 ISSN: 2597-4319

CONSTRUCTIVIST PERPECTIVE THE INFLUENCE OF ICT FOR SCHOOL EDUCATION

Ariski Damanik[1], Lanny Febria[2]

[1]English Language Education Department of State University of Jakarta
[2]English Language Education Department of State University of Jakarta
[1]riski3damanik@gmail.com
[2]lanny.febria21@gmail.com

ABSTRACT

Constructivist Perpective the Influence of ICT for the School Education discusses how information and communication technology takes part in contructivist learning approach in which the students find out the information by themselves. As students of SMK Fransiskus still difficult and unable to find out the meaning of learning and information by themselve ICT presents to helps them In the school to find knowledges and share their capabilities to each other using ICT in teaching learning process to increase their knowledge into the range of worldwide. ICT in line with the constructivism approach overcome the students difficulties in finding new information and release the image of having particular information and one knowledge that is from teachers as a single source. ICT present to solve students bored that bring them to exitement that knowledge can be accessed from anywhere in the worldwide.
Keywords: ICT, constructivist perspective, influence, teaching-learning; knowledge.

INTRODUCTION

There are many places where people can get knowledge and can be educated. It can be started from the basic place which is family as the source of first knowledge and first educator that we called it as informal education. School is one of the places where people can get knowledges and can be educated in the formal way. Talking about school means also talk about how people are educated. It means that when a school is built, one of the important things is the existence of the elements in school. The elements here refer to people as the actor for the school management and processing, especially students and teachers where the knowledges themselve be aplicated.

Many people do not go to school because of some reasons. Facilities can be taken as an effect that let people do not get the formal education one in school. It means that how the elements are working and processing is really important to attract people to come to school. To process, there should be things that help to facilitate in achieving the purposes of processing. In this case refers to the media that are used in the process of sharing knowledge.

There are many ways of how people (teachers and students) share knowledges. But sometimes those ways are not used effectively. We have moved from the past when teachers

are considering as the center of knowledge in which teachers is the only one that have the knowledge to share. Now we have changed it into teaching and learning as the student center. Now one of the ways of teaching that present is teaching using ICT. ICT is one of the suggestions to be used as stated by Freiberg and Driscoll (1996) about the guidelines that help students make better sense of the material.

For the recent years we cannot deny that ICT takes part and a big role for any aspect of human life. ICT that are becoming increasingly pervasive in societies around the world are also reaching schools. With numerous global advancements in ICT it is essential that educators have a thorough working knowledge of these media and their influence on the performance and engagement of the students. It is so because ICT bring a new spirit for the student and teacher and allowing them in sharing knowledges using different ways. It helps student who were not good in giving attention become better and even get the deeper understanding. Taking for example there are many references on the Internet that deal with exciting and important projects. Use the search engines to find additional information about the topics and information about other new works by searching and then narrowing the searching in accordance with the interests.

RELATED WORK

Constructivist

The constructivist believes that each learner must construct meaning for himself or herself—that the only learning that can take place is that connected to the individual's already-existing knowledge, experiences, or conceptualizations. Constructivism suggests that "as we experience something new we internalize it through our past experience or knowledge constructs we have previously established" (Crowther, 1997, p. 3).

The extent of the agreement among the various constructivist approaches is that constructivism is learning or meaning making theory. It suggests that individuals create their own new understandings, based upon the interaction of what they already know and believe, and the phenomena or ideas with which they come into contact. Constructivism is a descriptive theory of learning (this is the way people learn or develop); it is not a prescriptive theory of learning (this is the way people *should* learn).

Constructivism is not any one method, however, although it does incline toward an inductive, active approach to teaching. It instead is a way of thinking. The general notion comes from the Piagetian developmental tradition of respecting the evolving meaning-making capacities of the learner. It also taps into the social constructionist impulse, in which the social dialogical nature of human meaning-making is honored. Social constructionism finds its roots and its wings in the work of such thinkers as Baldwin, Mead, Hall, and, more recently, Gergen, among others. They propose that no meaning is made outside of a social context; there is no meaning "out there" to be found; we are always formed by our social context. Both "constructivism," the developmental and the social, offer us a humbling, non-authoritarian, and open-ended understanding of human knowing.

