

RESEARCH IN PROGRESS - HIBAH STRANAS 2013 KEMDIKBUD

The Fifth Asian Conference on Education 2013 (ACE2013) & The First Asian Conference on Society, Education and Technology 2013 (ACSET2013)

Title: The Comparison of a Learning Program Conducted in an Orphanage and a School in Indonesia

Abstract No. : 0770

Conference : ACE 2013 – The Asian Conference on Education 2013

Authors

Sri	Tiatri	(1) (5) Presenting
Tjibeng	Jap	(2) (5)
Retha	Arjadi	(3) (5)
Edo Sebastian Jaya		(4) (5)

Affiliations

- (1) Faculty of Psychology, Tarumanagara University, Jakarta, Indonesia
- (2) Faculty of Information Technology, Tarumanagara University, Jakarta, Indonesia
- (3) Faculty of Behavioural and Social Sciences, University of Groningen, Groningen, Netherlands
- (4) Faculty of Education, Psychology, and Human Movement, University of Hamburg, Hamburg, Germany
- (5) STS Research Group, Tarumanagara University, Jakarta, Indonesia

Categories : Student Learning, Learner Experiences & Learner Diversity

Presentation : Oral Presentation

Current Professional Status

University – Assistant Professor/Lecturer

Biography

Dr.Sri Tiatri is a lecturer in Faculty of Psychology, Tarumanagara University, Jakarta, Indonesia. She has a PhD in Educational Psychology from School of Education, University of Queensland, Brisbane. Her research interest are: cognitive processes and socio-cultural context related to human learning, The impacts of Online-Game & Mobile Technology to school-age children.

Contact us if you have a problem or wish to withdraw a submission: ace@iafor.org & acset@iafor.org



ace2013
The Fifth Asian Conference on Education

**The Comparison of a Learning Program
Conducted in an Orphanage and a
School in Indonesia**

Tiatri, S.¹⁾, Jap, T.²⁾, Arjadi, R.³⁾, Jaya, E. S.⁴⁾
Science, Technology, and Society Research Group Tarumanagara University, Jakarta

¹⁾ Faculty of Psychology, Tarumanagara University, Jakarta
²⁾ Faculty of Information Technology, Tarumanagara University, Jakarta
³⁾ Faculty of Behavioural and Social Sciences, University of Groningen, Netherlands
⁴⁾ Faculty of Education, Psychology, and Human Movement, University of Hamburg, Germany

Presented at The IAFOR- ACE 2013, Ramada Osaka, Japan
23-27 October 2013

INTRODUCTION: Student-Centered Learning

- Constructivist approach adopted by many educators in the world led to the belief that student-centered learning is more effective in learning new knowledge and skills (e.g., Novak, 2012).
- However, there were challenges toward this belief, e.g. with minimal guidance, student-centered learning was less able to increase the student's knowledge (Kirschner, Sweller, & Clark, 2006).

INTRODUCTION: Effective Learning

- Beside the adequate guidance, effective learning required some other variables.
- One of the variables is variable related to the social processes in the learning environment, including group togetherness.

INTRODUCTION: Group Togetherness

- Group togetherness has been identified as one of factors influence students achievement.
- Studies:
 - E.g., group togetherness could yields mutual action experience that has strong affective tone. In turn, a strong affective tone engagement strengthens join action (Crook, 2013).

INTRODUCTION: Social Interaction

- Studies that applied theories of social interaction, e.g. Palonen & Hakkarainen (2010), toward 28 primary school students in Computer-Supported Collaborated Learning Environment-Mediated Discourse:
 - There were large individual differences in regard to participation.
 - Average and high-achieving female students dominated the discourse, and carried the main responsibility for all students' collaborative building of knowledge.
- In the social process, social interaction lead to the cognitive apprenticeship (Rogoff, 2013).

INTRODUCTION: The Aim of Study

- In Indonesia, analysis of the social interaction specifically in a newly affordances of ICT assisted learning program, is still limited.
- The aim of study:
 - to examine a learning process that occurred in a newly affordances of ICT assisted learning program that is implemented to a different group of participants (orphanage house vs. school)
 - to identify the factors that caused the differences in the learning outcomes.

