

ENRICHMENT PROGRAM

Professional Skills For Online Learning

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PREFACE

The author is very grateful because this book can be finished, even though there are various obstacles encountered in writing this book. This book with the theme 'Professional Skills for Online Learning' is expected to be able to provide insights and information that are useful for writers as well as for readers.

The pandemic has brought significant changes in learning. The main issue is the migration from offline learning into online learning. The book offers the way to develop one's professional skill in the new era of online learning.

In this book, the professional skills for online learning are explained from various point of views. It is started from theoretical to practical terms of the skill. The book discusses digital literacy and technology to support online learning. Hopefully, the book can help teachers and students to develop their professional skills during this pandemic era.

SYNOPSIS

Learning using online platform is a breakthrough to the education world, especially for institutions whose habits still rely on mostly using the physical or onsite meeting for learning. To cope for academic skills and professional development in delivering online learning, students must be ready to shift their learning activities from old practices to the more dynamic yet effective strategies to be successful. This book discusses several underlying theories that all academia must delve into, so that there are strong basics for designing the learning. Several practical ways to implement the online learning through music, games, and social media are also being outlined. The balance of theories and its application may inspire and guide students, teachers, and all educators to reflect on their education practices.

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INTRODUCTION OF DIGITAL LITERACY, THE PROBLEMS, AND LEARNING APPROACHES

Eunice W. Setyaningtyas, S.Pd., M.Pd.

Digital literacy now has become a term that is increasingly and commonly discussed in teacher professional development forums and in the field of education since the Indonesian people experienced the period of Work from Home and Learning from Home. This is because the ability and skills to track digital literacy must be implemented as effectively as possible in the face of changing modes of work and study. With the change it can be said to be relatively fast, teachers, students, workers, communities must be able to adapt and organize themselves in order to remain productive and interactive with the technology. The process can't be separated from various challenges. However, above all the inevitable challenges, educators understand that humans will always learn to cope and manage circumstances to produce progress and goodness. Digital literacy skill and learning success in this digital native generation will be formed with the help of educators who are always learning to facilitate with the right learning methods.

This chapter will discuss the basic introduction of digital literacy, on its definition, its elements, and its factors. This will lead the reader to reflect on the problems faced by students and prospective teachers during the process of mastering digital literacy skills. In the end, to overcome the existing challenges, the introduction of the potential for effective learning models

will be described so that they can be reflected back to evaluate the learning that has taken place.

A. What Is Digital Literacy?

While reading this section, please always pause to reflect by answering this question:

“Have I acquire the knowledge and having the skills for this matter?”

Digital literacy, in general, is an ability to access information from any digital source, to process and use the information effectively and appropriately in a context.

From education point of view, in a more specific definition, digital literacy is seen from computer literacy and information literacy. *Computer literacy* is the ability to operate and use the hardware (i.e. computer, gadgets) and software (i.e. application, operating system). *Information literacy* is the ability to process, analyze and use the information properly to the purpose and context. In order to master all two literacies, one has to train how to use the mind (cognition), the physical action (kinesthetic), and the moral ethics (the affective). In *computer literacy*, a person needs to know the procedure in operating the hardware, identify the function of each buttons or icons, analyze the working system and decide which system works most effectively for a particular use, problem-shot, even modify how the system works, and also keep up with the updated version of technology advancement and doing all the learning of that new technology. The literacy for software use is also important to make sure the person is using the proper and right tools to support and carry out every task. This means

a person knows the difference of each different usage/ function of an application/ software, the advantages and disadvantages, and decide on which tool to make the task can be successfully done.

In order to master the *information literacy*, a person needs to train continuously to be a critical thinker, critical reader or audience to a source of information that has been received. When receiving an information, we tend to give response to it and use it for our matter. However, with so many sources and points of views, the information need to be filtered and criticized thoroughly before use. Any information must be assessed by careful analysis and evaluation before being transferred to other people or used as underlying belief for an act. To be a successful critical thinker in assessing an information, there are methods that can be applied. In Paul-Elder (2014) there are elements, standards, and intellectual traits of critical thinking, all those to do a deep check on an information. Only after then, a person can use the information to be passed on to other formats.

