needed to effectively and efficiently participate in the knowledge-based society.
• the student's ability to set personal motivation and learning goals, achieve goals guide the research.

C. Range
It is also proved that positive impact of ICT learning and teaching improved student motivation to learn. Personalized learning or individual learning provides success through information and communication technologies. Students should be considered for the study, who participated in the learning process. Interactive teaching methods, use of information and communication technologies give all students the opportunity to learn by doing digital research. Active learning approach helps to develop a positive self-esteem and develop students' lifelong learning (LLL). Given the ubiquity of ICT is no longer a need to prove that there is a need to teach how to effectively use information and communication technologies.
In the past quarter of a century, the EU Member States have for the school in information and communication technology infrastructure investments and services provided pre-and in-service training of teachers in ICT. Changing role of digital media in large part was due to "re-discovered" teaching philosophy, such as Germany's "Reformpädagogik" which was developed in the last century. With the personalized approach to learning, students are no longer opposed by the required courses. Instead, students can now actively participate in their personal education. With more heterogeneous class of information and communication technology learning environment may lead to greater personal program tailored to each student. This approach allows each student's pace suited to his or her progress and development and preparation phase. In this way, students can meet different individual learning needs through customized ICT solutions. [5]

Individual learning, support information and communication technology solutions means that there are many benefits. The most obvious one is to emphasize the formative evaluation method that can be placed. A program is needed to provide immediate diagnostic feedback to teachers and students, and guide them in the acquisition of knowledge and skills in various disciplines. In this way, the teacher can monitor individual student progress and wise men to achieve set goals for each student; often has a positive effect on student motivation, which leads to better results. Students and teachers can use a huge success learning platform. Students from home or at school can access online courses. They are able to electronically submit their own work, and participate in forum discussions. Students would expand their horizons from other schools and other countries. Students personalize their own space, and upload their own information. For teachers, the learning environment and improve the methodology enrich and expand the experience of the disciples. With the online course design and development of appropriate interactive tasks, they can monitor and track student progress. The platform administrator can promote between school and home management and communication between staff. It is also beneficial to all stakeholders to become more responsible.

D. Learning Needs and Environment
Teachers need to place on the development of learning environments. They should be flexible enough to allow a decision to different types of content and learning paths, while ensuring reliable results. So it is not surprising that individuals learn to school slowly. In addition, teachers need to adapt to new requirements and individual teaching and learning
methods, at least in the beginning. They need to rethink and reshape their roles, which makes the transition from a command to personal lessons. Individual teaching / coaching change is the role of teachers in the traditional knowledge imparting reduction. Teachers at least partially relinquish his / her role as third party imparting knowledge, especially in the media. But the teacher still plays an important role in decision-making at the appropriate media reference to their learning needs of individual students and learning environment. [6]

Individualized teaching should be able to track students' strengths and weaknesses. Only when the teacher can correct learning opportunities, to accurately assess student achievement, he can provide a way so that students in the learning process. It's also need to monitor simultaneous detection of learning processes and learning outcomes capabilities. Learn more personal, less teachers can rely on standardized evaluation system. Therefore, the evaluation system must become more diverse. Of course, the individual learning of the proposed transition may not have the help of digital media to achieve. In fact, the concept of individualized learning has been released when the computer does not exist. However, in many respects, digital media can promote personal use clear learning.

III. CONTINUOUS MONITORING AND ASSESSING LEARNING OUTCOME

There is a huge range of computer-aided testing and online student learning outcomes. Many schools and educational institutions have also invested in a software program. The nature of the personal computer program, their answer is accurate or not, with the visual and auditory aspects of software services in order to motivate students’ immediate feedback, they enjoy the program and teachers report that it improves concentration and their confidence. These programs enable individual performance monitoring and evaluation. When using a key element of the program is very easy to create a student and teacher on the basis of the location, so a recognized benchmark data monitoring their progress with the passage of time.

It is directly under-performing students to identify and intervention strategies to improve learning and accomplishments have been achieved. The value of the software is to facilitate 'input from schools and settings individual, group subject or on the basis of whole-school improvement goals. E-Portfolio and student use is another trend. Portfolio of achievements and progress recorded in the designated area efficiency. They are a good tool to record a student in different disciplines and long teaching career. Learning Management System (LMS) can be used in the portfolio because they encourage students to provide specific evidence of his authority. They can generate a configuration file, the formation of the initial configuration file car. This is an information and communication technology-based approach to tracking the progress of students through the recording of evidence. In addition, the electronic portfolio is important that teachers' professional learning and professional practice to create a community.

