

The logo for ICoME 2013 is a green, multi-layered diamond shape. The text "ICoME" is in white and "2013" is in a lighter green. The background of the top half of the page features a large, stylized letter 'A' composed of green diagonal stripes.

# ICoME 2013

**9 – 11 August 2013**

**Location** Mihama Campus,  
Nihon Fukushi University,  
Aichi, Japan

**Hosted by** Nihon Fukushi University  
Japan Association for Educational Media Study (JAEMS)

**Organized by** Korean Association for Educational Information and Media (KAEIM)  
China Association of Educational Technology (CAET)  
Japan Association for Educational Media Study (JAEMS)



## Welcome to ICoME 2013 in Aichi

It is an honor and a privilege to host the prestigious international conference, ICoME (International Conference for Media in Education), at NFU (Nihon Fukushi University). ICoME has been organized by KAEIM (Korean Association for Educational Information and Media), CAET (China Association of Educational Technology), and JAEMS (Japan Association for Educational Media Study), and this year marks its 11th conference.

NFU is the first social welfare university in Japan and it is the 60th anniversary of the university this year. Besides students who attend courses on our campuses, NFU has about 7,300 students who study online, and the university is actively using various media and ICT (Information and Communication Technology), including the administration of a virtual campus, a campus SNS, and so on. The international collaborative event called WYM (World Youth Meeting), in which students make joint presentations in English in multi-national member teams, has also been taking place annually at NFU. The WYM took place on Aug. 7th and 8th, just before ICoME2013. ICoME2013 will give us great insights to improve these kinds of activities. I would like to thank particularly Professors Hoisoo Kim (President of KAEIM), Yeonwook Im (Vice-president of KAEIM), and Katsuaki Suzuki (President of JAEMS) who gave us this great opportunity. I also would like to thank all the steering committee members and corporate staff who have been supporting this conference.

The theme of ICoME2013 is “Breaking through! Gaining insight! Broadening connections!” We have been carefully preparing so all the participants can enjoy the conference under this theme. I hope that you will enjoy this conference and we will all develop our collaborative association further.

Shinichi Sato, Ph.D  
Nihon Fukushi University

Welcome to ICoME 2013!

Wellcome to ICoME 2013 (International Conference for Media in Education) in Nagoya Japan. The ICoME 2013 is the 11th joint conference supported by Japan Association for Educational Media Study (JAMES) and Korean Association for Educational Information and Media (KAEIM) since 2003. After the big success of the 10th Anniversary of ICoME, first time held in Beijing, China, hosted by Prof. Chen Li of Beijing Normal University, we are back to Japan for this year. It is our first time to have ICoME in Nagoya, Japan, which is located in between Tokyo and Osaka, with an easy access to Chubu Centrair International Airport, Nagoya.

Since Nagoya is a historical city with such 16th Century warlords as Oda Nobunaga, Toyotomi Hideyoshi and Tokugawa Ieyasu, the Nagoya Castle is a must for the first time visitors. As a part of its 400 year anniversary, Honmaru Palace of the Nagoya Castle will be open to public in coming May, as the result of a long renovation project (just in time for ICoME 2013 visitors!). Nagoya is Japan's third biggest city and is also famous for more contemporary matters such as professional baseball team "Chunichi Dragons," and headquarter of Toyota.

So, there are a lot of reasons why you should come to ICoME 2013. Not only sightseeing, but also re-joining the long-time colleagues living far apart, and meeting with new ones, strengthening our friendships, and exploring new ideas, experiences, research, and more! With a big support from Hosokawa Bunka Foundation, Japan, we will explore our way to strengthening international connections through media, with the theme "Media Driven International Collaboration –Breaking through! Gaining Insight! Broadening connections!–"



Katsuaki Suzuki, Ph. D

President of Japan Association for Educational Media Study

Professor & Chair, Graduate School of Instructional Systems, Kumamoto University



Dear ladies and gentlemen,

It is an honor for me to be giving the congratulatory address for the “ICOME 2013” held in Nagoya, Japan. First of all, I would like to thank Dr. Suzuki and Dr. Kageto, who had been showing great passion and dedication to organize this conference. I also would like to express my special gratitude to all representatives from all walks of life for taking the time out of your busy schedules to attend this precious event.

The knowledge information wave in the 21st century has brought our society a lot of changes and it eventually led the educational fields to work on a very different environment, the digital environment. Our ICOME has played the important role as a pioneer in such a new era, meeting all the social demands for the innovative and promising education. In this sense this year’s theme of ICOME, “Media Driven International Collaboration –Breaking through! Gaining Insight! Broadening connections” is so timely and intriguing. Under the theme, I hope all the participants will share the various experiences and discuss the most important topics from the diverse educational fields.

ICOME 2013 will bring together educational experts, professionals and students from three countries academically and personally. Our friendship will also promote to explore the fine directions for effective international collaboration based on new media.

I wish you all a fruitful meeting and hope that you will benefit from the rich scientific sessions, and that our meeting will last as an unforgettable memory.

Thank you so much.

Yeonwook Im

Professor at Hanyang Cyber University

Vice-president of Korean Association for Educational Information and Media



## Program at a Glance

Date	Time	Program	Location
Aug. 9	9:30-10:00	Registration	The Building No. 12 2nd floor
	10:00-10:30	Opening ceremony	Cultural Hall
	10:30-11:30	Keynote speech Kanji Akahori	Cultural Hall
	11:30-13:00	Lunch	
	13:00-14:40	Concurrent Session	Room 1232 Room 1233 Room 1243 Room 1252
	14:40-15:10	Break	
	15:10-18:00	Roundtable	Room 1232 Room 1233 Room 1243
Date	Time	Program	Location
Aug. 10	9:00-10:00	Registration	The Building No. 12 2nd floor
	10:00-11:40	Concurrent Session	Room 1232 Room 1233 Room 1243
	11:40-13:00	Lunch	
	13:00-14:40	Concurrent Session	Room 1232 Room 1233 Room 1243
	14:40-15:20	Break	
	15:20-16:00	Closing Ceremony Young Scholar Awards, etc.	Cultural Hall
	16:00	Departure to the Closing Party	
	17:00	Closing Party (Traditional Japanese style)	

## Program in Detail

Friday, 9 August 2013

Concurrent Session1			
Chair: Gisela Rolluqui / Tomomi Sato			
Time	Room	Presenter	Title
13:00-14:40	1232	Gisela Rolluqui	The Instructional Media for Different Levels in the Philippine Educational System
		Makiko Kishi	The Socio-Cultural Features of ICT Practice at Japanese Primary Schools: Comparison with ICT Practice in Primary Schools in the UK
		Ellen Yaegashi	5th Graders’ Usage of the Help Feature in the International Children’s Digital Library
		Kikuko Miyake	Analyzing Lessons in Chinese Primary Schools based on Japanese Teachers’ Viewpoints -A Case Study of Nurturing Higher Order Thinking-
		Tomomi Sato	Proposal for a Computer System with Structured Chat and Social Stamp Functions to Support Social Reading for High School Students’ Essay-Writing Process
Concurrent Session2			
Chair: Hisae Matsui / Youngju Joo			
Time	Room	Presenter	Title
13:00-14:40	1233	Hisae Matsui	The Development of Interpersonal Emotional Connections in Virtual Worlds
		Munkhtuya Lkhagvasuren	Effects of Multimedia Technology on Learning Strategies of Learners
		Hae-Deok Song	Employing Affordance-Based Design to Improve the Usability of E-Learning User Interfaces
		Junko Nemoto	Design of Learning Environment for a Story-centered Curriculum
		Youngju Joo	Analysis of the Relationship of Students' Self-efficacy, Test Anxiety, and Parental Involvement Toward Learning Strategy and Achievement in Korean Middle School Mathematics

Friday, 9 August 2013

Concurrent Session3			
Chair: Lizhen He / TBD			
Time	Room	Presenter	Title
13:00-14:40	1243	Mi Ja Shim	Case Study on a Smart Class-Based Class: Focusing on a Cyber University Class
		Kyoko Shioya	Designing an Inquiry Based Learning Environment in the School Library
		Sung Hwan Park	Development and Effect Analysis of Blended Learning-based Program for Enhancing Parental Efficacy
		Motoo Kusano	Widening ideas on careers in Japan-Korea KJ workshop style mutual direction distance education -using personal computer pull down function-
		Lizhen He	Comparative Study of Personal Learning Environment’s Construction Ways and Technologies
Concurrent Session4			
Chair: Soo-Young Lee / Tri Indaryati / Yoshimichi Oikawa			
Time	Room	Presenter	Title
13:00-14:40	1252	Soo-Young Lee	Designing an Instructional Model for Smart Technology-Enhanced Team-Based Learning
		Heejeon Suh	Designing Role Playing Lessons in VR Experiencing Classroom
		Samuel Kigumi Mwangi	Integration of Computer Assisted Learning in Teaching and Learning in Secondary Schools in Kenya
		Tri Indaryati	Creative and Critical Thinking By Empowering Media In Teaching English As A Foreign Language In Senior High School
		Yoshimichi Oikawa	Designing a Blended Undergraduate General Chemistry Course Using the ARCS Model

## Program in Detail

Saturday, 10 August 2013

Concurrent Session5			
Chair: Terumi Miyazoe / Hoseung Byun			
Time	Room	Presenter	Title
10:00-11:40	1232	Terumi Miyazoe	Preliminary Research on the Implementation of Computer-Based Speaking and Writing Test and its Implications
		Nouko Iki	Improving the Intelligibility of a Self-Study Application For Japanese Academic Writing Using a Paragraph Writing Method
		Kyungjin Kim	The Effects of Types of Decision-Making and Collaborative Information Processing on Collaboration Performance, and Social Support and Collaboration Load among Collaborators in CSCL
		Yoshikazu Tateno	The Evaluation on the Practice by using “RepoReco” that Supports Undergraduate Students’ Reflection in Their Writing Processes
		Hoseung yun	Reversal Adoption Elements of Paper Media in Screen Learning Process
Concurrent Session6			
Chair: Soonsun Jang / Mayumi Kubota			
Time	Room	Presenter	Title
10:00-11:40	1233	Soonsun Jang	Analysis of the Relation among Moral Judgment, Information Ethics Judgment and Internet Ethics Consciousness of Undergraduate Students for Developing the Model of Information Ethics Education
		Satoshi Noguchi	How to Use the Digital Encyclopedia with Elementary School Students
		Takeshi Hasegawa	A study for the students under medical treatment in hospital to give a lot of opportunities in class with ICT
		Yuko Tsuchiya	Making digital stories by tablet devices to connect thoughts for earthquake disaster recovery -A study from Bridge! Media 311 project-
		Mayumi Kuota	The Passive Usage of ICT by Japanese Undergraduate Students

Saturday, 10 August 2013

Concurrent Session7			
Chair: Yukari Kato / FengKuang Chiang			
Time	Room	Presenter	Title
10:00-11:40	1243	Yukari Kato	Sustainable Professional Development to Promote Collaboration between Japanese Language Teachers Domestic and Overseas
		Takayuki Konno	Analysis for Designing International Collaborative Learning Based on the Dimension of Horizontal of Activity Theory
		Takehiro Wakimoto	Practice and Evaluation of Mentoring Support System for Novice Teacher
		FengKuang Chiang	The Analysis on Primary School Teachers' Attitudes towards E-Schoolbag
		Fumihiko Shinohara	Research and Development of the Web-pages Development Curriculum in Teacher Education Universities aiming at Challenging to the Globalization and Quality Education
Concurrent Session8			
Chair: Kenichi Kubot / Sun A Oh			
Time	Room	Presenter	Title
13:00-14:40	1232	Kenichi Kuota	Discussing Issues on International Collaborative Activities
		Sook-kyoung Choi	Time Dimensional Analysis of Online Collaboration in a Blended-Learning Context
		Kae Nakaya	Investigation of Learners' Performance in English Conversation Mobile Learning System Using Learners' Own Daily Life Topics
		Sun A Oh	The Effect of Peer Tutoring in Terms of Epistemological Beliefs and Self-Regulated Learning
		Sungho Kwon	A Prototype Development of Mobile Game Contents for Mathematics based on ARCS Model

## Program in Detail

Saturday, 10 August 2013

Concurrent Session9			
Chair: Tetsuro Ejima / Gary Kirkpatrick			
Time	Room	Presenter	Title
13:00-14:40	1233	Tetsuro Ejima	Legitimate Peripheral Participation in International Exchange in Education in Elementary Schools
		Ryota Yamamoto	The Interaction Among Students for Engaging Off-classroom Learning: the Case of Kansai University Senior High School Using iPad
		Shaoyu Ye	Relationship Between International Students' Information-gathering Capacity and Behavior Patterns after the Great East Japan Earthquake
		Gary Kirkpatrick	Constructing Learning Materials to Enhance Freshmen Students' English for Presentation Classes for the International Collaborative Event - The World Youth Meeting
		Keiko Noda	How to Motivate Student Learning Support Staff to Work in Creative and Proactive Ways
Concurrent Session10			
Chair: Katsuaki Suzuki / Chiyuki Kuwahara			
Time	Room	Presenter	Title
13:00-14:40	1243	Katsuaki Suzuki	Sequencing Collaborative Activities in an Online Graduate Program
		Jeeheon Ryu	Prediction of Overall Cognitive Load and Cognitive Efficiency in the Conceptual and Procedural Tasks
		Koji Nakajima	Verification of the Practical Uses of the ARCS-V Model
		Chiyuki Kuwahara	A Case of an Asynchronous E-learning Course in Undergraduate Career Education toward Enhancement of Self-efficacy



Friday, 9 August 2013

Roundtable 1-A			
Time	Room	Presenter	Title
15:10-16:30	1232A	Henan Wang	A Teaching Model Improving Students' Chinese Learning in Rural Area in China
		Sohei Daifuku	The Impact of Short Visit Program to Learners on International Collaborative Project ~A Case Study of J-CaJa~
		SanHa Kang	A Preliminary Study of the Perceived Usefulness of Media between Expert and Newcomer in Volunteer Service: Comparisons of Japan and Korea
		Rong Fei Sun	Research on the Activity Frame work of Using Visual Thinking Tools
Time	Room	Presenter	Title
16:40-18:00	1232A	Yuko Tsutsumi	Validity of progress chart for middle range homework : A study about mathematics homework in senior high school
		Jeongah Woo	Activating advertisement on Facebook based on volunteer activities conducted by both Korean and Japanese students
		Onri Seki	Practice of Active Participation to Photo Exhibition using Facebook
		Xu Liu	Research of Teacher-Students Reading Based on Learning Cell Platform