There are elements of developing digital literacy. It was explained in Belshaw (in GLN document, 2017) namely:

1. *Cultural*. It is comprehending the diverse settings or context in which digital users operate.
2. *Cognitive*. It is the ability to appraise content through thought.
3. *Constructive*. It is the construction of any professional and actual thing.
4. *Communicative*. It is knowing how networks and communications work in the real and digital universe,



5. *Responsible confidence of using the technology.*
6. *Innovation of new methods to do things.*
7. *Critical thinking in responding to a content.*
8. *Societal responsibility in using the technology.*

Those elements connect to each other and form a specific level of ability, skill, and habit of a person's digital literacy. In forming teachers' level of competency, a teacher must realize or be aware of those elements, do several analyses for each element to identify the details, and then start modifying or make optimal use of the elements to expand and deepen the digital literacy competence. This self-development will be a great help for the professional task completion, as well as adding the quality of teaching, designing the learning and assessment, which later will benefit the students. Students can have a role model for a digital literate teacher and furthermore, student will experience the instructional design that is enriched with technology.

B. Challenges And Problems

While reading this section, please always take time to reflect by answering these questions:

***“How is this matter happening in my surrounding?”, and
“What can I do to make the condition of this matter become better or more effective for my community?”.***

Challenges and Problems of Digital Literacy in Schools

Challenges in digital literacy comprehension and skills are real in Indonesia, where the gap of education quality and facilities are high in cities and villages. The challenges range from the



availability of the facilities across every schools in the country, to teacher's capability in using technology and designing instructions, and face the students condition and ability to reach the facilities and skill mastery. However, challenges will be problems if not taken care of properly and effectively.

In the Guide book of Indonesian Digital Literacy Movement (2017) there are indicators that are used to assess how far have the digital literacy implemented or experienced by the school citizens to foster the students' capability in facing the digital society demands. For every indicator, teachers need to stop to reflect towards their own condition in their environment. Analyze, assess, evaluate, and creating initiative to make a better system to be applied on their working place or in their living communities.

The first are *class-based* indicators, that includes:

- a. The number of head schools, teachers, and education employees who have attended digital literacy training;
- b. The intensity of the implementation and use of digital literacy in learning activities; and
- c. Principals', teachers', staff education's, and students' knowledge of digital media and the internet.



Until present there are still thousands of in-service teachers who are joining professional development for technology and teaching model enhancement. The increase of technology literate teachers is evidence, yet many more are still struggling, especially in rural area. With this, the intensity of implementation and use of digital literacy might be falling behind, since the school citizen' knowledge in implementation

is limited. This condition must be a reflection for future teachers. Are you developing the three indicators as the requirements for creating the instructional?

The next are *school culture –based* indicators:

- a. The number and variety of digital-based reading materials and teaching aids;
- b. The frequency of borrowing digital-themed books;
- c. The number of activities in schools that use technology and information;
- d. The number of presentations of school information using digital media or web sites;
- e. The number of school policies on the use of and application of information and communication technology in the school environment; and
- f. The level of utilization and application of information and communication technology in the school environment.

Reading habit of Indonesian students has never been in a reputable rank among the countries around the world in the past decades. Before the online learning, school librarians and teachers must do endless effort to get students enjoy reading in libraries and homes. During the online learning period, reading activities should adjust to the new habit with the big help from parents' involvement. Have parents provide sources for book reading physically and digitally? From the school side, have the school promote their digital literacy to the students?

The following are *community-based* indicators:

- a. The number of facilities and infrastructure at schools that facilitate digital literacy;



- b. The level of parental, community, and institutional involvement in the development of digital literacy.

Facilities and infrastructure can be varied among schools, however with effective management, creative ways can be fostered to students, teachers, principal, parents, to acknowledge digital literacy and use it in everyday learning activity. The community can be one of the sources to enrich the enforcement of digital literacy. The lack of digital books can be handled by letting several books to taken home for a month and reported, delivering online conferences once a week, etc. In the hands of creative teachers, limitation of facility raises creative ways of problem solving.

Digital Literacy Challenges in the Family

Family is the most important union in nurturing children's' development. The education and monitoring must happen every day in love and care in shaping the characters of a person. Hence, the family unit will be a role model for a child in every aspect, including shaping the digital habit. Whenever needed, teachers might need to educate the parents as well over some conditions around the home in case of these conditions:

- a) the number and variety of digital literacy reading materials owned by the family;
- b) the frequency of reading digital literacy reading materials in the family every day;
- c) the number of digital literacy readings read by family members;
- d) the frequency of family members' access of internet use;
- e) the intensity of family members' use of digital media in various activities; and

- f) The number of family members who have received useful and meaningful digital literacy training.