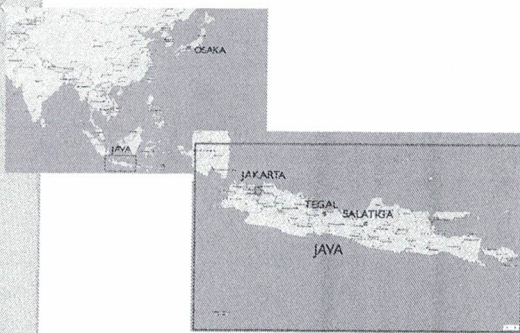
INTRODUCTION: Actor Network Theory (ANT)

- Actor Network Theory (ANT) introduced by Latour (1987) is a research approach that was believed to be useful to analyze the dynamics and objects of education (Fenwick & Edwards, 2010).
- ANT analysis could be used to trace the dynamics of all things that are involved in phenomena, including the natural, social, and technical aspects (Fenwick & Edwards, 2010).

METHOD: Research Setting

- The learning program was a part of larger scope of research regarding the development of an intervention model that was aimed to enhance students' critical thinking skills.
- The program involved the newly affordances of ICT assisted learning. The program was designed based on Verliden (2005) definition of critical thinking, which includes verbal reasoning, argument analysis, thinking with hypothesis testing, using the possibilities and probabilities, and decision-making and problem-solving abilities.

SETTING: Locations



METHOD: Research Setting

- The learning program:
- Six sessions @ 120 minutes each
 - Session 1: introduction to the critical thinking.
 - Session 2 & 3: inductive reasoning through photography tasks.
 - Session 4: critical thinking through watching a children movie.
 - Session 5: Categorization through photographs production.
 - Session 6: Critical thinking through watching a children movie at tablet.
 - The same program was implemented in two different contexts:
 1. In the context of orphanage house (February – March 2013)
 2. In the context of school (April –May 2013).
 - In both contexts there were two groups: experimental and control groups.

METHOD: Participants

The participants were two groups of adolescents (13-18 years old):

- Orphanage house: 30 orphanage members (enrolled in different schools) received the learning program in their orphanage house,
- Public school: 30 grade 8 public school students received the learning program at their school.

METHOD: Research Design & Data Collection

- Quasi Experimental Design

Group	Pretest	Intervention	Posttest
Experimental Group	O1	ICT Assisted Critical Thinking Learning Program	O2
Control Group	O1	---	O2

- Data Collection:
 - Verbal Reasoning Test (validity and reliability were reported in other articles (Tia et al., Jap. Arjadi, Jyja, 2013)).
 - Observation during the entire program.
 - Semi-structured interview during the entire program.

METHOD: Procedure

- Similar in the two contexts:
 - orphanage houses
 - school.
- Both contexts have experimental and control group.
- Five Steps:
 1. Pre-test.
 2. Learning program (6 sessions) in experimental group.
 3. Post-test.
 4. Data analysis.
 5. Evaluation.

Setting: Tegal Orphanage

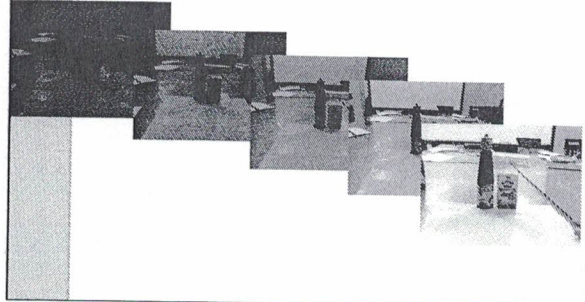


Setting: Salatiga Public Junior High School



Example of Participants' Product during the Learning Program

- Photo of soy sauce, and milk in different shutter speed.



ANALYSIS (1): Higher Performance in Orphanage House

- Result of Learning Program: Higher performance of participants in the orphanage house compared to the school.