## Program in Detail

Friday, 9 August 2013

Roundtable 1-B			
Time	Room	Presenter	Title
15:10-16:30	1232B	Haruko Ogawa	Design and Effect of Student’s Reflection in International Fieldwork
		Sunhee Kim	Analysis of affordances for Digital Natives’ Learning Agency and Socio-emotional Wellbeing through Reflection on Photographs and differences between Korea and Finland
		Zirun Ye	Empirical Research Of Communicating and Learning "Natural Diary" Platform of Microblogging-style in natural science curriculum of primary school
		Ji Soo Lim	Effect of Prosocial Video Games: Do Prosocial Video Games Promote Prosocial Behavior of Players?
Time	Room	Presenter	Title
16:40-18:00	1232B	Mutsuo Nagata	Utilization of ICT Devices in Japanese High School ICT devices are helpful for difficult situation
		Wei Xie	Planning and Design of Future Classrooms in Universities
		Min Hee Kim	Perception of Pre-service Teacher’s on Using Media for Development of Teaching Materials.
		Michio Koayashi	Supporting distance high school students in E-learning
Roundtable 1-C			
Time	Room	Presenter	Title
15:10-16:30	1232C	Hyun Joo	Development of training program improving Instructional method with social media
		Tomohide Nakajima	The Development of an iPad Version of "Math-Speed"
		Tomohiro Nagashima	Open Educational Resources (OERs) in Higher Education: A Global Perspective
		Lizhen He	The Analysis of Exchange and Sharing Activities Based on Visual Thinking Tools

**Friday, 9 August 2013**

Roundtable 2-A			
Time	Room	Presenter	Title
15:10-16:30	1233A	Yuchen Sun	"TESTING RESISTANCE" experiment courseware based on FlashAR
		Sun-Young Yang	Influence of Grouping by Learning Styles on Learning Performance in Computer-Supported Collaborative Learning
		Jie Li	Research on network personalized training model based on diagnostic of instructional design
		Koichiro Goto	Learning by a high school student's volunteer activity
Time	Room	Presenter	Title
16:40-18:00	1233A	Garcia Giran	A comparison of Computer- and Mobile Phone- Mediated Collaboration: A case study of Japanese university students
		Lei Chen	The evaluation approaches on the thinking abilities in primary school through thinking tools
		HyungJu Lee	A comparison of the attitudes in the usage of Emoticons by generation between Korea and Japan
Roundtable 2-B			
Time	Room	Presenter	Title
15:10-16:30	1233B	Jieun Yoo	The effect of learner’s characteristics and teacher’s character on perceived academic achievement In SMART learning environment
		Ayuka Nakagawa	Problems with the Implementation of Communicative English Teaching in Japan; Focusing on the Situation of English Teachers in a High School
		Xiaofeng Wang	The Research to the Teaching Reflection for Promoting the Depth of Online Teaching Research
		Shiho Okada	Influences of Overseas Fieldwork on Students’ Motivations and Behaviors after Returning to Japan and Its factors
Time	Room	Presenter	Title
16:40-18:00	1233B	Hypung gu Kang	A Study on the Development and Characteristics on the TFS(The First Study) System
		Hongmei Hu	Teacher online micro-video Course’s design and development: a case study of primary Chinese teachers learning PowerPoint skills
		Ayaha Tanaka	Avatars of adoration for children ~Fictional heroes and heroines and real-world occupations~

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Roundtable 3-A			
Time	Room	Presenter	Title
15:10-16:30	1243A	Jieun Shin	The essential factors of well-organized lecture in the SMART learning environment in Korea.
		Takato Tanaka	Study on the Usage and Perception of University Students on the Credibility of Information from Wikipedia
		Xinlian Xiao	The Application Research in Cultivating Pupils’ Collaborative Learning with Visual Thinking Tools: Case Study of Exploring the Similarities and Differences between Frogs and Toads in Comprehensive Practice Course
		Shijuan Wang	Study of 3C-HEAT Integration Levels in Chinese ICT Lesson Plans
Roundtable 3-B			
Time	Room	Presenter	Title
15:10-16:30	1243B	Moon Jewoong	The Effect of Visual Cueing and Narration Speed on the Comprehension Scores with Types of Task and Overall Cognitive Load
		Wenyan Wu	The Application of the Mind map in the Primary Chinese Text Preview
		Mutusmi Shiigi	The Factors that Affect Reflection in Overseas Fieldwork
		Sunae Shin	Is critical peer feedback better facilitate online interaction than complimentary feedback affective feedback: Social network analysis

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## **Keynote Speech**



## Do Digital Devices Work Better Than Paper Materials for Learning?

Kanji Akahori, Hakuoh University & Center for Research on Educational Testing

**Abstract:** This paper investigates the medium of paper, PCs and iPads as learning devices and describes the results of a comparative experiment that was conducted based on an experimental design in regards to the effectiveness and characteristics of the aforementioned media. A comprehension test and questionnaire were conducted on three groups of subjects who were learning while using paper, PCs and iPads on to which learning materials relating to information education had been printed or installed. The results of these tests and questionnaires were then compared. As results, it is predicted that using paper and an iPad in combination as learning devices will show the best learning effects.

**Keywords:** learning devices, iPad, paper, digital materials, learning effects

### INTRODUCTION

A great deal of literature has been published in relation to media and learning. For example, Kozma, R.B. (1991) has undertaken many reviews on the research of learning through books, television, computers and multimedia environments. In recent years, PCs, tablets PCs and the Internet have come to be used as learning devices, but recently, it is the iPad that has been attracting interest. The iPad is a slate information terminal, but is rapidly becoming popular as a device which allows the realization of electronic publishing.

In the past, the authors have conducted a comparative experiment on learning using paper, desktop PCs, tablet PCs and digital pens. The purpose of this experiment was to clarify whether differences in the input tool (pencils for paper, keyboards for desktop PCs, touch pens for tablet PCs and ballpoint pens for digital pens) exert an influence on memory, comprehension and character input in the learning process. The results of this experiment demonstrated that the same trends were seen in both paper and digital pens, while identical trends were also observed with desktop PCs and tablet PCs (Kato Y., Kato S., Akahori K., Yoshimoto M. & Sugiyama Y., 2010).

In this study, paper, notebook PCs and iPads were compared in a comparative experiment conducted using these same learning materials. This experiment was conducted to determine three items: (1) Differences in reading ability when using learning materials on paper and when using materials on the screen of a terminal, (2) differences between turning pages when using paper, the operation of a mouse device when using a desktop PC and the action of touching a screen with a finger when using an iPad, as well as (3) differences between text and diagrams on paper, and text, diagrams and video on desktop PCs and iPads.

## EXPERIMENTAL METHODOLOGY

The methodology of the experiment in this study is described below. An overview of this experiment methodology is illustrated in Figure 1. In this experiment, three types of learning material were prepared: paper materials, iPad materials and PC materials. After this, a total of 60 test subjects were assembled and these were then divided into three groups of 20 with each group studying using a different form of media. Hereafter, these are referred to as the Paper Group, iPad Group and PC Group.

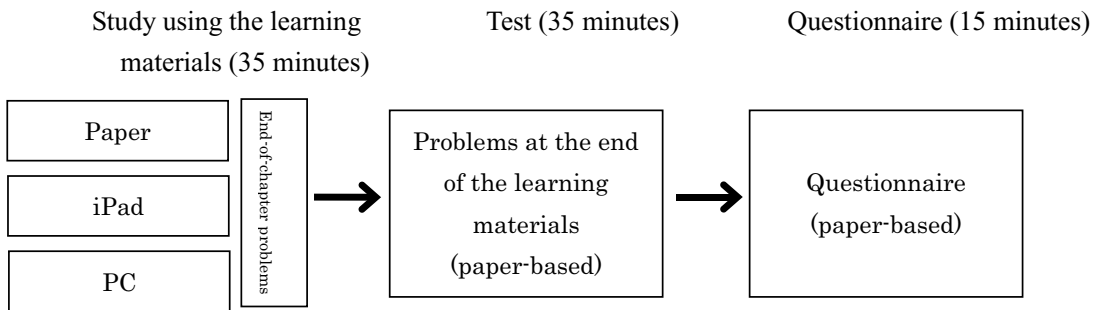


Figure 1: Flow of the experiment

## RESULTS OF THE TEST SCORE ANALYSIS

### 1) Results of the overall score

The average overall scores for the iPad Group, PC Group and Paper Group are shown in Figure 2. The average overall score that is discussed here refers to the 20 problems which are a combination of the five end-of-chapter problems and the 15 problems at the end of the learning materials. The total score for these 20 problems is 60 points.

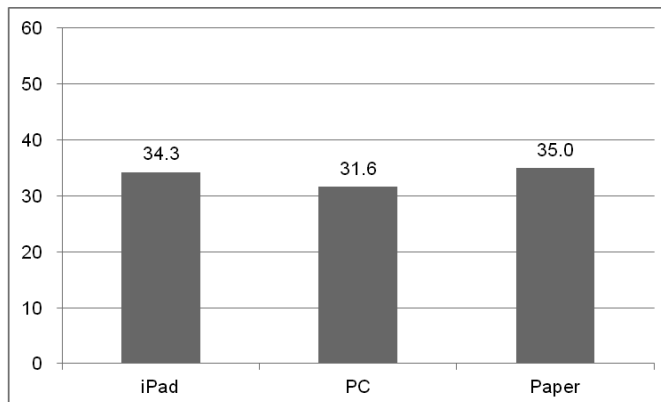


Figure 2: Results of the overall score

### 2) Summary of the results of the analysis

The analysis results for the aforementioned problems are summarized in Table 1. In this table, © indicates that this was the highest score among all three groups; ○ indicates that this was the next highest score among all the groups; and △ indicates the lowest score among all the groups. However, these symbols do not necessarily reveal the rankings of the three groups; instead, in the event that two of the

three groups obtained more or less identical scores, the same symbol will be used for both.

It is possible to extract the following characteristics of the various forms of media from these results:

- (1) The media of paper has superior results for the end-of-chapter, multiple choice problems, basic problems and knowledge/comprehension problems. Thus, it is possible to conclude that the media of paper is effective in accurately memorizing and comprehending the contents of learning materials.
- (2) iPads have superior results for the overall score, written problems, applied problems and knowledge/comprehension problems. Thus, it is possible to conclude that the media of the iPad is effective for individuals in thinking and making judgments on their own.
- (3) Although identical text, diagrams, photographs and videos were loaded onto the PCs and iPads, subjects in the PC Group were unable to show results as strong as those using iPads and paper. Thus, there is a necessity to conduct further investigation into the media characteristics of PCs. This will be discussed later in the considerations section of this paper.

	End-of-chapter problems	Overall Score	Multiple choice/ Written		Basic/Applied		Knowledge/Comprehension/ Comprehensive		
			Multiple choice	Written	Basic	Applied	Knowl- edge	Compre- hension	Compre- hensive
iPad	○	◎	△	◎	△	◎	△	◎	◎
PC	△	△	○	△	○	△	◎	△	○
Paper	◎	◎	◎	○	◎	○	◎	◎	○

Table 1: Analysis results of the problems

## RESULTS OF THE ANALYSIS OF THE QUESTIONAARE

The selection frequency distribution for the iPad Group, PC Group and Paper Group in regards to boredom and fatigue was analyzed. As results, paper was the media most likely to induce boredom, while the media least likely to do so was the iPad. In addition, PCs were the media most likely to cause fatigue, while the media subjects most desired to use again was the iPad.

These results are thought to represent the characteristics of the various forms of media. That is, the media of paper possesses the characteristics of being easy to underline text and take notes, but at the same time it is possible to perceive that this is a form of media that causes fatigue and so requires a certain amount of perseverance in the learning process. On the other hand, while underlining text and taking notes with the iPad is somewhat difficult, it does possess an effect in motivating users to study with it again. Consequently, iPads are characterized by the fact they make it easier to learn without becoming tired of study and it is possible to perceive that learning with these devices is an enjoyable experience. Underlining text and taking notes is not so easy on a PC and at the same time it is likely to cause fatigue. Therefore, it is not possible to perceive that learning on PCs will be an enjoyable experience. The characteristics of the media like these are cited as the grounds for the difference in the average scores for the problems described in Table 1.

### SUMMARY

Accordingly, this demonstrates that paper is best for learning activities in which the content being studied is memorized or comprehended as knowledge in a predetermined scope. Nevertheless, unless the user has the motivation to study, they are likely to become bored by using paper and this makes continuous learning a challenge. On the other hand, the iPad is best suited to problems in which an individual needs to comprehensively express their own thoughts and judgments. iPads are also characterized by the fact they encourage learners to continue with their studies. No particular special features were observed with PCs. The content installed on both iPads and PCs is identical, so this difference is entirely due to the variation in the media. This difference is a point that is extremely interesting. That is, there is great variation in the learning effects due to the media and device even when the digital learning material is identical. The main difference between iPads and PCs is the interface.

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**Concurrent session - Friday, 9 August**



## The Instructional Media for Different Levels in the Philippine Educational System

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**Abstract:** In the Philippines, the K+12 system is newly introduced and the readiness for its implementation undoubtedly made the teaching community confused and confounded. Thus, extra efforts are being done to upgrade and update all instructional materials. Even if the Department of Education are preparing the faculty members through trainings, seminars and providing them with syllabus accompanying the new curriculum, still the confidence for the coming teaching assignments for the additional two years in the system is very low. The faculty members are now strategizing teaching methodology for the subjects they have to handle through upgrading not only their knowledge but also the teaching materials they are to use in their classroom. With the changing environment, the learning style of students also advances. Children are now exposed to various modern gadgets, thus, they learn more advanced knowledge about their environment. These modern medium must be an advantage to the teaching profession. Teachers must know how and what the children learn through these medium and create some learning materials that will augment this knowledge in schools. This study is a partial analysis of the learning style of students in different levels of the educational system and the knowledge they acquire through different modern medium and test the gap between this and the knowledge they must learn in school. Also, this study will come up with what medium can be used as instructional medium that will aid the faculty members in their teaching courses or subjects in school.

**Keywords:** *K+12 system, gadgets, instructional material, medium*

## **The Socio-Cultural Features of ICT Practice at Japanese Primary Schools: Comparison with ICT Practice in Primary Schools in the UK**

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**Abstract:** The purpose of this study is to clarify the features of Information and Communication Technology (ICT) utilization of Japanese primary schools by comparison with ICT practice in UK primary schools from socio-cultural viewpoints. The authors collected data from five Japanese researchers, who have studied ICT utilization of primary schools in the UK, through a structured interview including three questions; (1) “what do you see at primary schools in the UK?” (2) “Have you ever seen similar practices in Japan? If so, what?” and (3) “Do you think Japanese primary teachers have similar practices in their lessons? If so, why?” The data was analyzed in four phases based on the qualitative research method. First, the transcript was reduced to information relevant to the research questions. Second, the data was open coded. Third, the coded data was categorized. In conclusion, the features of ICT utilization of Japanese primary schools were explained relative to categories from socio-cultural viewpoints. As a result, six socio-cultural features were found: (a) ICT equipment available at schools, (b) digital content that fits conventional class format, (c) staff that support teachers using ICT, (d) class format mainly on conventional individual guidance, (e) the process of constructing meaningful use of ICT and (f) actual feeling of efficiency of using ICT.