Each aspect needs to be examined because they affect significantly to the children's habits, needs, and problems. Which condition in the family affects the most to the children digital behavior? How can parents help children to form a good habit and ability in digital literacy? Can schools serve parents the knowledge and tips for parenting regarding this topic?

Digital Literacy Challenges in the Society

Digital literacy in the society includes several aspects, as mentioned in the following points:

1. the amount and diversity of digital literacy reading resources available at each public library;
2. the number of times per day that digital literacy reading materials are read;
3. the number of people who read digital literacy materials on a daily basis;
4. the number of communities, institutions, or agencies that actively participate in the provision of digital literacy reading materials;
5. the number of public facilities that support digital literacy;
6. the amount of public digital literacy initiatives
7. active community engagement in digital literacy initiatives;
8. the quantity of appropriate digital literacy resources.

Looking at these indicators determined by Indonesian *GLN/* National Literacy Movement (2017), how do you think the level or status of each point in your place? Do you think your society

care about building a good digital literacy habit? Which ones of the indicators mentioned above that concern more to young learners and young generation as a whole? What things can your community/ you do as a teacher to create better atmosphere for young learners?

Critical and Ethical Issue in Soft Digital Literacy

Besides all indicators of digital literacy, there are other challenges facing all the generations which is related to the critical and ethical issues. Some of it regarding the information validity, freedom and ethics of speech, and security to information access. Related to information validity, there are false, misleading, incomplete, or provocative information with little truth, evidence, and logical are common dangers in free-access information. Those problems can lead to a more serious clash and disunity among the society. Nowadays, there are so many cases of hoax, bullies, and other provocative materials in written and spoken language that ruins the generations' morality and social tolerance. This problem is also faced by children as they are already familiar with communication gadgets with access to millions of random sources that can provide positive or negative materials. Seeing this problem, teachers need to teach the skill to critical thinking, which leads to critical listening and reading. Hopefully that the practice in the classroom will be applied in other context and situation where they will receive information, which later will develop careful and wise speech or written opinion as they have been based by analysis and evidence. Related to the freedom of speech, teachers should also teach that in a democratic country like Indonesia, people can express their ideas in a responsible and respectful manner. Activities such as debates, discussion, and meetings, can be good training places in the class where

students are encouraged to be brave in delivering their ideas yet applying a respectful manner. Not only the practices will train a respectful way of saying something, but also serve as chances to think analytically to see the various condition from several sides that might be affecting to each other, and strategically create a solution that is expressed by honorable language. Related to the problem of information security, teacher must be aware of the potential that can happen to all virtual or digital account owners when it is not properly secured. This is an important lesson as well to avoid bad things happening such as fraud, stalking, also illegal use of other accounts.

C. Learning Models For Digital Literacy

Despite the challenges and problem, technology and digital literacy serve significant benefits in all aspects in a modern life. It is inevitable to be taught and used in education, so teachers need to be updated and add their capacity about digital literacy. Computer literacy and information literacy cannot be separated as they provide each other. It means that teachers are not only required to learn about the technology and information literacy, but also how to use and teach them for classrooms in a thoughtful consideration with ethical teachings. The following section will explore about potential teaching and learning models