A. Towards a More Self-Oriented Teaching and Learning Innovation

Adept at using a variety of media (podcasts, text, video clips, live discussions), students can support their learning and provide content and concepts have a deeper knowledge and understanding. Education need to use interactive multimedia software and different looking and the Member States and schools. With the traditional self-teaching and student led the country to independence learning methods, often find it easier to take advantage of the opportunities offered by digital media, compared with other countries, in the teaching has always been oriented teacher. However, self-teaching and learning potential of digital media to help achieve overall goals and objectives, it is great. [7]

Digital media produces a comprehensive understanding of problems and issues to illustrate learning process. It inspired the students to find a solution to the problem. Digital media is an excellent tool for learning at all levels in the individual as below:

- It provides information and ideas, and how the problem can be solved
- Support collaboration between students and related matters, the communication between students and teachers
- Helps record and demonstrate learning outcomes
- It can be used to assess progress (diagnosis)

Advantages of digital media teaching can explain by the following examples: [8]

- Multimedia learning environment provides students with opportunities and enough tasks, so that they follow different learning paths, based on their background, personal work and motivation. This helps students achieve more confidence and self-esteem.
- In the printed text, hypertext information can provide a dynamic and flexible. Links embedded in text reader offers the possibility of approaching the text the way individuals and to build their capacity.
- Interactive modeling and simulation, to actively introduce and explore the subject. They help develop and validate the hypothesis, thus extending the efficiency of students.
- Use of Internet-based learning management system to provide new learning opportunities: an Internet-based collaboration means and teamwork got a new dimension. Students unable to attend class due to unforeseen circumstances, you can participate via the Internet, and to learn from their peers in the same learning environment. They can be interactive - and perhaps synchronically - supported by the teacher.
- Slow Internet research strategies and methodologies to help build the knowledge (successful search strategies) in addition to promoting learning on the part of the students' learning strategies.
- Use digital media to record and present results, and propose solutions to the problem how to form and express their strategy of personal choice, as they provide a variety of processes and equipment. These examples show how
digital media support and help to meet the individual's teaching classes in the world today.

Appropriate learning environment (and content) through the use of information and communication technologies for learning and teaching requires proper design of digital content. School leaders should work together with the local authorities, known as the resource, classroom organization and collaboration among teachers, to take action. Successful integration of ICT in school development planning process to provide appropriate equipment, hardware, software and a suitable platform is a necessary prerequisite. Teachers may be very rich content sources and the challenge is to share and collaborate, create conditions for them in school and motivation. Changes of this type of work with schools and universities have begun to establish a cooperative and depend on the cooperation and work-sharing learning platform. However, teachers should not be burdened with the content of the production system. In many Member States from publishing and media center, media equipped with the media from the mass medium. Education policy should support this process system.

B. Learning to Learn with Digital Media

Use of information and communication technology as a teaching and learning aid must be integrated into virtually every subject curriculum. Digital tools to teach the operation is not enough, the students need to learn how information and communication technologies with the help of a learning process. The use of personal digital media was to promote independent learning, which in turn helps to make lifelong learning. Interaction, not only to accept the use of digital media, under the supervision of professional teachers, students need to develop the ability of the media, both in method and content. On the one hand, the continued development of digital media, dynamic, requires users to learn new skills. Successful adaptation to change is to strengthen students' self-confidence and willingness to respond to new themes and topics. Other hand, the increasing variety of information available online means that students have developed strategic knowledge and methods, able to select and use relevant information. Through digital media work, students become understanding and experience to continue to develop their skills and abilities, lifelong learning is very important.

C. Change Mindset

Turn on the digital efficiency priority in teacher education and training. Teacher education and training (pre-service and mid-career) is essential. However, it can also become a bottleneck to achieve digital learning in education and training aspects of the core competitiveness. Teacher training in various fields should include advanced digital capacity, rather than just focusing on ICT user skills of teachers. All teachers should be involved from the early education and training courses, advanced digital services efficiency and e-learning methods have been introduced. This training should take into account aspects of the use of ICT as a teaching and learning tool set school students as they use the tools. Understand the "key" and "quality" in this context to use digital tools. When used, the digital learning should include the development of digital media, a critical attitude. All fields and disciplines teachers and coaches should be confident and competent skills, they encourage students to use information and communication technologies for their learning in the critical and creative, search for relevant information, in different subjects, assessing the credibility of online information, in intellectual property, critical attitude, posted online content.

Teacher education and training for teachers should adopt practices and practical experience and resources is closely related to their daily needs. Promoting innovative learning methods is vital. With ICT innovative teaching and learning methods, which can be developed independently, the student center, they are actively involved in the learning process and encourage discovery and learning experiences, problem-solving skills, and so on. At the same time develop the skills and efficiency aspects of digital, digital tools such as online collaboration, self-confident and critical use. Early and in-service teacher training should publicize their views and encourage teachers to effectively use information and communication technology in teaching and learning, all school-related activities. [9]

IV. CONGESTION AND CHALLENGES

Trainee teachers in different learning environments and society should adopt different teaching styles. Their expertise, some outdated and no longer in the 21st century learning and teaching needs related. This also applies to the new media and qualified personnel are often unable to understand the digital space and all the opportunities.