What are the teaching implications of constructivism? Through constructivism we honor

multiple perspectives, and multiple teaching methods. We honor the meaning-making capacity of every individual, through attention to such constructs as "developmental readiness" and "learning style." No longer can we live in an ordered, teacher-centered universe, surrounded by our satellite students. Constructivist teaching can be especially resonant for counselor educators, for such instruction mimics the act of counseling itself.

Students who have difficulty embracing [constructivist teaching] also often have difficulty going into a counseling session open to the experience of it, to the client's way of seeing the world, and to new ways of conceptualizing and strategizing. By contrast, students who begin to embrace [constructivist thinking] begin to leave over-preparation' behind.

ICT is short for "Information and Communication Technologies." It is similar to IT (Information Technology), but focuses more on telecommunications mediums, such as the Internet, cell phone networks, and satellite technology. Information and communication Technology can broadly define as the tools, facilities, processes, and equipment that provide the required environment with the physical infrastructure and services for the generation, transmission, processing, storing and disseminating of information in all form including voice, text, data, graphics and video (Nana Yaw Asabere)

From the review above the writer would say that constructivist perspective of ICT, influencing a lot in school education in which student use ICT as a media to construct their own meaning and teacher will enable children to find and make their own connections that result in valid, internalized meanings unique to each child.

ICT regarding constructivist perspective in school setting.

Learning approaches using contemporary ICTs provide many opportunities for constructivist learning through their provision and support for resource-based, student centered settings and by enabling learning to be related to context and to practice (Berge, 1998; Barron, 1998), any use of ICT in learning settings can act to support various aspects of knowledge construction and as more and more students employ ICTs in their learning processes, the more pronounced the impact of this will become.

Wider availability of best practices and best course material in education, which can be shared by means of ICT, can foster better teaching. The use of ICT in subject teaching involves the integration into lessons of an innovative teaching tool. It is useful therefore to consider how scholarship on the management of educational innovation can illuminate integration of ICT into classroom practice. An authoritative source of such scholarship can be found in the work of Elliot Rogers (Rogers 1995). Rogers suggests that to better understand the implementation of an innovation, attention needs to be paid to the differences between the characteristics of people adopting innovations in addition to the features of the innovation itself.

ICT also allows the academic institutions to reach disadvantaged groups and new international educational markets. As well as learning at anytime, teachers are also finding the capabilities of teaching at any time to be opportunistic and able to be used to advantage. Teachers can generate meaningful and engaging learning experiences for their students

strategically using ICT to enhance learning. Students enjoy learning, and the independent enquiry which innovative and appropriate use of ICT can foster. They begin to acquire the important 21st century skills which they will need in their future lives.

Cconstructivism as an approach of creativity and problem-solving whereby information is discovered through some activities of learners. They give three types of constructivism (all of which are importance for effective learning); namely exogenous constructivism, endogenous constructivism and dialectical constructivism: In exogenous constructivism, knowledge reflects the reality of the external world which greatly influences the construction process. This implies that teachers must remove the gap between what is taking place inside the classroom and what is outside. There are many different ways of accomplishing this task. Of these, field trip activities are of paramount importance. According to Olukayode (2014), students on field trips can visit people and places that they are not normally exposed to during the school days. Endogenous type of constructivism, further, has it that new knowledge develops out of earlier knowledge.

Based on social constructivist learning theories, social design of an online learning environment must provide a safe and comfortable space, in which learners are willing to share information. Teaching at any time can be opportunistic and able to be used to advantage. Also, the learning environment must offer certain tools so that the students can easily communicate and collaborate with others.

Social constructivism is an approach that encourages all members of a learning community to present their ideas strongly, while remaining open to the ideas of others. It is a passionate approach, involving the whole person: thought, emotion, and action. It is not a relativistic outlook, where just any position will do. Like Nuthall (2002), we think teacher input has a major role within a social constructivist framework. However, we also stress that students, too, must have a major role, with greater opportunity than they commonly have to give input, discuss, and reflect in class.

It means that ICT is taking a big role for the improvement of constructivism learning approach. ICT is enhancing the quality and accessibility of education. ICT increases the flexibility of delivery of education so that learners can access knowledge anytime and from anywhere. It can influence the way students are taught and how they learn as now the processes are learner driven and not by teachers.