**Keywords:** *ICT, Socio-Cultural viewpoint, Primary School, UK*

## **5<sup>th</sup> Graders' Usage of the Help Feature in the *International Children's Digital Library***

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**Abstract:** This study examines the use and understanding of a particular help feature on a particular information retrieval system, the *International Children's Digital Library*, by 5<sup>th</sup>-grade children. Based upon reference research that shows that there are gender differences (girls tend to be more advanced) in achievement in literacy at this young age, the study expects to find greater use, understanding and satisfaction with the digital library and its help feature among girls. As education and the tools for education continue to increasingly move into the digital environment in the 21<sup>st</sup> century, it is imperative that learning, especially the acquisition of literacy skills, not be impeded by non-effective help systems.

**Keywords:** *children, digital library, educational technology, evaluation, help, help feature*

## **Analyzing Lessons in Chinese Primary Schools based on Japanese Teachers' Viewpoints -A Case Study of Nurturing Higher Order Thinking-**

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**Abstract:** The purpose of this study is to clarify the characteristics of the class that are practiced in primary education in Guangzhou, China which encourage higher-order thinking skills. Research method is to have elementary school teachers in Japan watch the lesson practice video of China, and interpret the lessons that focus on thinking power development in China. The interviews with teachers in Japan are all written and analyzed qualitatively. As a result of the analysis, the characteristics of the classes in China has become clear from the perspective of five "flow of the class," "The aim of the class," "teaching method", "mutual learning of pupils" and "the skills of the pupils".

**Keywords:** *Primary Education, China, Japan, Higher Order Thinking, Collaborative Research*

**Proposal for a Computer System  
with Structured Chat and Social Stamp Functions to Support Social Reading  
for High School Students' Essay-Writing Process**

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**Abstract:** This paper describes the development of a computer system to support high school students in writing short essays. In recent years, more universities have adopted these essays in their entrance examinations. Many examinations test applicants not only on reading comprehension but also on their ability to write an essay in response to a question. To support this reading and writing process, we have developed a system called SCSS (Structured Chat and Social Stamp), which supports students to perform social reading (reading and commenting on what is read individually and in groups, and applying stamps to indicate information about what is read). SCSS consists of five stages. The first stage is understanding the question at hand, while the second stage is achieving reading comprehension. In both these stages, students first think of ideas by themselves and then share their thoughts with their classmates. The third stage is where students express ideas to answer a question. Though at this stage students cannot comments or exchange ideas with their peers, they can see other students' ideas through the system interface. In the fourth stage, students pick their favorite ideas and comments from the previous stages and arrange this content into the material for a short essay. In the fifth stage, they write the essay, in the first person.

**Keywords:** *Social Reading, Structured Chat, Social Stamp*

## The Development of Interpersonal Emotional Connections in Virtual Worlds

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**Abstract:** The purpose of this research is to examine whether sharing or not sharing the virtual environment in an online virtual world has a different influence on the development of interpersonal emotional connections that participants may have in an online virtual world telecollaborative context. To fulfill the purpose, the experiences of four pairs of Japanese and American students were observed as they participated in conversational activities in two different virtual environments; one where they can see the avatars of their partners and the other where they cannot see them, in the frame of single subject research designs. The participants had five twenty-minute conversation sessions in Japanese in Second Life, an online virtual world developed by Linden Lab. All of the participants experienced both environments mentioned above with different partners. The perception of social presence, which was measured on a Likert scale, and verbal interactions during the activities were analyzed together in each session for each participant to examine the development of interpersonal emotional connections in a longitudinal manner. The results indicated that sharing virtual environment may contribute to building interpersonal emotional connections in the initial stage of their relationships, however, the benefit may not be so significant as they know each other more after several sessions.

**Keywords:** *virtual world, emotional connection, telecollaboration*



## Effects of Multimedia Technology on Learning Strategies of Learners

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**Abstract:** Currently, multimedia technology has been a frequent subject of research. Since it has been the question of research for many years, the countries that are using Information Technology have been studying the effects of the Information technology on the quality of learning process of learners and pedagogy of teachers and even they have had their own policies.

It has been 20 years since information communication technology started to be used for instruction in Mongolia. A number of foreign and domestic projects are being implemented in the field of using ICT in instruction. Nevertheless, the different ICT infrastructure in the country has had negative impacts on implementation of projects and programs. In this case, the School of Computer Science and Information Technology, Mongolian State University of Education has organized annual national contests under the topic as “Application and development of multimedia technology in instruction” for primary and secondary teachers since 2006 with the aims of revealing objective results and progress of the above mentioned projects and programs for instruction and providing possibilities of sharing and disseminating experiences for teachers. Many primary and secondary teachers of different subjects from urban and rural places participate in the contest.

In this article, we focus on multimedia technology’s support of learning process of learners and teaching methodology of teachers”, based on works and creations of the contest participants. The paper took a focus interview from primary and secondary teachers to reveal difficulties and problems when teachers design e-resources for lessons.

The paper has more practical advantages and it contains the following issues:

1. The study identifies the usage of multimedia technology in primary and secondary levels, based on surveys.
2. What can the didactic requirements be to design multimedia resources?

**Keywords:** *Information technology, multimedia technology, teacher, learner, learning strategy, methodology of learning*

## **Employing Affordance-Based Design to Improve the Usability of E-Learning User Interfaces**

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**Abstract:** Given that a user interface interacts with users, a critical factor to be considered for improving the usability of e-learning content user interface is to design a more affordable user interface. Most studies on affordance are limited to the examination for the affordance of e-learning tools rather than the systematic design of such affordance. Using the approach of Maier and Fadel's affordance-based design methodology as a framework, the researchers identified affordance factors, developed affordance strategies and the user interface, and evaluated the user interface prototype. In addition, the effects of affordance design strategies on usability were examined. Implications are suggested for designing strategies that enhance affordances of user interfaces of e-learning contents.

**Keywords:** *Affordance-based design methodology, User interface, E-learning content, Usability*

## Design of Learning Environment for a Story-centered Curriculum

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**Abstract:** This paper describes three years (2009–2012) of our practice in the story-centered curriculum project that we initiated in 2008, and, as part of a design-based research, how we revised it, retrospectively. While improving the quality of the contents, reflection activity proved to be very valuable, because the learners revealed that their knowledge of each course deepened and that their application skills increased, which was the intent of the curriculum. We found that we deliberately placed much value on reflection activities. To see the effectiveness of the reflection activity, we need to review the extent to which the activity met our intent. Comparing the quality of the reflections of past learners and reviewing the correlation between the timing of the reflection activities and the quality of the reflection, will be the possible action to confirm our decision making to lead a proposal of the design principle.

**Keywords:** *Story-centered curriculum, Reflection, Design-based research*

## Analysis of the relationship of students' self-efficacy, test anxiety, and parental involvement toward learning strategy and achievement in Korean middle school mathematics

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**Abstract:** This research used the third year survey data of 6,212 ninth graders from the 3-year Korea Educational Longitudinal Study (2005-2007) in order to examine the relationship of students' self-efficacy, test anxiety, and parental academic involvement toward learning strategy and academic achievement in middle school mathematics in South Korea by applying structural equation modeling. After satisfying the standard fit of both the measurement model (TLI=.979, CFI=.989 RMSEA=.040) and the structural model (TLI=.969, CFI=.983 RMSEA=.046), the authors verified the positive effect of academic self-efficacy ( $B=.21$ ,  $\beta=.47$ ) and parental academic involvement ( $B=.06$ ,  $\beta=.15$ ) as well as the negative effect of test anxiety ( $B=-.05$ ,  $\beta=-.13$ ) on learning strategy. Moreover, the positive effect of all variables on academic achievement proved to be statistically significant based on the following results: academic self-efficacy ( $B=33.51$ ,  $\beta=.36$ ), test anxiety ( $B=3.35$ ,  $\beta=.04$ ), parental academic involvement ( $B=9.81$ ,  $\beta=.12$ ), and learning strategy ( $B=7.89$ ,  $\beta=.04$ ). These results show that students' academic self-efficacy had the greatest effect on learning strategy and academic achievement, suggesting that educators should increase students' academic self-efficacy, promote parental academic involvement, and decrease test anxiety in order to improve learning strategy and academic achievement in middle school mathematics in South Korea.

**Keywords:** *self-efficacy, test anxiety, parental academic involvement, mathematics education, structural equation modeling*

## Case Study on a Smart Class-Based Class: Focusing on a Cyber University Class

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**Abstract:** The main goals of a smart class are supporting a variety of teaching-learning methods in an online class environment, generating and sharing content with ease without constraints, temporal and spatial alike, fostering online interactions, and managing teaching-learning materials efficiently in a cloud environment. This study seeks to explore more effective class strategies through a case study on a smart class-based class. According to the study findings, a smart class improves learners' digital literacy, facilitates data-sharing with and feedback from fellow learners, enhances learners' willingness to participate in class, and elicits positive reactions from them toward novel experiences. These findings imply that smart devices, not just offering convenience in information access, encourage learners to actively take part in the production and utilization of diverse information in the teaching-learning process.

**Keywords:** *smart devices, smart class, class strategy, digital literacy*

## Designing an inquiry based learning environment in the school library

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**Abstract:** The purpose of this study is to identify the points designing an inquiry based learning environment at school libraries from the viewpoint of its users or students. Since inquiry based learning was introduced to the school curriculum, users need skills of information collecting, reporting and presentation making. The authors interviewed the teacher-librarian at the high schools. These teacher-librarians help students write theses and essays, as well as observing their respective library. The interview results reveal the following three common findings:

1. School libraries need to be equipped with good ICT environment since the school libraries have been changing from a place of research to a place for presentation making and discussions.
2. Teacher-librarian need to play the role of managers. This is due to the users' acquisition of information skills. Thus the users' needs in the library are not only limited to reading, but also extended to discussion, presentation making, and group work activities.
3. Users have an interest in searching for a variety of information, such as books, newspapers and Internet searches. Hence an online database is necessary for users to search a variety of information.

The authors found three areas to upgrade the school libraries; "equipment/building", "teacher-librarian" and "media". This is because the school library has changed its primary function from a place of reading to place of inquiry based learning. Based on these findings, the authors appropriately designed the libraries of both the elementary and junior/senior high school of Kansai University. The authors are currently evaluating user's satisfaction for future possible revision.

**Keywords:** *ICT in education, Library education, Information skills, Inquiry based learning, Learning environment*

## Development and Effect Analysis of Blended Learning-based Program for Enhancing Parental Efficacy

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**Abstract:** The purpose of this study is to analyze effects by developing and implementing the blended learning-based program for enhancing parental efficacy based on the analysis of the requirements for the development of parent education program and the extraction of significant models of parenting style (consistent expressions of support, rational attitude, expectations, corporal punishment and interference) and parental efficacy.

A needs analysis for the development of parent education and a survey for the extraction of significant models of parenting style and parental efficacy were conducted for statistical analysis as the research methods, and 500 parents with school-age children in Seoul, Gyeonggi-do, Daejeon, Gwangju and Busan areas were sampled as the research subjects. The educational content of the program for enhancing parental efficacy, education methods and implementation period were examined through a needs analysis, and the program for enhancing parental efficacy was developed by setting the self-reflection, learning and training, application, self-evaluation (SLAS) hybrid model, which is a development model of the parent education program. In addition, 168 parents with school-age children in the capital area as well as Seoul and other areas who participated in the program were selected for the effect analysis. The statistical methods used in this study were multiple regression analysis, paired T-test, independent samples T-test and one-way analysis of variance (ANOVA).

According to the results of this study, the rational attitude and corporal punishment out of the parenting style were significant factors to the parental efficacy and the consistent expressions of support, expectations and interference were not significant. Through a needs analysis, the SLAS Hybrid model, which is a model for designing and constructing the content of parent education program, has been proposed, and the blended learning-based program for enhancing parental efficacy was developed. In addition, the program for enhancing parental efficacy brought about positive changes to the parental efficacy (parenting skills, positive parenting efforts, parenting confidence, learning coaching skills and parenting management skills) of the parents who participated in the education. Such a series of the findings are providing data for the expansion of parent education as future life-long learning and the development and operation of more effective parent education program.

**Keywords:** *Parent education, Parental Efficacy, Parenting style*

## **Widening ideas on careers in Japan-Korea KJ workshop style mutual direction distance education –using personal computer pull down function–**

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**Abstract:** One of aims of distance classes with students of overseas universities is to widen students' ideas on the topics and cultivate competences to view things from many angles, through exchanging ideas with students who have a different cultural background. This paper reports the practices of distance classes between Josai university Graduate School Business Research Course and South Korea Dongseo University Business Course where students majoring in business were expected to take part in KJ methods workshop, aiming to compare business style of two countries, explore the differences of ideas on careers and widen their perspectives. To conduct KJ methods on personal computers, excel was employed to make information sorted and categorized. The classes were held in Japanese language, so Korean students were allowed to prepare words pulled-down on excel file in advance in order to reduce some difficulties possibly produced by lack of language competences. Students managed to share the whole process of showing each other's ideas, categorizing, mapping, clarifying and naming these ideas, and having presentation and making questions and answers. Data electronically saved were accumulated into e-portfolio to let students reflect changes of their own ideas. Four topics were taken up in the classes: competences needed to make a living; competences needed to work with people who have a different culture; merits and difficulties in working in their own countries and overseas; differences in business style between two countries, as a conclusion.

**Keywords:** *ideas on careers, information sorted; KJ methods, e-portfolio*



## Comparative Study of Personal Learning Environment's Construction Ways and Technologies

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**Abstract:** Personal Learning Environment (PLE) represents a new trend in learning environment and might be useful or indeed central to learning in the future. Several researches have been made since it was proposed in 2004. Now it is widely used in personalized learning of all levels, from primary school learning to university learning, and even lifelong learning. This paper aims to clarify three different ways of constructing PLE and the associated technologies, such as Blog, ELGG, iGoogle, etc. By elucidating its definition, characteristics and making comparative analysis, the paper summaries their respective advantages and application scope. So as to give users some suggestion on customizing learning environment according to their personal needs.

**Keywords:** *Personal Learning Environment, construction way, PLE technology, comparative analysis*

## **Designing an Instructional Model for Smart Technology-Enhanced Team-Based Learning**

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**Abstract:** The purpose of this study is to explore and develop a new instructional approach to a technology-enhanced collaborative learning environment called Smart technology-enhanced Team-Based Learning (denoted as S-TBL). We designed a novel instructional model that combines mobile technology, collaborative teamwork, problem-solving process, and a variety of evaluation techniques in the perspective of a conventional team-based model. Team-Based Learning (TBL) is an instructional model that is based on procedures for developing high performance learning teams that can enhance the quality of student learning in various fields. TBL has the following defining characteristics and procedures: (1) Lesson Panning, (2) Pre-Class Preparation, (3) Readiness Assurance Process, and (4) Application Exercises. The traditional TBL has been implemented across a broad range disciplines and school levels, and proven to be educationally effective in various academic domains. We believe emerging technologies that are now available in classrooms will bring us new opportunities to maximize the merits of TBL even further. Along with the revision of the traditional TBL model, we integrated smart learning technologies (such as iPad or Galaxy Tab for 1:1 mobile computing): 1) to provide a holistic learning environment that integrates learning resources (including reading assignments), assessment tools, and problem solving spaces; and 2) to enhance collaboration and communication between team members, and between an instructor and students. The S-TBL instructional approach combines: 1) individual learning and collaborative team learning; 2) conceptual learning and problem-solving & critical thinking; 3) individual assessment and group assessment; 4) self-directed learning and teacher-led instruction; and 5) personal reflection and publication.