Education has been slow to introduce new job description for teachers to list all the necessary qualifications and requirements, must be re-certified teachers.

Vacations and exchange programs, will give teachers time to gain experience in other areas of work in foreign countries, school or program in order to qualify for unusual and not normal practice.

It is needed to provide infrastructure and a complete work and electronic tools to teachers in the school system without the widespread impact. Additionally, there are incentives for teachers between the electronic working.

The majority of teachers are they ready to go home, because in the school's ICT infrastructure inadequate. If teachers are encouraged to spend more time in schools, and students must be given their proper working conditions. It also includes an extension to the virtual work space. Teachers should develop specialized services, and provide teachers with new learning tools to increase their commitments.

Plus the necessary action, learning content, model development, infrastructure challenges, decision-making and leadership, education, the quality of staff. Teachers and trainers education and training is essential. All subject teachers must strive to become the media's "literacy" as a set of skills is also a student needs acquisitions. Therefore, the focus of teacher education and training must be placed on teaching rather than on technical details and how to deal with some of
the ways and means of application. Teachers are faced with a purely technical-oriented methods are often scared, and may even feel that not enough places. Resistors use of information and communication technology in schools can occur if the teacher does not understand why it is important to consider ICT in the classroom and feel of visitors or overstrained. If these problems are technical, but because methods, in certain circumstances the necessity and importance of embedded software, not only for their own interests, made a profound impact, and achieved gratifying to the classroom teachers and students actually take new efficiencies.[10]

A. Key Lesson

First, the basic ICT skills, and then use critical and creative information and communication technologies. Teachers are generally able to work the most commonly used software to help them with their work (research, write documents, create presentations, etc.). But few can handle and communication technology tools in the teaching and training fields. Teachers need to have the ability to learn and innovate. Teachers with more information and communication technology-based student-centered teaching style are good way to teach them to do. We know from experience, the teachers are trained to teach them the way. In the Teacher Training College Board is the only way to force the information and communication technology in initial teacher training. But there is a need to encourage individuals to take the first step. Teacher training has entered a new phase, the necessary skills and use of information and communication technologies creative and critical ways: [11]

- How to use information and communication technologies for a variety of disciplines crucial. Any new technology integration is very important skill in self-confidence and critical ways to use this technology in teaching and learning
- value-added information and communication technology as a teaching tool
- new forms of communication (outside the classroom)

Then the next step is to use in the teaching of information and communication technology in teaching and learning environment and digital media. For example: European ICT teaching license – EPICT; MSC-Malaysia Multimedia Super Corridor.

Austria chooses to cooperate with a large part of the Danish far-job training model into teacher training programs. Education needs training focuses entirely on teaching and teaching problems. Every year teachers attended courses for teachers EPICT separated a few hours per week working on material provided by the office two or three friends EPICT learning directly in their own schools, their workplaces. In the group, teachers study and discussion of the material for each module, and then learning sequence design. Denmark patterns are different, there are additional teachers in the classroom Austrian try their planning, including reflection lessons (times), distribution reports. Currently, it ensures that the participants to the environment, directly to the learning development of teachers and schools have a lasting impact. Teachers do not participate in seminars, from the school, but to meet and talk, try and reflect on their peers. As can be seen, their achievements, other teachers, so they may trigger the development of their schools. Teachers try to provide the actual teaching, creating authentic learning environment, providing teachers in the classroom on the real situation, and will not lead to false expectations, whether it is positive or negative. [12]