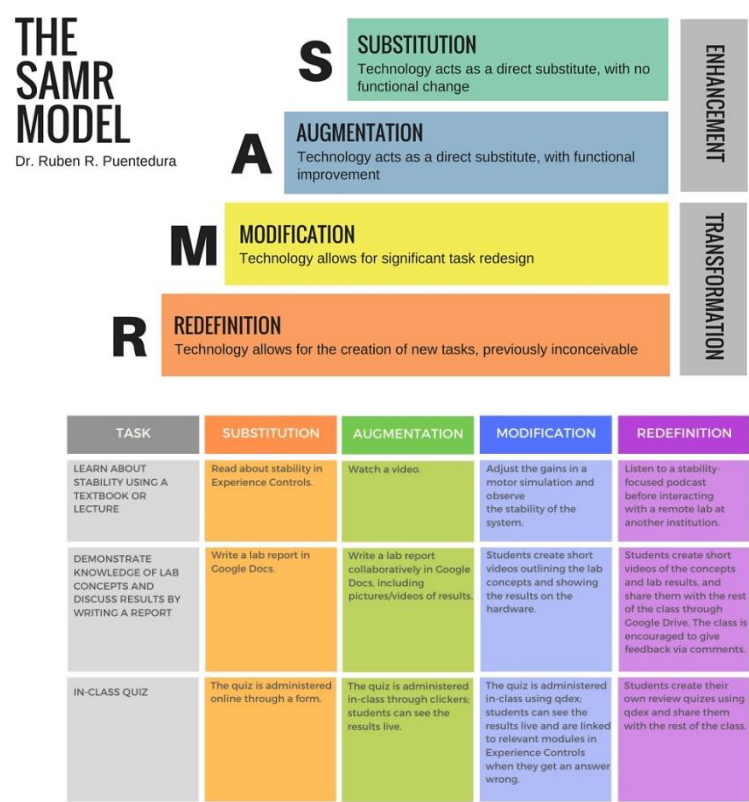
There are some digital learning theories or approaches for classroom instructional, such as TPACK, SAMR, Digital Blooms, Peeragogy, and other several more. Teachers can decide on which theories that works best for a curriculum that enable students to utilize technology to study, curate, annotate, create, innovate, problem-solve, cooperate, campaign, reform, and

think critically by learning these theories. Since TPACK and Digital Bloom has been discussed in the previous book of Enrichment Program 1, we will take a look at the SAMR and Peeragogy. While you are reading, please reflect on how have you used digital literacy skill in your learning.

D. SAMR

SAMR stands for Substitute, Augmentation, Modification, and Redefinition. They are categorized into two function as to transformation and enhancement. The enhancement function includes Substitution and Augmentation, while the transformation includes Modification and Redefinition. The Substitution happens when technology serves only to substitute or replace a form of task, without any changes of function. For example, using application such as presentation with PowerPoint, Prezi, or Emaze, to substitute paper and written documents, or Paint app for drawing. The function is the same, only the form is different. The Augmentation happens when the tool has enhancement function that give students advance experience and productivity. For example, Powerpoint can be designed for making simple games. Another example, taking notes can be done collaboratively and saving various kinds of documents such s videos, websites, pictures, rather than just a written text piece. An augmented reality can be used for studying a skeleton. In Modification stage, there is a change because technology can alter the learning task. For instance, a teacher can make a different learning activities by making students explore and research from social media to analyze language use among people. In Redefinition, technology can alter the way learning takes place, the way activities carried out, students interact, and also define the form of product, and even creating a new task. When the class

theme is about history of civilization, students might decide to use a digital organizer to manage their task, explore the array of option from the internet about any civilization, store the information using various tools, also might be interested to demonstrate a cultural information that they have learned and work it on a collaborative video, which later being discussed online to get feedbacks.

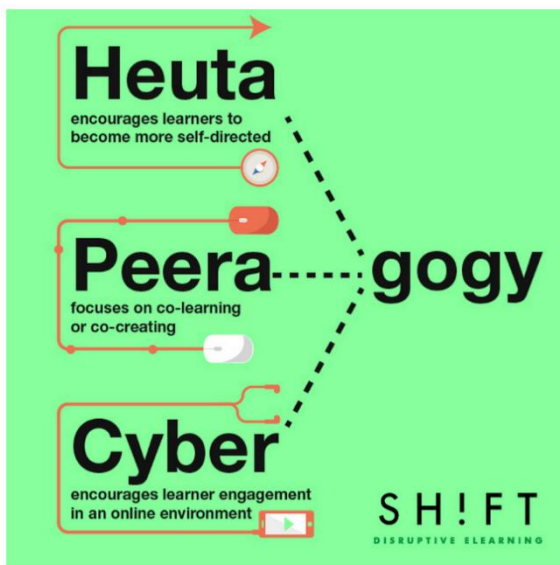


Source: www.quanzer.com

Peeragogy

Peeragogy is the practice of peers studying alongside one another and assisting one another in their learning. The notion is that everyone contributes in their own unique manner to the group. Each peeragogue's contribution is contingent on a healthy sense of self-awareness. However, successful learners need to have intrinsic motivation to be contributive to each other. Then, successful learning will also be determined by the media or technology that is applied for the peers. It is a learning of two or more learner teach and learn from others, particularly interested in how co-learners collaborate to construct their learning environment, and it potentially lead to a students authored syllabus. Inquiries, discoveries, problem-solving are very likely to happen in this group.