**Keywords:** *Team-Based Learning, Smart Technologies, Learning Method, S-TBL*

## Designing Role Playing Lessons in VR Experiencing Classroom

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**Abstract:** The ubiquitous and virtual technology is influencing conventional teaching methods in school education. Mixed Reality is one of new technology in school and makes learners' experience more "engaging" and promotes active and interactive learning. Role play is an effective teaching method for affecting individual attitudes and developing interpersonal skills through dramatizations. This study aims to design the role playing lesson for children in a mixed reality classroom. For the purpose of this study, we analyzed the mixed reality contents and VR experiencing classroom environment in a smart model school in Sejong City, Korea, and planned the role playing lessons for children using mixed reality contents. The result of this study, four mixed reality lessons for Korean and English of elementary school were developed. It is needed to apply the role play lessons to elementary school students and to evaluate the effectiveness of these lessons in further studies.

**Keywords:** *Role Playing Lesson, Mixed Reality Contents, VR Experiencing Classroom*

## **Integration of Computer Assisted Learning in Teaching and Learning in Secondary Schools in Kenya**

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**Abstract:** The purpose of this study was to establish factors that lead to poor integration of Information and communication technology (ICT) for teaching and learning in schools in Kenya, despite comprehensive policy, institutional, infrastructural frameworks and capacity building by the Ministry of Education.

The subject of this study was administered by use of questionnaires in three categories of public schools: National School, Provincial schools and District Schools. The respondents were students from each level that is Form one, two, three and four and teachers based on the most offered subjects in the secondary schools. The Computer assisted learning facilities were classified into computers, internet and content in optical media. In National school Internet based research, optical media content provided by Kenya Institute of Curriculum Development and Cyber school program for Science subjects was used in learning. In Provincial school they lack adequate computers, reliable Internet and Content in optical media. In District school they lack adequate computer, no internet connection and content in optical media.

A Learner Management System which can be accessed by all learners by use of any internet access devices like mobile phone access will be ideal tool with over 4,000,000 mobile phone subscribers currently in Kenya.

## Creative and Critical Thinking By Empowering Media In Teaching English As A Foreign Language In Senior High School

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**Abstract:** Teaching cannot be separated from media, since teaching without media is like food with no taste, plain! The development of teaching media is very fast even cannot be chased since IT in broader sense and internet in narrower sense grabs the world twenty-four hours a day without stopping. It provides people any information of any fields including media can be taken out from internet easily. It gives, however, great impacts on teaching development as it spoils teachers by providing any teaching material, as conversely it sometimes makes teacher be lazy to make any personal development.

Teaching in the era of 21<sup>st</sup> skill that is IT-based is not as easier as teaching in the previous years, when internet had not been so easily accessed especially in Indonesia due to lack of instruments provided by the government. Nowadays, internet is the source of any information. Teachers are spoiled with teaching media that can be taken out any time from internet, in various kinds, and in terms of many fields of study and information. On the other words, teachers do not need to get confused on what is going to teach. The problem is, however, not finished only by getting teaching material from internet, but without being realized by teachers themselves, other problems come up. Internet is an open media source. Everybody can browse, search, and find the same material with the one found by the teacher. With no exception, the students. They are accidentally able to find the same source of knowledge where the teacher takes the teaching material from. Both sides, teacher and student learn the same thing from the same source.

Teaching is bridging gaps between teachers and students. The students' situation from not knowing to knowing something. What happen when there is no gap anymore since the students have already known the information by themselves from any other sources: internet, television, magazines, books or other source of information. Students will feel get nothing from the teacher, as the consequence there will be no more attention to what the teacher is teaching. Even it is teaching English which is considered a very important subject at school by most students, however, the students do not want to pay attention anymore. Again, since there is no gap, so no pain no gain can be applied to describe this situation.

Teachers, in this case, have nothing to do to give up easily. Media they get from internet or other sources, in which the students have already known, should be followed up into fresh, and ready to use media. Teachers give something special that cannot be predicted easily by students. The students will always wait for something surprising from their teachers, since the teachers always give something new, interesting, and fun to the students. Empowering teaching media is the answer of all the problems. Teachers need to improve their personal development from time to time, and not to strictly rely on certain sources of teaching media without making any changing and adjustment as what the students need and suitable for them. Creative and critical thinking from the teacher in making use of media results good benefits from both sides. Students can learn something new, and teachers can teach something which has gaps. And finally there will be breakthrough to close the gaps and change it into important knowledge for the students, and important experience for the teachers. Creative and critical thinking in empowering teaching media will put teachers in their good position as always. Without doing any personal development, teachers are difficult to hand and in hand with IT as a main role of their teaching.

While creative and critical thinking in empowering media as a means of teaching is the way to grab success.

**Keywords:** *empowering teaching media, 21<sup>st</sup> Skill IT teaching-based, bridging gaps*

## Designing a Blended Undergraduate General Chemistry Course Using the ARCS Model

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**Abstract:** The ARCS model is one of the representative instructional-design theories. We applied this model to design a general chemistry course that was conducted as the blended learning. The course is offered to students of physics, mathematics and mathematical science. Firstly, we designed a framework of instruction and contents in accordance with the ARCS model containing preparation and review, and evaluated it by the questionnaire that was related to the four categories of the ARCS model. After that, we improved methodology and course contents by the results of the questionnaire, and applied them to our general chemistry course of Tokai University. We have had a continuous improvement in the learning materials with the results of the questionnaire taken in the last semester. We got 4.5 points of student evaluation which was higher than that of the last year by 0.6 in five points scale. Seventy nine percent of respondents felt that the course had relevance to them. The attitude survey for the students who took a credit of the course shows that the interest for the chemistry tended to increase. But there was no significant difference among the amount of document and the average score of the written examination.

**Keywords:** *ARCS Model, Course Design, Chemical Education, Blended Learning*

**Concurrent session - Saturday, 10 August**





## **Preliminary Research on the Implementation of Computer-Based Speaking and Writing Test and its Implications**

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**Abstract:** This paper is a preliminary research on the implementation of an official computer-based Test of English for International Communication (TOEIC) speaking and writing (SW), a relatively new concept in the country. With the growing demand for graduates to possess competence in communication, the objective measurement of English proficiency has become vital in higher education. Contrary to the receptive skills of listening and reading (LR), a systematic evaluation of productive skills, such as SW, lags behind in terms of implementation. Such situation is evident among students with intermediate to low proficiency. This research was conducted among students in a science university whose major was not language. Data from two sources, namely, the test scores and the post-test questionnaire of examinees, were examined. Results in SW were analyzed with their most recent TOEIC LR results. Similar to prior studies (Liao, Qu, & Morgan, 2010), this paper obtained moderate-level correlation among the four skills, indicating that students in the LR-centered curriculum exhibit adequate development in SW proficiency. Moreover, the students regarded the computer-based SW test as fun. Overall, the computer-based SW test is a viable option for the objective assessment of the productive skills of students with intermediate and false-beginner proficiencies.

**Keywords:** *Computer-based Test, TOEIC Speaking & Writing, Learner Perceptions, Correlational Analysis, International Competence, Curriculum Development*

## Improving the Intelligibility of a Self-Study Application For Japanese Academic Writing Using a Paragraph Writing Method

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**Abstract:** In this study, we tested improvements to an academic writing application, based on the method of a five-paragraph structure and rhetorical functions that we previously developed to help novice writers learn to write papers and reports in Japanese for academic purposes. Our previous research showed how students' understanding, knowledge and skill in writing Japanese improved while using our application. However, we found it was necessary to change some aspects of teaching the writing method. This is mainly because, although students understand the method, they had difficulty using it. Even though some students are familiar with the concept of a paragraph taught in English classes, when it comes to Japanese writing, they cannot recognize what a paragraph is. We hypothesized that English terminology and ideas might be blocking their understanding. To overcome this, we felt it is necessary to retrieve the idea of a paragraph in English classes and incorporate it into Japanese writing classes. In this study, we sought a different approach for novice writers to acquire the foundation of Japanese academic writing.

**Keywords:** *Academic Writing, Paragraph Writing Method, Self-Study Application, Writing Application*

## **The Effects of Types of Decision-Making and Collaborative Information Processing on Collaboration Performance, and Social Support and Collaboration Load among Collaborators in CSCL**

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**Abstract:** This study investigate the process of thinking required by individual learners in collaborative learning and the process of collaborative learning from the perspective of information processing and suggest a specific process of collaborative information processing with information externalization to make effective collaboration performance. In particular, the body of research mainly focused on the optimal process of information processing on the basis of individual learners' types of decision-making.

**Keywords:** CSCL, Types of Decision-Making, Social Support, Collaboration Load

## The Evaluation on the Practice by using “RepoReco” that Supports Undergraduate Students’ Reflection in Their Writing Processes

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**Abstract:** It is widely known that undergraduate students have serious difficulties in writing academic reports. In particular, novice writers lack a strong ability to reflect on the writing process. Thus, this study focuses on the problems in students’ reflection on their writing process.

This study seeks to evaluate the effectiveness of writing sessions in which tutors provide one-on-one instruction to students using a computer application named “RepoReco.” The experiment simulates an academic writing course as an extracurricular study.

RepoReco visualizes the writing processes to support students’ reflection. The system can be used on a web browser. It records the writing processes of undergraduate students’ verbatim and then displays them visually. It records (1) the time of their writing; (2) position of the cursor; (3) cut, copy, and paste actions; and (4) changing numbers of characters.

To evaluate students’ report writing using this system, we conducted an experiment in a laboratory setting. Twelve undergraduate students were asked to evaluate the effectiveness of an instruction session in a questionnaire and interview. We focused on whether the students consciously reflected on their writing process as they wrote. The experiment results indicated that RepoReco indeed helped the students to reflect on their writing process.

**Keywords:** *Academic Writing, Reflection, Writing Process, Writing Center*

## Reversal Adoption Elements of Paper Media in Screen Learning Process

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**Abstract:** The purpose of this study is to explore elements of reversal adoption, the reason learners want to return from screen media back to paper media in learning situations. For the study, twenty-three college students were asked to write a journal about their experience in screen reading process for five consecutive weeks. They were also asked to describe their experiences after studying a summary of a learning content during a class session. Analysis of data was performed by open coding and axial coding processes of Grounded Theory. The reversal adoption elements were classified into twelve elements of four domains: cognitive domain (interferes engagement, decreases comprehension, interrupts memorization, and delays learning), affective domain (obsession with writing, learning anxiety, dissatisfaction with learning effects, desire for possession, and preference), interface domain (inconveniences in operation, and deterioration of quality), and physical domain (fatigue). All participants felt that they want to change to paper media while learning with screen media. Especially when learning via screen that required in-depth thoughts and understanding, they experienced being prevented from concentration and engagement, obsessed with psychological pressure and anxiety that their learning is failing. These results are expected to provide suggestions in designing digital textbooks.

**Keywords:** *technology adoption, screen reading, reversal adoption, digital textbook*

## Analysis of the Relation among Moral Judgment, Information Ethics Judgment and Internet Ethics Consciousness of Undergraduate Students for Developing the Model of Information Ethics Education

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**Abstract:** Problems caused by the side effects of information society created a big pressure for more effective education for ethics of the knowledge society, even though the information ethical education has been practiced nationwide more than ever. In this thesis, I analyzed the relationship among the three major elements related to ethics for undergraduate students (moral judgement, the information ethics judgement and the internet ethics consciousness) for developing the model of information ethics education.

With the subject of 150 undergraduates, standardized tests of the self-diagnose about the moral judgement, the information ethics judgement, and the internet ethics consciousness of the undergraduates were conducted. Analysis of the data showed that the level of the moral judgement, the information ethics judgement, and the internet ethics consciousness of the undergraduates were not so related, which means the high moral judgement ability doesn't necessarily guarantees the high level of internet ethics consciousness while those two are assumed to be strongly related. This result suggests there is a need to develop the education program for improvement in the morality and internet ethics education. The relationship between the moral judgement and the information ethics judgement showed very weak static correlation, and there was no significant correlation between the correlation of what and the internet ethics consciousness. This means that there was little correlation between the reality and the cyber space and no correlation between the action and the consciousness.

I proposed the information ethics education model based on the analysis of the previous researches as follows. First, diagnose the consciousness, the morality, and the precedent knowledge and then conduct the education of the customized learning contents individually on line based on the diagnosis. Next, I practice self-directed, active, and practical learning offline. In this time, throughout all the learning procedure we have to implement the learning based on the Flipped Instruction Model, Authentic Learning and Convergence Learning.

**keywords:** *Information Ethics Education Model, Moral Judgement, Information Ethics Judgement, Internet Ethics Consciousness.*

## How to Use the Digital Encyclopedia with Elementary School Students

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**Abstract:** This research paper will show how to use the digital encyclopedia with elementary school students. This study uses an encyclopedia called the "Gakken New Wide". The subjects of this study were elementary school students (31 people). They freely used the digital encyclopedia during their school life for two months. However, the teacher gave them a few rules (i.e. when the teacher is speaking, students don't use the digital encyclopedia. Don't use it during long breaks and lunch breaks.) This research uses data on logs of students using digital an encyclopedia and fieldwork and a questionnaire of elementary students. The reason, the data practice using digital encyclopedia by students. The analysis of the data showed that using the digital encyclopedia changed students style on class lessons.

**Keywords:** *Digital encyclopedia, Empirical Study, Elementary school*

## A study for the students under medical treatment in hospital to give a lot of opportunities in class with ICT

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**Abstract:** We visit hospitals and give lessons to students in a long-term hospitalization based on National Curriculum Guideline of MEXT Japan. The purpose of this study is to investigate how ICT can be used more effectively to help the students to learn. Some of the students stay in hospital all the time, so teachers visit them three times a week to give a 120-minute private class. It's usually difficult for students to lie in bed and concentrate on learning for as much as 120 minutes, because of their bad condition, such as a disorder or chronic disease. The teachers should keep in mind that students learn under restrictive environments. In addition, it is required for teachers to make fully worked-out teaching plans considering their academic ability, motivation to learn, state of student's condition, medical environment, and treatment plan for individual student. This study has been practiced in Obu Special Support School in Aichi Prefecture, Japan

We have set up a hypothesis that ICT provide necessary supplies for students in hospital. Even in hospital, where learning environment is not preferable, we made much account of practical experience for students. In this paper, model lessons were put in practice. Students use the Internet or digital contents using mobile 3G data communication, and they devised ways and means to present the materials they prepared. They also used these digital devices in investigating learning. Touch panels, such as iPad, or projectors were adopted as necessary, too. Through these model lessons, ICT seems of use for students in hospital. However, practical experience must be emphasized as well. ICT should be one of the supplements when teaching in hospital.