In a simple term, constructivism can be defined as learners' active creation of their own knowledge by trying to make sense out of material that is presented to them by the teachers (Reigeluth, 1999). According to Ornstein and Hunkins (2009), constructivism keeps individual learners actively involved in the process of thinking and learning. Reiser et al (2007) regard constructivism as a belief that reality is constructed by individuals and social groups based on their experiences with and interpretation of the world. Moore (2009) describes constructivism as an approach of teaching and learning whereby students construct their unique mental image by combining information in their heads with the information they receive through their sense organs. In this approach, teacher centered strategies of learning such as lecture methods are minimized and multiple ways of receiving information are honored.

Through concrete handling the Lego material supports the access to abstract concepts and vice versa, the transfer of abstract programming concepts into concrete motion. Meanwhile, it gives feedback on how successful a construction or programming process is. Such proceedings offer appropriate conditions to promote girls' and boys' technical curiosity. Girls often feel inferior with regard to technical constructions, and often fear the embarrassment. Robotics technology—combined with a gender-sensitive constructivist learning approach—instead allows for a less biased access.

This in turn would better prepare the learners for lifelong learning as well as to improve the quality of learning. In concert with geographical flexibility, technology-facilitated educational programs also remove many of the temporal constraints that face learners with special needs (Moore & Kearsley, 1996). Students are starting to appreciate the capability to undertake education anywhere, anytime and anyplace specially in school.

METHODOLOGY

The purpose of this study is to know teacher and students' reaction of how they involve ICT as the media to achieve the constructivism learning approach. In collecting the data the writer takes the respondents or participants from SMK Fransiskus 1 which located at Jl. Bangunan Barat Kampung Ambon Kayu Putih. There are 15 students and 15 teachers that the writer chose as the respondents. The students are chosen randomly from each grade from the total of students 113. The writer also chose the teacher randomly from the total number of 26 teachers. Then the writer gives the questioner to be filled by the respondents. There are ten questions that given to them. Those questions refer to the students and teachers in using ICT for the access of information of knowledge in teaching learning process.

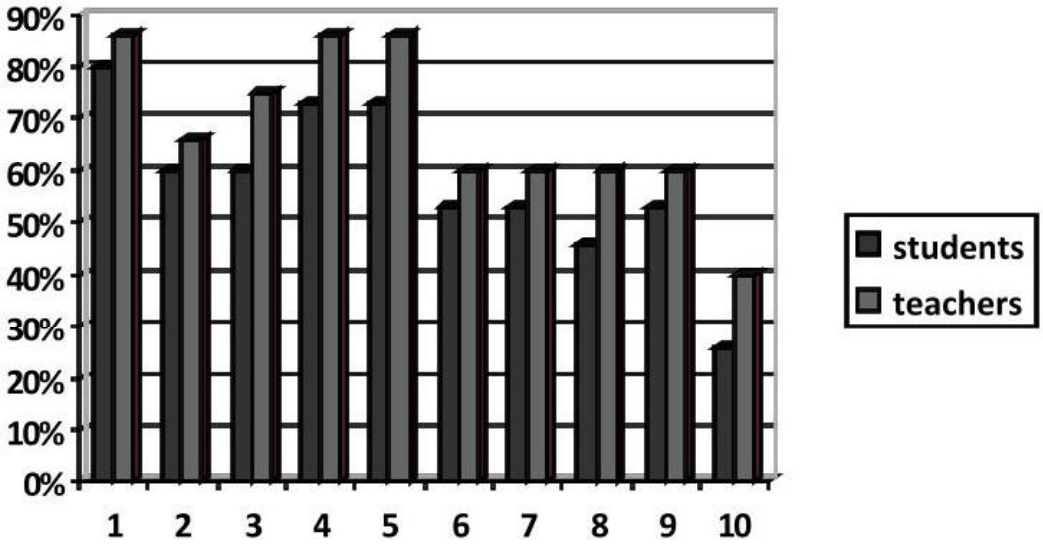
The following are the questions given to the teacher and students.

Questioner The Percentage of ICT using in SMK for Teacher and Students

1. Do you have your own laptop which you can bring it to your school?
2. How many computers do you have in your lab?
3. Is the number of computer in your school enough to fulfill your need?
4. Where do you usually use computer? Computer lab, classroom or never use it?
5. How many times do you use computer in a week?
6. Do you use computer for study?
7. Do you have internet access in your school?
8. What do you usually access when you connect your laptop to the internet?
9. Do you usually do your task via online?
10. Do you satisfy with the internet connection that you have it right now?