In the meantime, along the process, the media used for this collaborative learning plays important role, which makes technology comes in to unify all the works, ideas, and results from each learning participant. In a more specific term, the first stage requires self-motivated learner to do individual work. Then learners will compromise in the collaborative task with the peers. In this stage, digital literacy will take place, peers will learn how to use technology that best suit their needs.



Source: <https://www.educatorstechnology.com/>

Peeragogy approach is applicable for adult learners as they are seen to have gained self-control ability to create their own learning. Student teacher is a suitable role to practice this to experience the challenges during the process. Peeragogy is also applicable for younger learners. With prompts and guidance from the teacher, initial example and generous feedbacks, younger students can create their own instruction to develop their learning in their group. Inquiry is a useful tool, and this will encourage emergent learning to occur, which is a purposeful, iterative study of a locally specified arena of action through continuous learning activities. In emergent learning teacher monitors students' progress and direct students' whenever they lost the main purpose or can't decide what to do. By practicing this kind of learning, students are trained to author their own learning independently but also collaboratively.

Reflection for Student Teachers

SAMR and Peeragogy are two approaches that can be used to balance technology and education in class instructional, other than TPACK and digital Bloom. The practical methodology in the learning must be carefully formed with consideration of the classroom characters and needs. The degree of digital literacy can be varied in different classrooms, not all kinds of computer literacies must assist students learning, yet information literacy is important to be learned. Despite the negative effects of technology, it enables people to express ideas and thoughts, also to connect and work with other people. Student teachers will always be the hopes for the next generation to be able to handle the education practices. Learning about computer and information literacy will not only benefit individuals to build teacher character, but also benefit the students learning instructional. The technology will always develop, which is a reason that teachers need to be able to decide the most suitable approach to manage technology in learning and its ethical practices. All the learning of digital literacy is without putting behind the ethical teaching, and it requires all social aspects- family, society, study environment, government attention-, to make people use the digital literacy competence in a high responsible manner.

21st CENTURY, TEACHER, TECHNOLOGY AND TPACK

Yohana Setiawan, M.Pd.

A. Human and Education development

Humans are living things who are proficient in creating new tools (or in this case called technology) to make their life easier. Humans had created tools from rocks, woods, and bones since 3,5 million years ago to support their life. It does not stop with those ancient tools; human continuously develops themselves until they found electric battery in 1800s and touch screen in 2000s. Humans will continue to upgrade their technology to make their life easy, advanced, and fast (Woodford, 2021).

Humans' technology development is related to industry revolution. In 21st century, education is directed to produce humans who are ready for industry 4.0 to industry 5.0. Demartini & Benussi (2017) said industry 1.0 at the end of 18th century was related to machinery (steam engine), then developed into industry 2.0 starting in the 20th century related to electronic goods. Industry 3.0, which existed 60 years after industry 2.0, was related to microprocessor and programmable logic controller that made everything runs automatically. Industry 4.0 is a world of machines that can interact each other efficiently. Since the development of technology is fairly rapid, it cannot be possibly offset by traditional education as the primordial man did, right?

Beside industrial development, human life cannot be separated from the existence of a web or information pages/sites that can be accessed quickly. The web also develops with the term web

1.0 to web 4.0. Kujur & Chhetri (2015) said web 1.0 (hypertext web) allows humans to only access or search information and read it. Web 2.0 (the social web) is used by more users, where humans can participate, collaborate, and distribute information.

Gerstein (2014) and Demartini & Benussi (2017) say that education also has its version in line with the development of human civilization. There is education 1.0 to education 4.0 (still emerging). Education 1.0 relates to the old culture in teaching and learning, namely receiving, responding, and regurgitating. Receiving is when the teacher gives material to students, responding is when students take notes, read, do assignments. Regurgitating is when the teacher gives a question as an assessment according to the material he has conveyed. All children will be seen as equal. Education 2.0 is used in line with the development of web 2.0 where teachers can interact with students, students can also interact with other students, and students can also interact with material. In education 2.0 there is a 3C term, namely communicating, contributing and collaborating. Maybe this 3C is not foreign to SWCU BIPE students because lecture activities already use websites to find information and even create social media related to education, students also collaborate in group work, consult with lecturers, produce products such as power points, podcasts, and take advantage of web 2.0 tools.