**Keyword:** *Visiting Education for children under Medical Treatment*



**Making digital stories by tablet devices to connect thoughts for earthquake  
disaster recovery  
-A study from Bridge! Media 311 project-**

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**Abstract:** Bridge! Media 311 project (BM311 project) began in 2011 with the intent to collect people's thoughts and wishes for recovery from the Great East Japan Earthquake. University students would record videos of reconstruction work in affected and non-affected areas and share them nationwide. This study describes a 3-day media workshop held in February 2013 on the use of tablet devices, with student participants from non-affected areas in Niigata and Hiroshima. The participants visited the devastated city of Ishinomaki in Miyagi to make "digital stories" of their thoughts after seeing and hearing, and brought them back to their hometowns to convey their findings to a wider audience. Students conducted fieldwork in Inshinomaki by taking photos of the disaster site and interviewing people about the tsunami and how they have lived since it happened. After that, they reflected on their experiences together and made short slide movies adapting the format of "digital storytelling" to our purpose. Our study shows how we have designed the workshop to help participants express their thoughts, and further shows what students learned. The possibility of using tablet devices for media expression is also discussed.

**Keywords:** *Digital storytelling, Exchange Learning, Media Literacy, Media Workshop, Disaster Information*

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## **The passive usage of ICT by Japanese undergraduate students**

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**Abstract:** The primary purpose of this study is to investigate the features of the Japanese undergraduate students' attitude towards a variety of information communication technology (ICT) in order to construct the effective learning environment at a Japanese university. To pursue this purpose, a survey questionnaire was administered at the beginning of the first semester in 2011 at 6 different universities in Japan. The total of 862 data was collected. The basic descriptive data analysis shows that the usage of ICT by the freshmen is passive rather than active such as watching YouTube instead of watching TV and reading someone's blog instead of commenting due to the short length of the possession of own computer etc. Therefore, in this study, the interrelationships among the findings are investigated. Regarding the usage of the network in relation to their study, six factors were extracted and the t-tests revealed that the usage of ICT by female students are more careful than male students. In addition, confirmatory factor analysis was conducted and found that the frequent use of 'SNS' is not strongly affected by 'convenience.' Based on these finding, two approaches are suggested for freshmen to utilize ICT for academic learning.

**Keywords:** *IC , SNS, freshmen, learning, questionnaire*

## Sustainable Professional Development to Promote Collaboration between Japanese Language Teachers Domestic and Overseas

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**Abstract:** The main objective of this project is to promote teacher collaboration for new curriculum development and assessment for Japanese language education, reporting their practices and exchanging ideas with each other. In order to promote professional communication between Japanese language teachers and professionals in teacher education, the author organized virtual learning communities, utilizing two different sites: moodle-based website and e-portfolio system. In use of these sites, nine participants and four mentors tried to report daily activities, and share knowledge for improvement of domestic and overseas language learning. Through such collaboration on the web, it proposed the model for fielding small inquiry communities of project's participants in order to improve their practice and challenge new program to improve their students' learning environments and their teaching and management skills. Practical reports for six months revealed the following: (1) participants did not have sufficient opportunities to communicate with each other, although they were highly motivated; (2) continuing discussion among participants was needed to build a community of practitioners (3) participants were hesitant to make comments on the teaching portfolio of the others because they do not know each other, (4) the projects for students' video exchange and the local seminar for Japanese language teachers were attractive for participants who did not have enough opportunities to consult other teachers.

**Keywords:** *he Scholarship of Teaching and Learning, Professional development, Pedagogy of investigation, Real-World Practice, Professional development*

## **Analysis for Designing International Collaborative Learning Based on the Dimension of Horizontal of Activity Theory**

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**Abstract:** This study aims to investigate how a teacher adjust lesson objective in the sociocultural context in “international collaborative learning.” The author applied the dimension of horizontal of activity theory viewpoints as a framework of analysis on the relation of people's activity in “international collaborative learning” in order to investigate how lessons work while considering the environment surrounding teachers. The author collected data in “international collaborative learning” between Japan and India schools. The author employed classroom observations implementation and interviews to teachers for collecting data. As a result of data analysis based on the dimension of horizontal of activity theory, the author identified three factors for designing “international collaborative learning” where mutual activity collides.

**Keywords:** *activity theory, international collaborative learning, sociocultural context, teacher education*

## Practice and evaluation of mentoring support system for novice teacher

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**Abstract:** This paper describes the development of a software program for mentoring novice teachers and trial mentoring practice. It can be effective for experienced teachers to observe classes taught by a novice teacher, and then have both reflect on student behavior in the classroom. However, there are some problems with this type of discussion. It is difficult for teachers to discuss specific children, as their conversation focuses on abstract matters such as teaching skills or theory. It is also hard for novice teachers to formulate a correct interpretation of what experts say. To solve these problems, we developed the mentoring support system “FRICA,” which is a software program composed of a tablet pc and web camera. Experienced teachers can record the behavior of school children during lessons being taught by novice teachers, and both can afterwards view the recorded movies of each child in chronological order. FRICA can significantly increase the amount of time spent on discussion of children during teachers’ reflective conversations (Wakimoto et al. 2010). This study describes how experienced and novice teachers can reflect on lessons using FRICA, including their thoughts and impressions of using it for mentoring, the effects of which are examined using qualitative data.

**Keywords:** *Novice teacher, Mentoring, Lesson, Reflection*

## **The Analysis on Primary School Teachers' Attitudes towards E-Schoolbag**

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**Abstract:** This study focuses on elementary school teachers' perceptions of and attitudes towards the use of the E-Schoolbag for instruction. We analyzed and collected instructional problems based on the results of focus-group interviews with teachers. In addition, a questionnaire and focus-group interviews were implemented in order to better understand teachers' attitudes towards using E-Schoolbag. It has been found that there are some problems with teachers using E-Schoolbag for classroom-instruction, i.e. problems of instruction and teachers' perception. Problems of instruction refer to such issues as information technology literacy, academic teaching, classroom management and lesson planning, and instructional design.

The teachers participating in the pilot program includes the adaption of new technology and new teaching mode as well as the suspicion of the pilot effect. The results of the questionnaire show that the teachers have the highest degree of satisfaction for E-Schoolbag management at the school and the lowest for resources and functions of E-Schoolbag. Besides, we analyze such factors as gender, subjects and teaching age and found that the male teachers obtained higher expectations in the education system and management of school, since it is expected that E-Schoolbag should have more functions to meet their needs, while younger teachers pay more attention to the pilot. Through this study, we hope to provide a reference to the schools or teachers who plan to use E-Schoolbag for instruction in the future.

**Keywords:** *E-Schoolbag, teachers' attitudes*

## Discussing Issues on International Collaborative Activities

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### **Abstract:**

The purpose of this paper is to discuss strength and weakness of international collaborative activities the author has experienced last ten years. When a group of people work together, they can gain different perspectives and ideas so that they can conduct unique collaborative activities. Furthermore, if they can involve in people in different countries, the activities would be more interesting. In addition, the Internet could internationally accelerate this kind of collaboration. They also could develop key competencies which were conceptualized by the DeSeCo Project. However, if they get involved in so different people working together, they may encounter difficulty to collaborate. Therefore, most people tend to avoid collaborative activities.

In the international collaborative activities, their social and historical backgrounds are diverse so that their way of thinking, management, and behavior, and communication styles are different. However, I would like to argue that the international collaborative activities are quite educational and informative so that we can get great benefit from it. I have been conducting the international collaborative activities with people in Syria, Myanmar, the Philippines, Cambodia, China, United States and Korea. The people in respective countries have different backgrounds. In this situation, we need to negotiate with each other how to come up with better collaboration. In this presentation, I would like to discuss strength and weakness of international collaborative research and activities and develop better understanding and fruitful outcomes of collaborative research.

**Keywords:** *international collaboration, key competency, active learning,*

## **Time Dimensional Analysis of Online Collaboration in a Blended-Learning Context**

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**Abstract:** Educators believe in the value of collaborative learning in higher education. Conventional universities are increasingly adopting web-based learning support systems to facilitate students' collaborative learning activities. However, little research has been conducted to understand the mechanism of collaborative learning as Hewitt (2004) argued. Therefore, this study is to conduct a time dimensional analysis of online collaboration in a blended-learning context. One of such analysis is related to assessing students' use of time in online collaboration. This case study presents an exploratory analysis of two groups of students (n=13), involved in a collaborative knowledge building task. The students participated in two weeks Moodle-based collaborative activity, and log data which is accumulated in Moodle such as written messages, groups' final outputs, and individual reflection notes, are collected. It attempts to analyze the quantitative and qualitative changes in the students' written messages along with critical time dimensions. In addition, it investigates the relationships between group's specific time related pattern, group performance, and individual learning experience. This paper concludes with implications of the results.

**Keywords:** *Online collaboration, Time, Pattern analysis, Blended-learning context*



## Investigation of Learners' Performance in English Conversation Mobile Learning System Using Learners' Own Daily Life Topics

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**Abstract:** We have developed an English conversation mobile learning system for Japanese EFL (English as a foreign language) learners. We have already reported development of English conversation learning mobile system and effectiveness of the system for improving learners' WTC (willingness to communicate).. In this research, we focused on the effectiveness of the system for learners' performance. During the experiment, we collected response time and answer time as learners' performance. Response time is how long it takes for a learner to start talking as an answer after a question or comment from the system. Answer time is the duration of the learner's answer. The seven-day experiment and results of the analysis revealed that the participants could decrease response time by continuous English conversation practices with lifelog-based topics. We had already concluded that this kind of practices with the system might be effective for improving some of learners' WTC. Consequently, we concluded that improving learners' WTC scores resulting from the practices with the system might be effective for decreasing response time.

**Keywords:** *English Conversation Learning, Second Language Acquisition, Mobile Learning, Learners' Performance*

## The Effect of Peer Tutoring in Terms of Epistemological Beliefs and Self-Regulated Learning

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**Abstract:** Peer tutoring is a learner-centered approach to teaching and learning that is intended to provide significant benefits in learner knowledge, skill and metacognition. This study investigated the change in epistemological beliefs and self-regulated learning under peer tutoring conditions. A total of 117 college students participated in this study. They had to fill out a questionnaire regarding epistemological beliefs and self-regulated learning at the beginning and end of the research. The control group was given reading materials and studied under self-study conditions without small group collaboration. The experiment group had small group collaborative learning opportunities. After every learning task, students from both groups wrote in their reflection journals. There was a significant change in epistemological beliefs between pre and post small group collaborative learning tasks. The experimental group receiving the instructional intervention showed a greater change in sophisticated levels of epistemological beliefs than the control group. There were no significant differences in self-regulated learning for both groups. Peer tutoring facilitated sophisticated levels of epistemological beliefs. Various collaborative strategies should be applied in pre-service teacher education and college tutoring program.

**Keywords:** *small group collaborative learning epistemological beliefs, self-regulated learning, peer tutoring*

## A Prototype Development of Mobile Game Contents for Mathematics based on ARCS Model

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**Abstract:** As mathematics is a notional scholarship and presents many formulas, learners have difficulty compared to other studies of the specific nature. In particular, in order to study and learn the formulas presented in mathematics, practice is essential. Fortunately, the popularization of mobile devices such as smart phone, creates an environment in which the learners can study anytime and anywhere. Therefore, the purpose of this study is to develop a prototype of mobile game contents for mathematics which applies the motivation strategies of Keller's ARCS model. The content of the development is the 'set operation' in the first semester of middle school freshman. Detailed research substances in accordance with the research purpose are, first, to develop the education course for the prototype of mobile game contents for mathematics, second, to develop contents which applies the motivation strategies of ARCS model and third, to apply the education course and ARCS motivation strategies and develop the prototype of mobile game contents for mathematics. To verify this study, the pilot study targeting 20 first-grade students in S middle school was conducted through questionnaire. The developed prototype of math mobile game based on ARCS model was proven to be effective. This study is valuable in a way that it glimpsed the potentials of a pioneering learning method integrating the ubiquitous mobile technology with the educational aspects of learning motivation.

**Keywords:** *Mobile, Mobile game, ARCS Model, Mathematics, prototype*

## Legitimate peripheral participation in international exchange in education in elementary schools

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**Abstract:** In fiscal 2004, we had an international exchange program with Chinju National University of Education in Korea. In the spring, about 12 students of Chinju National University of Education went to Aichi University of Education. In the fall, about 12 students of Aichi went to Chinju for about one week each. The major feature of this training was that the students have practiced doing classes at an elementary school in the partner's country. In addition, using the Internet, this practice was operated by the students' principal.

In this research, we primarily analyzed the text that students wrote. We found that the students' learning can be explained by legitimate peripheral participation theory. Changes to the central role of peripheral legitimate participation were considered more significant than age and grade, and the number of times that they have participated in this training had a large impact. In addition, when a person whose age and grade was not very different to those of the average became a leader, cognitive apprenticeship seemed to function more.

In the future, we will survey graduates and children who take classes. As a result, we will examine the effect of this training.

**Keywords:** *international exchange program, teacher training, legitimate peripheral participation, cognitive apprenticeship, students' principal*

## **The interaction among students for engaging off-classroom learning : the case of Kansai University Senior High School using iPad**

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**Abstract:** This paper reports the off-classroom activity utilizing iPad to engage the student to learning. The school curriculum conducts not only classroom learning but also off-classroom learning opportunities. This study focuses how we can support off-classroom learning, because nowadays in Japanese schools conduct off-classroom learning as integrated learning opportunities. Students learn from various off-classroom experiences, however, it is not enough to engage learning, because students are difficult to find meaning for their learning from various off-classroom experiences. To engage off-classroom learning, there are previous studies about utilizing mobile devices, such as mobile phone, PDA (Personal Digital Assistants) and tablet devices. Although in these studies, they are able to prepare learning resources after students motivated the strategies that how students engage to off-classroom learning was not clarified. Other previous studies mentioned interaction among students effects to motivate them. Then, we designed off-classroom learning with interactions among students in Kansai University Senior High School, and clarify how they are motivated from their interactions.

**Keywords:** *Off-classroom activity, Interaction, iPad, fieldwork*

## **Relationship between International Students' Information-gathering Capacity and Behavior Patterns after the Great East Japan Earthquake**

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**Abstract:** In order to investigate (a) international students' information-gathering capacities and their behavior patterns after the Great East Japan Earthquake, and (b) how their information-gathering capacities and cultural competency, as well as their demographic factors, related to their behavior patterns in the aftermath of the earthquake, we conducted a survey of over 500 international students enrolled at Saitama University 3-month after the earthquake. On the basis of 397 student responses, it was established that (i) the students primarily accessed Japan's mass media and various websites to collect relevant information; (ii) nearly half of the students stayed where they were while over half of them went to other places; (iii) their cultural competency in Japan and information-gathering capacities, as well as their demographic factors (age, gender, economic situation, nationality, Japanese language proficiency), all influenced their behavior patterns in the aftermath of the earthquake; and (iv) Chinese students had more diverse purposes for studying in Japan and higher cultural competency than students from other countries, which was found to be related to their behavior patterns. The implications and issues for future research are discussed in order to get a better understanding of how to support international students when emergencies, such as earthquakes, occur in future.