Pay attention to the needs of teachers and trainers are great difficulties, teachers and coaches will experience in their profession paradigm shift away from teacher-centered to student close to the center, far underestimated. Teaching style changes needed to fully exploit ICT learning teachers and coaches may be difficult to accept. We need to consider the larger issues and dangers, in information and communication technologies into their teaching and training teachers to see. If the teacher asked the first question, they see the security. Practical teacher training is not from the consumer's attention. In other words, teacher training should be from all of the requirements. Slap happy and other cyber bullying creation of information and communication technologies of resistance. These requirements have been met, in Austria, electronic LISA School (teacher) e-learning networks, virtual teacher training institutions offering online seminars for teachers. Usually guarded "Pädagogische Hochschule's" (University of Education), seminars and courses, teachers can attend teacher training in Austria. Government needs to provide teachers with a certificate, complete their superiors, to record their training process. E-LISA Academy works include "Pädagogische Hochschule" production of the same type certificate. Online learning has received official status in Austria and teacher training system also seems to work for those in the education sector, do not immediately realize the potential of online collaborative learning. Over 10 years ago, electronic LISA Academy courses include self-study materials, leading to completion by the end of the task, which is to obtain a certificate. These courses have been with a specific theme and demand for teachers to expand their knowledge of teaching English, German or mathematical use of new media. In 2006, the college system complete course electronic LISA renews. Today, self-paced tutorial is mainly used as a reference, not as a course. In contrast, online seminars cooperatives introduction is vital too. They are characterized by a certain period of time, between one to four weeks, through seminars, but there are conflicts in the classroom or how to organize school activities, such as providing teachers in the classroom on the real situation, and how to deal with the course. Thousands of teachers have successfully completed the online seminars and more cooperation, so far, participated in more than one. These observations indicate that mobile e-learning is from the periphery to the center of the teacher's view, is now considered an accepted and commonly used method teacher education.
training. In addition, technical support schools that is often still difficult by the fact that not all students have access to computers or the Internet all the time. Ideally, each student has a computer at school and at home. It is important for teachers to see new potential and develop innovative teaching fresh and imaginative learning scenarios. [13]

B. More Innovative Teacher

Infrastructure construction and purchase of equipment, it is very easy, but to change a person's teaching style is more difficult. Teachers need to be familiar with the education and use of information and communication technologies in the context of a new concept. Current trends indicate that many in the education learning platforms and learning management system are designed socially constructed based approach to learning and collaboration. However, experience shows that teacher education and teaching methods are more familiar with the traditional method, requiring support for change. [14]

Explorations are inquiry-based, interactive modules designed to give students the opportunity to do history: to conduct research, analyze primary sources, and draw their own conclusions. [15] Each Exploration will have a separate tab containing specific teacher materials. Please Note: eXplorations are still under development and being tested. Some units are more complete than others. Eventually all will have a teacher resource section. They have included the names of eXplorations that are not yet live so we can see what is planned. If we are a teacher and would like to help in the development of these inquiry-based units, please let them know by using their Comments page.

V. Conclusion

Teachers can try new methods, and experience what it means to teach and learn in the 21st century should be established. University is an important partner, in this case, to accompany and evaluate experiments and technological innovation. Will introduce teacher education delivered blended learning, combining technology-based materials and face-to-face conversation. Combined with professional content production and production by the teacher will be an important task, need to identify and open source materials. Learning objectives and outcomes should be changed to reflect the acquisition of skills and abilities. In order to assist students to achieve the objectives and learning outcomes, we need theory with practical examples from the area. This will result in the examination and assessment of style student performance changes affects the entire education system. It will be a challenge, affecting their outdated experience, as a student, to solve the main decision-makers.

### TABLE I

#### UNIT 1 COLONIZATION AND REVOLUTION [16]

<table>
<thead>
<tr>
<th>Exploration</th>
<th>Description</th>
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<tbody>
<tr>
<td>The World Before 1492</td>
<td>Indentured Servitude and Slavery</td>
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<tr>
<td>Columbus and the Columbian Exchange</td>
<td>The Puritans</td>
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<tr>
<td>Spanish Discovery of the New World</td>
<td>Revolutionary America</td>
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<tr>
<td>Pocahontas and Squanto</td>
<td>Who Wrote the Constitution?</td>
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TABLE II
UNIT 2 PRE-CIVIL WAR AND CIVIL WAR [17]

<table>
<thead>
<tr>
<th><strong>The Duel: Aaron Burr &amp; Alexander Hamilton</strong></th>
<th><strong>The Alamo</strong></th>
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<tbody>
<tr>
<td><strong>Spirituals</strong></td>
<td><strong>Indian Removal</strong></td>
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<td><strong>Childhood in Bondage</strong></td>
<td><strong>Pre-Civil War History Through Music</strong></td>
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<td><strong>Children and the Westward Movement</strong></td>
<td><strong>Children and the Civil War</strong></td>
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<tr>
<td><strong>John Brown: Hero or Terrorist?</strong></td>
<td><strong>Why Did the South Secede?</strong></td>
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REFERENCES


[2] The study of the impact of technology in primary schools (STEPS) provides a detailed picture of national ICT strategies and their impact in primary schools in the 27 countries of the European Union, as well as in Liechtenstein, Iceland and Norway. Funded by the EU Lifelong Learning programmed, this study of ICT in Europe’s 209,000 primary schools was undertaken by European School net (EUN) and Empirica GmbH, with the support of national correspondents, researchers, policy makers, teachers and pupils in 30 countries. For more details, please see: http://www.eacea.ec.europa.eu/llp/studies/study_impact_technology_primary_school_en.php.


[8] Ibid.


[17] Ibid.