Education 3.0 is a completely learner-centered education or the term self-determined education. In education 3.0 there is also the term 3C, namely connectors, creators, and constructivists. Students who will determine what, why and how he learns freely, sounds like independent learning, doesn't

it? The interesting point is that the teacher is no longer a source of all information, no longer a test taker, the teacher will be free from the curriculum target, the teacher becomes a complete teacher, namely teaching what students want to learn. Students are the center of education. Education 4.0 which is being developed will use technology assisted by Artificial Intelligence (AI) in line with web 4.0 which will help humans to develop themselves.

By looking at human development, prospective teachers need to open their eyes that when they graduate and become teachers they will not be lecturers. Even the extreme thought is that maybe teachers are no longer needed because there will be AI that helps students learn. Then what should we do?

Activity 1

Please answer these questions and share it to your friends.

- What do you think about Industry 1.0 – 5.0; Web 1.0-4.0; and education 1.0-4.0?
- Try to imagine you live in Education 4.0. era, what will you do as a teacher?

B. 21st century Teacher and technology

Based from my experience, in this 21st century, technology and the four teacher competencies (pedagogy, personality, social, and professional) must go hand in hand, let me break it down. There are four competencies that must be possessed by a professional teacher, namely pedagogical competence, personality competence, social competence, and professional competence. Pedagogical competence is related to the teacher's ability to understand students and manage learning. In this case, the teacher can adjust the use of technology in

understanding students. Palekahelu, Hunt, Thrupp, & Relmasira (2016) noted that from the total of 1738 respondents of elementary, junior, senior, and vocational highschool in Salatiga, there were 80.5% own mobile phones, while 19.5% do not own personal mobile phones. From the total of 1399 students that own mobile phones, 92.6% own one mobile, while the other 7.4% own one or more mobile phones. From the 2016 data, shouldn't teachers be aware that students are not ignorant creatures? Especially in 2021, where learning is forced online because of the pandemic, don't students use gadgets to study? Therefore, teachers must begin to identify the technological capabilities of their students.

There are things that are quite worrying in Indonesia, when accompanying PPG students in their 2020-21 positions, I found that their elementary school class teachers were still not proficient in using technology. Let alone skills, infrastructure facilities are still limited, sometimes the power goes out and there is no signal, then how can they use technology for learning? I really encourage students to learn a lot about using technology not only in making media but also using it in conducting learning assistance starting from opening, classroom activities, to closing activities. How does it work? Online activities can be facilitated by several virtual face-to-face applications such as Google Meet, Zoom, Big Blue Button and others.

Personal competence is a competency that arises from within the teacher as an individual who can be used as an example. Teachers at least want to develop themselves, lifelong learning including learning about technology.

As discussed previously about the development of industry and the web, teachers must have social competence which is reflected in how they communicate in social media such as WhatsApp, Facebook, Twitter, Instagram, Tik Tok and others. Sumampouw (2020) and CNN news (2021) noted the negligence of teachers in social media. Maybe because you want to be famous, or just stupid in sharing information. Teachers are required to have a high social spirit, so it is important for teachers to maintain their attitude in social media. One of them is by not

Professional competence is the teacher's self-development, one of which is by utilizing technology to obtain information, communicate, and access journals and publish the results of the research he does. Teachers can search for materials through websites, develop media with existing technology, and conduct research assisted by technology. So it is clear, if you want to be called a professional teacher, the teacher must be able to make friends with technology.

How do 21st century teachers respond to existing technology? Clouse & Alexander (1997) once wrote tips on how teachers collaborate with technology. 1) include computer classes in the curriculum, 2) use computers for personal and professional development, 3) understand copyright (no plagiarism), 4) practice knowledge of technology in a social environment, 5) create and use appropriate applications, 6) use basic computer terminology correctly, 7) use computers for learning, and 8) familiar with various types of computer hardware.