**Keywords:** *Great East Japan Earthquake, International Students, Information-gathering Capacity, Behavior Patterns*

## Constructing Learning Materials to Enhance Freshmen Students' English for Presentation Classes for the International Collaborative Event – The World Youth Meeting

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**Abstract:** In keeping with project based learning, which is a focus of the International Welfare Development faculty and its International Collaborative event, the World Youth Meeting (W.Y.M.), the outcome of this research project will be to produce materials to enhance freshmen students' English presentation skills. Students in the faculty of International Welfare Development (I.W.D.) take a central role in the event. Prior to the event they take a variety of classes to prepare for the various roles in the W.Y.M. This researcher will distribute surveys to Nihon Fukushi University (N.F.U.) and foreign participants who participated in the W.Y.M. as presenters. The survey will ask the participants to reflect on their experiences as presenters and to give advice to freshmen. The survey will ask for recommendations on preparing for and giving presentations at the event. The collected advice will then be examined to find areas of commonality. A compilation of the comments would then be used as teaching considerations for the freshmen English for Presentation classes. The intention is that by incorporating the previous participants' suggestions, it will increase the relevancy and narrow the focus of materials to better meet the needs of the students. In addition, it will provide an opportunity for the senior students to reflect on their experiences in the role of presenters at the W.Y.M.

**Keywords:** *international collaborative event, materials production, student needs, reflection*

## How to motivate student learning support staff to work in creative and proactive ways

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**Abstract:** This paper aims to explore how to establish a structure for promoting student proactiveness and independence. As a measure to ensure students' learning with substantial quality, several higher educational institutions introduced a "peer leader" system to support mutual and collaborative learning among students. However, it remains unclear which design is the most effective and efficient at cultivating proactive learners. In this study, therefore, a literature review was conducted. We discussed how students can build an attitude of autonomy as well as what university personnel should learn about establishing relationships among students in order to assist their skill development. In this study, we uncovered three important factors; (1) to prevent falling into the hole of misconception, (2) to provide just-in-time guidance to students, and (3) to commit to some extent upon necessity, in order to establish a structure for promoting proactiveness and independence of students. With reference to existing indicators including the Minimum Standards of Learning Support for Administrative Staff, we would like to propose a structure for the cultivating model, as the next step in the future.

**Keywords:** *Higher education, Peer support, Autonomy, Design*



## Sequencing Collaborative Activities in an Online Graduate Program

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**Abstract:** This paper describes a successive group work sequencing in an online graduate program. Various collaborative work methods have been intentionally introduced in multiple courses under a Story-centered Curriculum in order for the students to become gradually accustomed to collaborative online activities that increase levels of complexity and intensity. It is discussed the factors of group activities that determine complexity and difficulty levels may include the size of a group, nature of submission of the group work (as a group or by individuals), visibility of others' work in progress with the use of different tools available, and making peer comments option or requirement, among others. Students' reactions to the collaborative activities in the online learning environment have been positive, with some implications for improvement of the design of collaborative activities in the future. A set of design principles is called for in the future research to guide designing introduction and implementation of online group activities of others, and to refine our own practice.

**Keywords:** *sequencing, group work, collaboration, visibility, online graduate school*

## **Prediction of Overall Cognitive Load and Cognitive Efficiency in the Conceptual and Procedural Tasks**

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**Abstract:** The purpose of this study was to investigate the role of self-evaluation, which was based on subjective survey. The importance of cognitive efficiency has been increased. It can be defined as qualitative changes of knowledge gain and mental effort invested to gain. However, there are two different definitions of cognitive efficiency measures: 1) deviation and 2) likelihood models. This study has two goals. First, it was to see the relationship of the self-evaluation with the cognitive load factors. Second, it was to examine that the self-evaluation can be implemented as an alternative indicator of two cognitive efficiency measures. Three hundred thirty-four college students participated to the study. Five factors of cognitive load were measured, and two cognitive efficiency measures were calculated: 1) deviation and 2) likelihood models. The learning content was divided into conceptual and procedural tasks with long and short line length of layout. Pre-test scores were measured for conceptual and procedural contents as a covariate variable. The result indicated that the self-evaluation can be used to predict the overall cognitive load. It had positive correlations with mental efforts and usability for both tasks. However, it had negative correlations with task demand and perceived difficulties for both tasks as well. The results revealed that the self-evaluation showed significant relationships with the cognitive load factors. Regarding the analysis of relationship with cognitive efficiency, the self-evaluation showed significant negative correlations with deviation model based cognitive efficiency for conceptual and procedural tasks. However, interestingly, the self-evaluation showed a significant positive correlation with likelihood cognitive efficiency for procedural task.

**Keywords:** *Cognitive Load theory, Self-evaluation, Cognitive Efficiency,*

## Verification of the Practical Uses of the ARCS-V Model

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**Abstract:** In this paper, the authors describe the progress of their study about practical uses of the ARCS-V model. After more than twenty years of stable periods, the ARCS-V model has been expanded from one of the representative instructional design models, the ARCS model. The “V” factor is planned to assist instructors for having learners keep their motivation and volition for reaching their goals. The authors planned to verify the practical uses of the ARCS-V model to make clear if there is any situation where the ARCS-V model is more useful than the original ARCS model. Volition-related tools for the ARCS-V model were designed to follow the idea of the tools for the ARCS model, such as a hints list and a worksheet of motivational design steps. They were to be applied in this study to verify if these tools can assist instructors to prepare proper and useful strategies for learner’s volition. The tools were reviewed by the instructional design experts to be improved regarding the validity and the intelligibility. Also, potential scenarios of a sample class which has motivational issues are going to be provided as a tool for the verification. The processes for the verification including the usage of the scenarios are described in detail and the future tasks are also discussed.

**Keywords:** *the ARCS model, the ARCS- Model, volition, design tools, learner motivation*

## A Case of an Asynchronous E-learning Course in Undergraduate Career Education toward Enhancement of Self-efficacy

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**Abstract:** This paper reports the practice of asynchronous e-learning course for undergraduate career education based on questionnaire survey of career decision making self-efficacy. Career development tasks for undergraduate students include self-understanding, school-to-Work transition, and independent career design. These problems are closely related to "Career Decision-Making Self-Efficacy: CDMSE" (Taylor & Betz 1983). The authors set up asynchronous e-learning course using Moodle. It's on credits transfer system and 36 students from 6 universities and 16 faculties took it. Each lesson consists of VOD, resources, and Forum module. Students must post a message and reply to other messages on forum each time, and peer review for career planning assignment is used at the 14th lesson. From the survey with CDMSE scale, the average of course students is higher than that of other nationwide survey. Although no remarkable change was recognized after the practice, students show favorable feedback on interaction with other students. Because of peer review using a real name, a tendency to praise or admire was seen in review messages. Thus almost all respondents said that they could find their good points through the practice. To enhance self-efficacy, further improvements are needed in specific learning design and peer review system for asynchronous e-learning.

**Keywords:** *asynchronous e-learning, Moodle, career education, peer review, Career decision making self-efficacy*

## **Roundtable - Friday, 9 August**



## A Teaching Model Improving Students' Chinese Learning in Rural Area in China

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**Abstract:** Education gap exists between urban and rural area in China. In this article, a teaching model in Chinese class is introduced. It is developed by the Institute of Modern Educational Technology in Beijing Normal University. The validity of the model has been proved, in the process of 12 years' practice in different areas in China, while the effect in an area in Ningxia province is mainly discussed here. The model can help to improve the students' words and expressions, reading and writing ability greatly. Students in the country schools can achieve as well as those in the city.

**Keywords:** *Chinese teaching, rural students, model, China*

## **The Impact of Short Visit Program to Learners on International Collaborative Project ~A Case Study of J-CaJa~**

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**Abstract:** Education is changing these years in Japan through developments in information and communication technologies (ICT) and globalization. It is no longer enough to provide just knowledge in the classroom but also to provide social skills such as communication ability, management skill, and intercultural understanding. Because of this perspective, Project-Based Learning (PBL) is one of the practices to provide social skills to students. Because of developments in ICT, now it is easy to communicate with those who are in remote places. International collaborative projects are very popular in PBL. In these practices, students build relationships with foreigners and accomplish their goals collaborating with each other. When they are in domestic situations, ICT tools such as SNS or teleconference systems play a very important role to maintain their relationships. However, activities that are done in a collaboration country are still an important part for encouraging students to learn. In this research, we will analyze how activities in a collaboration country affect students from a viewpoint of legitimate peripheral participation (LPP), using the J-CaJa project as an example of PBL.

**Keywords:** *Project-Based Learning (PBL), international collaborative project, Legitimate Peripheral Participation(LPP), Short Visit (SV) program*



## A Preliminary Study of the Perceived Usefulness of Media between Expert and Newcomer in Volunteer Service: Comparisons of Japan and Korea

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**Abstract:** This study was to conduct a preliminary survey to identify how a user could differently perceive the usefulness of SNS for volunteer activities between Japan and Korea. The role of mobile media has been increased to share information and ideas. It facilitates the communication as well as shares experiences. Particularly this study focused on how social service volunteers utilized the mobile device. Initial research interest was to delineate how many volunteer projects utilized mobile media such as Facebook and micro-blog in order to engage participants. Although the usefulness of mobile media can have a considerable impact on volunteer activities, level of perceived usefulness can be different from levels of expertise and cultural basis. In other words,, expert volunteer and newcomer have different perspective for applying mobile media in their volunteer society. Community of practice is a theoretical framework to explain how members of community shares knowledge, commitments, and ownership. This research will focus on the different perceptions of using mobile media between expert and newcomer. For this study in-depth interview method will applied for each country based on qualitative analysis.

**Keywords:** *community of practice, perceived usefulness, volunteer activity*

## **Research on the Activity Frame work of Using Visual Thinking Tools**

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**Abstract:** The development of high order thinking has been considered as a national priority of learning. We found that visual thinking tools can improve students' high order thinking ability and it change the traditional teaching method. By using this activity frame work, the teachers can better understand what are the students are thinking about and the students can use the thinking tools to help themselves solve complex problem and discuss with other people.

**Keywords:** *Activity Frame work, Thinking Tool, PETA*

## **Validity of progress chart for middle range homework : A study about mathematics homework in senior high school**

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**Abstract:** In Japanese junior and senior high schools, it is common for students to have middle range homework which they must finish workbook by the deadline. However, some students do not work on problems properly or cannot finish their homework because it is too late to start. In this study, as a teaching aid to encourage effective learning of students, we propose a progress chart that can visually grasp students challenge achievements. We expect that learning motivation and self-management skills for the homework will be improved by using this chart. We conduct interviews with responsible teachers and questionnaires to the students about mathematics homework of senior high school.

**Key words:** *Task Analysis Diagrams, Self management, Learning motivation*

## **Activating advertisement on Facebook based on volunteer activities conducted by both Korean and Japanese students**

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**Abstract :** Considering some of the studies on experiential learning, it would be suggested that for young generation to tackle the global issues such as child welfare, education, and poverty, more attentions should be directed in overseas volunteer works, rather than passively receiving information and studying in the classroom. Sense of achievement and sympathy surely moves young generation to realize how to live.

Korean students and Japanese students have been experiencing volunteer works while acquiring the key elements of Media utilization such as Facebook or mailing list as indispensable tools. Despite the fact many groups as forerunners have been finding out key solutions to improve their works there, their results tend to lose accessibility to the followers. This paper proposes plans for activating advertisement of volunteer program on Facebook referring to Kolb's experiential learning cycle. Someone who tries to find volunteer program can observe those posts and find out something new. Finally, they can find the new direction and future activities and can decide whether they participate in those programs or not.

**Keywords:** *advertise, volunteer program, Facebook, Kolb's experiential learning cycle.*

## Practice of Active Participation to Photo Exhibition using Facebook

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**Abstract:** In this research, the authors evaluate a practice promoting active participation of visitors to a photo exhibition using facebook. One of the issues of museum education is that visitors passively receive information edited by curators. It is, however, important to make visitors actively learn in the exhibition. Therefore, in this research, the authors designed a photo exhibition using social network service in order to enhance visitors' interest and understanding. The objective of the photo exhibition is to enhance interest and understanding on the West Africa by active participation. The visitors use a mobile device such as an iPhone or an iPad to ask questions through facebook to those who went to West Africa as Japan overseas cooperation volunteers and those who live/lived in West Africa. The visitors are expected to think more deeply on West Africa by communicating with those relating with West Africa. In this research, the authors employed questionnaire to evaluate of this photo exhibition from viewpoints of plus, minus and interesting points. The data was collected from 130 out of 400 visitors. As a result of data analysis, it was found that the visitor motivated themselves by posting questions and understood cultures, value and ideas of West Africa from various viewpoints by referring to comments uploaded by other, and felt more sense of participation by connecting with other visitors, staffs and those who give comment to the questions.

**Keywords:** *Photo exhibition, ICT, facebook, iPhone, iPad, West Africa*

## **Research of Teacher-Students Reading Based on Learning Cell Platform**

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**Abstract:** Reading plays a core role in Yuwen education in China. In recent years reading whole books (not just pieces) has been given more attention. It even gets written in the new curriculum standard. However, guidance from teacher on students reading a book is absent. The potential of information technology in the reading process is also neglected. This paper aims to construct a model for teachers to guide students' book reading using a ubiquitous learning platform--Learning Cell Platform (LC for short). It can record students' reading experience and reflections, promote wide discussion and sharing, help managing personal and group knowledge, and allow teacher to track students' reading. Considering this, guided by Aidan Chambers' ideas about children's reading, a model for teacher-students reading based on LC platform is constructed. It contains four stages: 1) Teacher-students read together; 2) Read and think on one's own; 3) Discuss online and in class; 4) Reflect on the reading process. In order to test the effects of the model and LC Platform, a practical research is conducted. Results show that all students' reading abilities improved, especially those who used LC platform. This implies that the model is effective and LC platform plays a role in improving students' reading ability.

**Keywords:** *teacher-students reading, Learning Cell platform, book reading*

## Design and Effect of Student's Reflection in International Fieldwork

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**Abstract:** In this study, the authors discuss an importance of reflection in an experimental learning. This study clarifies effects on students who participated an international fieldwork. First, the authors introduce a design that promoted students to reflect their experience in an international fieldwork based on a case study conducted in Philippines. In this study, the authors combine both individual and collaborative reflection. Second, the authors analyze the factors that promoted students' reflection through an interview and a questionnaire. The target was a group of students that consist of four students who have not experienced to join an international fieldwork and other four students who have experienced in an international fieldwork in other countries such as India, Thailand and Indonesia. The authors analyzed the data with paying attention to interaction of students with difference experiences. As a result of an analysis, the authors clarified the process how the students reflect individually and collaboratively .