• Table 1. Comparison of Participants' Performances in Verbal Reasoning Test

Context	Experimental Group		Control Group	
	Pre-test Score M	Post-test Score M	Pre-test Score M	Post-test Score M
Orphanage House	12.45	13.30	10.40	10.15
School	13.17	12.83	12.54	12.64

ANALYSIS (2) Actor Network Theory

Actors which have their contribution toward the participants' differences in their performance:

- (a) individual differences,
- (b) closeness to each other,
- (c) knowledge about their peer,
- (d) knowledge about the technology (the media used in the process of learning).

ANALYSIS (3) Actor Network Theory

Other actors which were identified as the key in learning process were:

- (a) group interaction,
- (b) group togetherness, → learning engagement
- (c) curiosity.

Other actors which were identified as having little contribution to the difference performances were:

- (a) the instructors
- (b) the instruction.

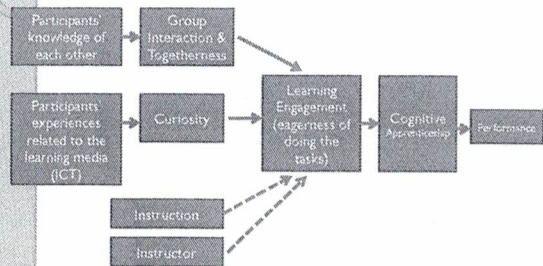
ANALYSIS (4)

- Based on observation and semi-structured interviews during the learning process:
 - the orphans' member had a closer and intensive group interactions compare to the public school students.
 - The orphans' member had higher level of eagerness to do the tasks and made some experiments with camera and tablet. This were observed from their behavior and facial expression.
 - The orphans' member valued group togetherness more than the public school students.
 - The curiosity and engagement in ICT were as important as other findings (see Table 2).

Table 2. Comparison of the Learning Process Observed during the Program, between Orphanage House and School

Aspect	Orphanage	School
The nature of the group	Students in various schools, member of orphanage houses, from low to middle social economic background, already know each other, live about 16 hours a day together in same orphanage house, have same gender (female).	Students in one school but from various classrooms came from middle to high social economic background, some of them did not know each other, and have different gender.
Group Interaction	High	Moderate-low
Group Togetherness	High	Moderate-Low (segmented)
Curiosity	High (have little experiences with the learning media such as camera and tablet), eager to try using the technology.	Moderate (high level experiences with learning media such as camera and tablet), see the technology as other media in their school.
Engagement	Very High	Moderate-low

Finding



CONCLUSION

- The learning process occurred in the orphanage house involved more positive group interaction, group togetherness, learning engagement, and curiosity compared to the learning process in the school.
- Factors that cause to the differences of the learning outcome are: participants' knowledge of each others, and the participants' experiences related to learning media (ICT: Camera/Tablet).

Other Interesting Finding

- The female participants, both in the orphanage house and the schools, showed higher engagement in carry out the tasks compared to the male participants.
 - supported the Palonen and Hakkarainen (2010) finding that female participants tended to dominated the social interaction, and carried the main responsibility for all students' collaborative building knowledge.
 - Further deep elaboration study related to the gender would be useful to explain students' behavior and to develop more appropriate technology mediated learning program.

IMPLICATION

- Prerequisite needed to maximize the benefit of the critical thinking involved the newly affordances of ICT assisted learning program:
 - positive group interaction
 - group togetherness,
 - curiosity,
 - learning engagement.
- Orphanage house has potential to become a good place for educating (including development of critical thinking) of young generation.

ACKNOWLEDGMENT

- We would like to thank the school's principal for giving us the permission for field research.
- We are also indebted to Mekar Sari Suteja and Dr. Fransisca Iriani who have assisted us in data collection, and Viny Christanti who have assisted us in the financial administration.
- Lastly, we would like to extend our thanks to the research assistants (Valentino Tania, Desi Puspitasari, Sylvanie Sukamta, Maretta Caroline, Jessica Surya, Sugeng, Margareth, Michelle Frisilia) who have all assisted us in the data gathering process and/or data entry.
- This study was partially funded by competitive National Strategic research grants from Directorate of Higher Education, Ministry of Education and Culture.

Thank You

Questions ? ☺