Demographic data of participants and study

Teachers(age)	Students(age)	Subject to be taught and studied
1(46)	4(16)	Agama
1(48)	6(18)	Matematika
1(39)	2(19)	Gambar Teknik
1(47)	3(17)	Bahasa Inggris
2(27)		Bahasa Indonesia
1(36)		Produktif multi media
1(42)		IPA
1(54)		IPS
1(57)		Fisika
1(35)		KKPI
1(32)		PKN And Sejarah
1(34)		
1(45)		
1(49)		
1(26)		



DISSCUSSION

Based on the result above the writer conclude that students and teachers in SMK fransiskus 1 has already had facilities to apply constructivism approach using ICT in teaching learning process but whether students nor teacher do not improve it and they do not apply it into maximal portion.

CONCLUSSION

ICTs in school refer to education so it refers to the development of information and communications technology specifically for teaching/learning purposes, and it involves the adoption of general components of information and communication technologies in the teaching learning process. Transaction- constructivist perspective the use of ICT in school setting refers to the adoption and the use of ICT in education on teaching and learning. ICT can affect the delivery of education and enable wider access. In addition, it will increase flexibility so that learners can access the education regardless of time and geographical barriers. It can influence the way students are taught and how they learn. It means that teachers and students of SMK fransiskus should improve the use of ICT in teaching learning process to have high achievement of knowledge access in school.

REFERENCES

Afolabi, Olukayode Ayooluwa. (2014). Psychosocial Predictors of Prosocial Behaviour Among A Sample of Nigerian Udergraduates. European Scientific *Journal January 2014 edition* vol, 10. No.2 ISSN: 1857-7881.

Asabere, yaw Nana. 2012. *Use of information & Communication Technology (ICT) in tertiary education in Ghana: a case study of electronic.*

Beck, Kliv.,, Kosni, Clara. 2006. Innovation in teacher Educator a Social Constructivist Approach. New York: State university of New York.

Freiberg, H.J., Driscoll, A. (1996). Universal Teaching Strategies. Allyn and Beacon, U.S.A

Ian D. Selwood, Alex c. w. Fung and Christopher D. O'Mahony. 2003. *Management of Education in The Information Age, The role of ITC. US: Springer publisher*

Learning (E-learning).available from: http: //www.esjournals.org.

Lewis, Antony. 2011. *Word web English dictionary*. New Jersey: Princeton University

Martin, David. 2009. *Elememementary Science Method: constructivist approach*. England: engage learning.

Mcauliffe, Garrett, Eriksen, Karan. 2002. *Teaching strategies for constructivist for development counselor Education*. London: Bergin and Garvey

Moore, M.G. & Kearsley, G. (1996). Distance education: A system view. New York: Wadsworth Publishing Company.

Ornstein, A.C. and Hunkins, F.P. (2009). *Curriculum Foundations, Principles, and Issues*. USA: Pearson.

Reigeluth, C.M. 1999. *Instructional Design Tehories and Models*. Volume 11. Lawrence Erlboum Associated, Publisher, Mahwah. New Jersey.

Reiser, Robert A, and John V. Dempsey. 2007. Trends and Issues in Instruksional Design and Technology; Second Edition. Pearson Merrill Prentice Hall. Upper Sadle River, New Jersey Columbus, Ohio.

Tatnall, Arthur. Kereteleswe, Omponye. Visscher, Adrie. 2010. *Information Technology and Managing Quality Education*. Kasane, Botswana: Springer

About the writer:

1. **Ariski Damanik:**
   Friendly called as Riski. He was born in Sorong, West Papua and was born on September 23rd 1992. He got his Strata 1 at English Education Department of Victory University Sorong and now he is ongoing process of studying English Master Program at State University of Jakarta.
2. **Lanny Febria:**
   Friendly called as Lanny. She was born in Padang, West Sumatera and was born on February 21st 1988. She got her Strata 1 at English Department, the Faculty of Teacher Taining and Education Bung Hatta University and now she is ongoing process of studying English Master Program at State University of Jakarta.