**Keywords:** *international fieldwork, reflection, interview*

## **Analysis of affordances for Digital Natives' Learning Agency and Socio-emotional Wellbeing through Reflection on Photographs and differences between Korea and Finland**

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**Abstract:** The purpose of this study is to find affordances for children's socio-emotional wellbeing and learning agency, which are expected for the digital generation to develop through digital devices. With the collaboration of a Finnish research team, this study was conducted in 2012 - 2013 at a Korean kindergarten with seven children who were 6 to 7 years old. These digital native children utilized digital photographs to supplement the limitations of their verbal expressions. This qualitative research was conducted by two adult researchers and seven preschool children as co-participatory researchers so that the perspectives of the children as well as the adult researchers were reflected in the results. The children took photos of events that the children found positive in their lives and had reflective interaction sessions with the adult researchers regarding the self-chosen photos. The results suggest that there are two major affordances, achievements and relationships, that promote children's agency and strongly support the construction of their socio-emotional wellbeing. Korean children seem to have a weaker learning agency than Finnish children. In addition, the degree of the children's engagement in the interaction helps to demonstrate their agency.

**Keywords:** *Early Childhood, Agency, Socio-emotional Wellbeing, Co-Participatory Research Method, Interaction, Digital Native, Literacy Through Photography*



## Empirical Research Of Communicating and Learning "Natural Diary" Platform of Microblogging-style in natural science curriculum of primary school

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**Abstract:** Aim at the current situation of lacking teaching resource and poor migration of course knowledge in natural science curriculum of Chinese primary school, the thesis design and research a platform which adopts the popular Microblogging-style recently that can help students study at anywhere of anytime, achieving shared social type learning with the interaction between students on the platform .Empirical research is launched in some primary school students based on the platform. The research shows that students strengthen their interest on natural science and the awareness of initiative exploring and sharing through their study on the platform, demonstrating the function of the learning platform which based on the idea of learning in practice and sharing.

**Keywords:** *natural science, Microblogging-style, sharing, interaction learning, empirical research*

## **Effect of Prosocial Video Games: Do Prosocial Video Games Promote Prosocial Behavior of Players?**

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**Abstract:** As effects of popular media are studied, effects of video games are also studied. Many studies focus on negative effects, especially of violent video games on players' aggression. It has been shown in empirical studies that video game violence does have negative effect on players based on General Aggression Model. It describes how video game violence can be learned and reflected on players' actions.

Studies on prosocial video game suggest that prosocial behavior is similar to aggression. Studies on prosocial video games use the General Learning Model, which expanded from the GAM to fit into more general situations. The idea is that anything can be learned in the similar way as violence is learned.

Compared to video game violence, prosocial effect of video games is a field that is shallow in theoretical background with methodologies yet to be developed. In many studies, the definitions of prosocial are not concrete. Since the definition of prosocial behavior is not clear, it is questionable the validity of the instruments for the assessment and the prosocial-ness of games used. In this study, it aims to make the definition of prosocial behavior clear to conduct a valid study on the effect of prosocial video games.

**Keywords:** *Video Games, Prosocial Behavior, General Learning Model*

## Utilization of ICT Devices in Japanese High School

### ICT devices are helpful for difficult situation.

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**Abstract:** The objectives of this study are to clarify the effective utilization method and timing of ICT devices in Japanese high school. The author utilized the projector in math classes throughout the year in 2012. The objective of this class was to make the students understand how to use their textbooks, because the descriptions in the textbooks were difficult for students. The author was able to explain clearly, the information in the textbook by showing the contents of the textbook on screen with a projector. This process has not been performed by a conventional class so far. The author made an important finding after reviewing the video afterwards. By recording the conversation of students at break time, and analyzing video in class using ICT device by other teachers, the author found what students really expected. According to the results of the questionnaire, the students who did not feel stress took the good point in test. On the contrary, students who felt stress took the bad point in test. Stress is caused by various factors. ICT devices are helpful for difficult situation like this. The author analyzed how teachers should utilize ICT devices in classroom teaching in a way that teachers and students did not feel stress. The author will continue this research with an English teacher to discover how to teach English in an enjoyable way.

**Keywords:** *High school, ICT device, Stress, PCA, disparity*

## **Planning and Design of Future Classrooms in Universities**

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**Abstract:** Recently, with the development of educational informationization, the research related to future classrooms became a forward-looking task in the educational technology field. Through a case study and literature review, we propose a basic constructional scheme of the future classrooms for universities. The scheme aims at creating a university classroom environment in the future, which meets the requirements of the education concept and function, as well as the requirements from teachers and students. When it comes to innovation, we hope to ensure that the classroom is equipped with state-of-the-art information technology and great facilities, so that it can provide rich resources and diverse functions. In addition, the entire flat surfaces in the room are interactive, such as wall space, table top and screens. Based on this design, we try to break the traditional classroom space layout, make it design-driven and futuristic. For example, the tables are designed to create group workstations or meeting style in various combinations. This classroom will offer classes tailored for many types of active learning, including discussions, group work, and presentations, which emphasize a high degree of interactivity in the learning space.

**Keywords:** *future classroom, design, educational technology*

## Perception of Pre-service Teacher's on Using Media for Development of Teaching Materials.

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**Abstract:** This study searches pre-service teacher's perception about media utilization on simulated instruction that designed by Gagné's events of instruction. On this study, college of education's 20 women students designed instruction by Gagné's events of instruction for analyzing their perception of media utilization at developing instruction materials. Then, they developed PPT materials by each event and did simulated instruction. The study analyzed peer assessment about media utilization and effectiveness by each instructional event. The categories of media utilization are 'image', 'movie', 'flash', 'text', 'the others', and 'nothing used' and confirmed used media by each instructional event. Also, it calculated individual assessment that measuring peer assessment by each event and verified effectiveness by using media types and quantity. As a result, mostly using media by Gagné's instructional events are as follows: 'movie' is the most used media in the 'gaining attention' and 'enhancing retention and transfer' events, and 'image' is the most used media in the 'stimulating recall of prerequisite learned capabilities' event. Also, 'text' is the most used media in the 'informing the learner of the objective', 'presenting the stimulus material', 'providing learning guidance' and 'assessing the performance' events. Quantity and effectiveness of utilized media have correlation in several instructional events. 'stimulating recall of prerequisite learned capabilities', 'presenting the stimulus material', and 'enhancing retention and transfer' events are synonymous relations between quantity and effectiveness of using media statistically. There are some implications in the study. First, Pre-service teachers believe that particular media has more effectiveness depending on instructional events, even though there are no difference between media and effectiveness actually. Pre-service teachers tend to choose media by easiness instead of effectiveness. Second, there is no difference in effectiveness by media's types in every event, but media's quantity made difference effectiveness in some instructional events. However, it is dangerous that generalize using much media guarantee to effective instruction. Media's education effect depend on not use of the media itself, but how meaningful the using of media by teacher and students. Therefore, per-service teachers have to understand and much about media utilization for effective instruction in actual class.

**Keywords:** *instructional media, using media, teaching material, Gagné's events of instruction*

## Supporting distance high school students in E-learning

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**Abstract:** Many schools in Japan have begun to offer e-learning in their distance education programs as a means to increase the rate of students continuously learning until they graduate high school. By facilitating and deepening communications between teachers and students as well as among students, and also by developing an individualized learning support system, many high schools have successfully incorporated e-learning into their distance education programs. In this report, we used X High School as an example of a school with very successful results in continuous learning. After analyzing data gathered from interviewing predominantly faculty members and alumni, we were able to develop three methods of supporting students with continued learning.

**Keywords:** *e-learning, distance education, mentorship*

## Development of training program improving Instructional method with social media

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**Abstract:** The purpose of this study was to develop training program for teacher because of the emergence of social media. For this purpose, necessity of change in instructional method utilizing social media was suggested. This program is presented through 'instructional system design of media education', more specifically it is formed with prior learning to improve understanding about the media itself, collaborative learning using digital storytelling through the media, evaluation. The key competencies such as digital media literacy, sharing and collaboration for collective intelligence, data processing for using media are reflected in this course. It is expected to be a practical training program by utilizing social media in the era of smart learning.

**Keywords:** *develop of training program, social media, media education*

## **The Development of an iPad Version of "Math-Speed"**

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**Abstract:** In recent years, Gamification is very important word in educational field. Gamification provide the joy and motivation. Gamification is suitable to education. Therefore, many materials and systems developed base on Gamification. Thus "Math-Speed" is developed. It is card game as mathematical material base on Gamification. It is a lot of good effect on students. However, "Math-Speed" has some problem. For example, can't check wrong calculation when playying "Math-Speed". These problem will solved by computer. This paper aims to develop an iPad version of "Math-Speed".

**Keywords:** *Learning materials, Development, Tablet, Application ,Gamification*



## Open Educational Resources (OERs) in Higher Education: A Global Perspective

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**Abstract:** Based on the philanthropic philosophy, many open educational resources (OERs) have been developed in different parts of the world over the past few years. MIT OpenCourseWare in the USA, OER Africa in African countries, Japan OpenCourseWare in Japan, and OpenLearn in the United Kingdom are just a few examples of OERs. These OERs vary by type of media used, level of education, context of utilization, and so forth. This study aims to organize, compare, and contrast the growing phenomena of OER development in order to help researchers and practitioners in education to conceptualize differences and similarities in the OER movement. First, the cases of OERs development in Americas, Asia-Pacific, Europe, and Africa are identified, following this order. Then, the analysis framework is to be developed using differences and similarities among the cases. Finally, the study will conclude with a set of recommendations for future study areas.

**Keywords:** *Open Educational Resources, OERs, Open Education, OER movement*

## The Analysis of Exchange and Sharing Activities Based on Visual Thinking Tools

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**Abstract:** In order to improve the situation of narrow classroom communication and few chances for expression, “Cross-group sharing & asking” communication approach based on visual thinking tools was introduced. Research found out that pupils’ expression skill and critical thinking ability were improved, but they still needed more time to use the communication approach and teacher’s effective guidance was quite essential.

**Keywords:** *Visual Thinking Tools, Exchange and Sharing Activities, Expression skill, Critical Thinking Ability*

## "TESTING RESISTANCE" Experiment Courseware based on FlashAR

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**Abstract:** Experiments play an important role in electrophysics learning. However, due to inaccessibility to equipment and safety risks, electrical experiments can only be conducted in schools.

In this paper, we design and develop a novel "TESTING RESISTANCE" experiment courseware based on FlashAR, which can provide a direct interaction for learners who have a computer with a camera. Learners can control the wiper of the slide rheostat by moving the AR marker instead of the mouse or keyboard. Meanwhile, the real-time current and voltage values can be read on the virtual voltmeter and ammeter. The courseware also includes a problem-based learning method to encourage deeper understanding. It presents a real situation in daily life and guides learners to obtain related knowledge and finish the electronic report. Feedbacks are given to learners on whether they should go back to certain parts where they have made mistakes. After inviting a few experts and students to use it, we have already acquired some positive feedbacks showing that this courseware, which combines the virtual and the reality and enables natural interaction, effectively promotes learners' understanding and improves their interest and motivation in electrophysics learning.

**Keywords:** *Augmented Reality, Flash, electrical experiment, Problem-Based Learning*

## **Influence of Grouping by Learning Styles on Learning Performance in Computer-Supported Collaborative Learning**

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**Abstract:** Grouping is important factor for successful computer-supported collaborative learning(CSCL). Studies on CSCL focus on heterogeneity and homogeneity about observable part such as learners' expertise or learning ability. However, preference of teaching style and learning method varies from leaners' learning style. Therefore, learning styles can be considered as a strategy for grouping in CSCL. This study aims to compare the learning performance of groups based on Kolb's learning style index. 100 high school students participated in this study which compared five conditions - assimilating, diverging, accommodating, converging, heterogeneous. Cmap Tools was used to externalize the participants' knowledge during the collaborative learning.

**Keywords:** CSCL, learning style, grouping, concept map, Kolb's learning style inventory,

## Research on network personalized training model based on diagnostic of instructional design

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**Abstract:** With the development of information technology, the network training becomes an important way to promote teachers' professional development. However, the existing network trainings depart from the work situation and lack of aim, such as "national training program for primary and secondary school teachers" and "educational technology training" etc. It is difficult to meet the individual needs of teachers. The aim of the study is to construct network personalized training mode based on diagnostic of instructional design, which can provide problem-oriented personalized training and can be combined with teachers' work situation. The authors carried out a design-based research. And the outcome was a network personalized training mode consisting of three stages, personalized diagnosis, personalized activity recommendations and personalized evaluation. The authors hope it can provide suggestions to carry out the network personalized training for teachers in primary and secondary schools.

**Keywords:** *personalized training, network training, teacher training model, diagnostic of instructional design*

## **Learning by a high school student's volunteer activity**

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**Abstract:** The Ministry of Education, Culture, Sports, Science and Technology recommends carrying out employment experience and a volunteer activity by the government guidelines for teaching of the high school in July, 2009. However, when employment experience and a volunteer activity are actually performed, it is not shown clearly what kind of effect there is. In this paper, a high school student's volunteer activity shows clearly how a high school student is changed. It interviews for the high school student who has participated in the elderly-people project currently undertaken in the public hall in Takatsuki.

## **A comparison of Computer- and Mobile Phone- Mediated Collaboration: A case study of Japanese university students**

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**Abstract:** This exploratory case study carried out in Tokyo, Japan, examines the Computer Mediated Collaboration via Moodle, a web forum on desktop computers, and the Mobile Collaboration via LINE, an application for smartphones. First, it investigates and compares how these two kinds of media affect the participation, interaction and collaboration of students through content analysis of the messages posted. Second, it inquiries into the students' collaborative experiences, opinions, and difficulties they had during online discussions via focused interviews. Finally, it explores the impact of these two online media sources using the students' final written reports. Based upon the results and review of associated literature, this case study concludes that smartphones have a great potential to enrich interactions online.

**Keywords:** *Participation; Interaction; Online collaboration; LINE; Moodle; Smartphones; Desktop computers.*

## The evaluation approaches on the thinking abilities in primary school through thinking tools

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**Abstract:** This paper reports the evaluation approaches of thinking abilities of pupils from three primary school in Guangzhou. It is expected to show how to record the thinking process of students with thinking tool. We find that the thinking tools promote the diverse evaluations, provide opportunities and platforms for expression, and get feedbacks, valuable evidences for evaluation.

**Keywords:** *Evaluation approaches, Thinking tools, Thinking abilities*



## A comparison of the attitudes in the usage of Emoticons by generation between Korea and Japan

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**Abstract:** This study aims to obtain some insight into improving communication through the use of emoticons focusing on different generations, and differences between Korea and Japan. People can have a better understanding of the context of a message when they are able to observe body language cues or hear the inflections of the people's voice. However, with the development of new technologies, people have many opportunities for non-face-to-face communication such as with e-mails or mobile chat. In these kinds of text based communication, the lack of nonverbal information is sometimes compensated for by using emoticons. Emoticon is a compound word incorporating the words emotion and icon. This is a simple and easy way to express ones feelings in a text message, and is used a lot in informal or social communication. However, there are few earlier studies that have analyzed the use of emoticons. Furthermore, there does not appear to be a commonly used standard or guidelines for the use of emoticons. For this reason, we will conduct a survey about the use of emoticons, including an examination of frequency and characteristics, in mobile technology usage, and we will compare the differences in usage between Korea and Japan.

**Keywords:** *Emoticon, social communication, non-face-to-face communication*

## **The effect of learner's characteristics and teacher's character on perceived academic achievement In SMART learning environment**

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**Abstract:** To enhance learner's competency for 21<sup>st</sup> century Smart Education has been introduced in Korea. In the environment of Smart Education, diversified teaching methods are utilized using smart devices aggressively. This research would aim to discover the impact of learner's media-literacy, self regulated learning skill, collaboration preference and teacher's support for autonomy on the perceived academic achievement of grade school students in the smart education environment. The subjects of this study are about 21 grade school students who had received at least one semester SMART education with one-to-one device or individual smart device. After conducting a survey, the data being collected will analyze correlation to identify relationship among learner's characteristic and teacher's characteristic and perceived academic achievement. In addition, the predictive factors that determine the significant relationship analyze to identify the impact of perceived academic achievement by regression. As a result of regression analysis, the factors which influence on the recognized learning achievement are Teachers' support for autonomy, media literacy and self regulated learning, collaboration preference in regular sequence.

**Keywords:** *SMART education , Media Literacy Skill, Self-regulated Learning Skill, Collaboration Preference, Teacher's Support for Autonomy*

## **Problems with the Implementation of Communicative English Teaching in Japan; Focusing on the Situation of English Teachers in a High School**

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**Abstract:** In Japan, “the School Curriculum Guideline” for the high school English stated that communicative English skill should be put a greater focus to prepare students who can participate actively in the globalized world. In actual classes, however, teachers tend to put more focus on developing students’ grammatical and reading skills. This paper aims to clarify the factors which contribute to the difference of focus by conducting a case study in one public high school. This study pinpoints two factors which prevent teachers from implementing communicative English teaching: one is a problem in the educational system in Japan and the other is the teacher’s environment.

**Keywords:** *High School English, Communicative English Teaching, Teacher’s Environment*

## **The Research to the Teaching Reflection for Promoting the Depth of Online Teaching Research**

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**Abstract:** The study focused on the depth of the teaching research and attempted to design a LWCTR teaching research process, that is “Learning theory---Watching video teaching case---Cooperative preparing for lessons---Teaching and discussion---Reflection and summary” . Based on this process, it developed a variety of teaching research reflection activities to promote teachers' professional development. The article elaborates an empirical study case, and it can constantly modify and inspect LWCTR teaching research process. At last, it conclude a set of reference reflection script and implementation strategy, which promote the depth of teaching research.

**Keywords:** *Teaching Reflection; Online Teaching Research*

## **Influences of Overseas Fieldwork on Students' Motivations and Behaviors after Returning to Japan and Its factors**

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**Abstract:** This paper clarifies how student's experiences during overseas fieldwork affect their school life after returning to Japan. Recently overseas fieldwork for the university students has become more popular in Japan. The purpose of these projects is to increase cross-cultural understanding and improve language skills. Students increase motivations in many ways such as develop a greater understanding of other cultures through the fieldwork when they return to college life. However, in fact, students seem that they do not realize connection between experience in overseas fieldwork and school life. Nevertheless they find their purpose on the school life and living. Then, in this paper, the author also attempts to clarify how participants' motivation and behavior changes after fieldwork and its factors based on the case study of overseas fieldwork in the Philippines.

**Keyword:** *overseas fieldwork, motivation, school life, promotional factor*

## A Study on the Development and Characteristics on the TFS(The First Study) System

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**Abstract:** This study describes the development process and characteristics of TFS, which is a learner-centered on-line LMS(learning management system) based on the self-directed learning SMMIS model of Soongsil University. TFS system consists of a learner-centered LMS and learning content. The LMS is conducted based on the on-line learning planner, and the learning content consists of digital textbooks, based learning and SDL (self-directed learning) on-line content.

**Keywords:** *Self-Directed Learning, LMS(Learning Management System), TFS(The First Study)*

## **Teacher online micro-video Course's design and development: a case study of primary Chinese teachers learning PowerPoint skills**

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**Abstract:** PowerPoint is widely used in classroom teaching at primary school in China. However, based on an investigation to various related literatures and PowerPoint presentations, it was found that there are several common problems existed in PowerPoint presentations, such as improper use of multimedia materials, inappropriate color matching and unscientific layout. Some in-service Chinese teachers working in primary schools in Feixi County, Anhui Province wanted to improve their ability of making demo PowerPoint presentations, So that a teacher online micro-video course was designed and developed in the study. The course was conducted on LearningCell platform. The content of the online micro-video course was organized by the classroom teaching links of Chinese subject. The process of micro-video was divided into 6 links, which were raising a question, introducing key steps, demonstrating effect, demonstrating specific processes, demonstrating effect again and summarizing. Every class contained a series of learning activities, which were reading guidance, watching micro-video, preparing everyday-work, sharing work and discussing. The data of questionnaires and PowerPoint presentations showed that the teachers had improved their skills of making PowerPoint presentations and their awareness of integrating PowerPoint skills with Chinese subject had also been improved.

**Keywords:** *PowerPoint; teacher training; micro-video*

## Avatars of adoration for children ~Fictional heroes and heroines and real-world occupations~

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**Abstract:** This study clarifies the relationship between Japanese children's view of real-world occupations and fictional heroes and heroines. I think heroes and heroines are concrete ideals for people. Therefore, I deduce that the occupation of such heroes and heroines are ideal occupations for people. I also believe that people's opinions are affected by the various media they use. To clarify the above, children's actual situation must be understood. Children form their views of occupations mainly on the basis of their interests. Therefore, I conducted a questionnaire survey intended for upper-grade elementary school students. This survey mainly asked about the children's desired future occupations, the heroes and heroines they admired, and how children use media. In this study, on the basis of children's ideals, I compare the ways children see real-world occupations and fictional heroes and heroines. In the future, to compare between countries and cultures, similar research is needed into the views of people about heroes and heroines in other countries. Also, opinions about heroes and heroines in American comics, called *Amecomi* in Japanese", especially need to be investigated.

**Keywords:** *Heroes and Heroines, Occupations, Children, Media*



## The essential factors of well-organized lecture in the SMART learning environment in Korea.

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**Abstract:** The concept of the research in Korea about ‘good learning’ has started from make qualified lecture it has started from late 90’s. ‘Smart’ is being widely used in many fields, even in education field, ‘smart learning’ is now used by many people. Through the research about ‘good teaching’, this research tries to find out what is the meaning of good teaching in smart learning environment, which is a new trend in education field.

This research is based on literature review and participant observation. Through the literature review, I’ve found 4 factors. First, comparison between good lectures from inside and outside of Korea, second, problems of bad teaching, third, smart learning, forth, constructivism. Also this study did participant observation on four classes which have done smart learning.

Through the research, ‘good teaching’ in smart learning environment in Korea can be defined smooth interaction between teacher and student. To reach this goal, 4 elements, first, self- directedness second, trust and consideration, third, creativity and interesting and forth adaptability are needed.

**Keywords:** *smart learning, good learning, interaction, constructivism*

## **Study on the Usage and Perception of University Students on the Credibility of Information from Wikipedia**

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**Abstract:** This study investigates the usage of and perceptions of university students on the quality of information found in Wikipedia. Although several studies reported that the accuracy of Wikipedia information corresponds to that of Encyclopedia Britannica (Giles, 2005), the citations for academic works in Wikipedia remain contentious (Rand, 2010). Furthermore, the manner by which students use Wikipedia is unclear. Lim (2009) analyzed the Wikipedia usage of university students from the perspective of the social cognitive theory, and found that students use Wikipedia with a vague idea on information quality. Lim and Kwon (2010) examined the Wikipedia usage of university students in the US, as well as their perceptions on the credibility of Wikipedia information. The study deduced several gender differences. The present study examined the Wikipedia usage of university students in Japan and their perceptions on the quality of Wikipedia information. The research replicated the questionnaire validated previously by Lim et al. ICT usage and demographic questionnaire items were added for correlational analysis. The questionnaire was administered online and in print to 205 undergraduate students from a science university. The data were analyzed in terms of gender and focus of the study (media versus non-media major). The study indicated gender difference in terms of self-efficacy when judging information, as well as a positive correlation between perceptions of information quality and previous experiences of using Wikipedia.

**Keywords:** *Wikipedia, Information Credibility, Self-efficacy, ICT Use, Gender Difference*

**The Application Research in Cultivating Pupils' Collaborative Learning with Visual Thinking Tools: A Case Study of *Exploring the Similarities and Differences between Frogs and Toads* in Comprehensive Practice Course**

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**Abstract:** The perspective on new learning ability in the 21st century had emphasized the importance of collaborative learning. This study introduced how to use visual thinking tools to cultivate pupils' collaborative learning ability in comprehension practice course. Also, we reflected the effects and shortages of collaborative learning activities by using visual thinking tools. We found that: (1) most pupils think visual thinking tools are beneficial to collaborative learning. (2) Visual thinking tools have great advantages in knowledge management, group discussion, etc. (3) Division and cooperation in group members is not ideal. (4) Group members lack of collaborative reflection after collaborative learning.

**Keyword:** *visual thinking tool, collaborative learning, collaborative learning activities*

## Study of 3C-HEAT Integration Levels in Chinese ICT Lesson Plans

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**Abstract:** Critical Thinking, Creative Thinking, and Collaboration (3C) are the three important factors of 21<sup>st</sup> century skills. In Maxwell's HEAT (Higher-order thinking, Engagement, Authenticity and Technology) instrument, High-order Thinking implies Critical Thinking & Creative Thinking, while Engagement involves Collaboration. However, her results do not show 3Cs' integration levels in lesson plans clearly. Therefore, the purposes of this study are to (a) investigate 3Cs' integration levels in lesson plans, and (b) analyze these three factors' correlations with their respective related factors. We have designed corresponding levels of 3C combining 7 levels (0-6) of HEAT, and analyzed 26 pieces of lesson plans gathered from advanced ICT teachers in high school in Shanghai, China. The findings show that (a) the integration levels of Authentic learning and Technology were low though ICT has close relationship with them; (b) compared with Creative Thinking, teachers were skilled at integrating Critical Thinking into their instruction; (3) the integration levels of Collaboration was low due to monotonous collaborative methods. In order to find out the integration details of 3C in each lesson plan, we selected 12 higher-score activities. We found that most teachers preferred design outreach activities to develop students' abilities and that the categories of instructional strategies were limited.

**Key words:** 21<sup>st</sup> Century Skills, Critical Thinking, Creative Thinking, Collaboration, Higher-order Thinking, Engagement

## The Effect of Visual Cueing and Narration Speed on the Comprehension Scores with Types of Task and Overall Cognitive Load

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**Abstract:** The purpose of this study was to investigate how visual and auditory information affect comprehension in different types of task and the overall cognitive load measures. Arrows on screen was used as visual cueing, and narration was applied with different speed. In order to process narration it requires more cognitive load than visual information does. Different narration speeds could have different impacts on comprehension and cognitive load when it combines with visual cueing. Fifty-six college students were recruited as paid participants. Independent variables were presence of visual cueing and narration speeds, and 2x 2 factorial design was applied. Dependent variables were comprehension scores and cognitive load measures. Pre-test was measured as a covariate variable. The learning content was the blood circulation in human heart system. It was made of 1) the functions of human heart for conceptual tasks and 2) the circulation process of blood in heart for procedural tasks. In the conceptual task, there was no significant difference in comprehension score. However, a significant difference by narration speed was found in the procedural task. The participants in normal speed of narration outperformed for those in fast narration speed. No main effect of visual cueing and no significant interactions were found. Interestingly, there is no effect by the presence of visual cueing. It can be explained that there was stronger modality effects. For the overall cognitive load measures no significant result was found when pre-test of concept and procedural tasks were controlled. Although there was no significant effect by the independent variables, some significant relationships between pre-test scores and the cognitive load measures were found. The results revealed that the pre-test score of conceptual task had a significant relationship with the task difficulties. The pre-test score of procedural task had significant relations with the task difficulties and usability of cognitive load measures. The results indicated that types of task may have different impacts on the cognitive load measures.

**Keywords:** *narration speed, visual cueing, types of task, cognitive load*

## The Application of the Mind map in the Primary Chinese Text Preview

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**Abstract:** Previewing before class can cultivate the students' self-study ability, has a guiding role on students' classroom learning, and helps teachers to personalized teaching. The Visual Thinking Tool: mind map, can help students to make the thinking process present clearly and visually. In this article, we have made an experimental study on the application of mind map in Chinese text preview, and the role of the development of students' thinking ability, so as to improve the situation of the neglect of the preview and the process of "knowledge processing" and "problem solving".

**Keywords:** *Mind Map, Preview Study, Thinking Ability, Visual Thinking Tool*

## The Factors that Affect Reflection in Overseas Fieldwork

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**Abstract:** In this research, the authors clarify factors for designing learning environment that affect reflection in overseas fieldwork. In general, objective of the fieldwork is to provide experience in applying theories to the practical areas within their field of study. It is, however, reported that students do NOT always cognitively active during the fieldwork although behaviorally active. It is important to consider a learning environment that promotes both cognitively and behaviorally active. To suggest how to design such a learning environments, the authors clarify factors that affect reflection based on a case study implemented in Philippines. The authors analyzed the process and factors that students reflect in and on the activity. To clarify factors that affect reflection in overseas fieldwork, the authors employed group discussion after the fieldwork. The student participants gathered as to assess the learning environment of the fieldwork. First, they jot down about what they learned and illustrated the process and its' factors. Second, they individually identified factors that affected learning. As a result of the data analysis, three factors were clarified, (1) different opinions with other students, (2) comfortable atmosphere for discussion, (3) questions for researching.

**Keywords:** *learning environments, oversea fieldwork, Philippines*

## **Is critical peer feedback better facilitate online interaction than complimentary feedback affective feedback: Social network analysis**

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**Abstract:** Interaction is an essential element for meaningful learning, it is necessary to Strategy to facilitate this even when performing an online assignment. In this study, we are expecting interaction among students is increased, that we can to reduce the burden and difficulty of the assignment of individual learner, to improve academic achievement. We conducted an online peer feedback strategic to facilitate interaction among students, and examined the effect. We separate the students into 2 groups, One for complement peer feedback in affective domain and the other for critical peer feedback in cognitive domain. As a result, interaction of a group of critical feedback showed more strong and substantial network in centralities, node type, and density. Thus, in order to facilitate the interaction was proved that it is possible to utilize the cognitive feedback is more effective.

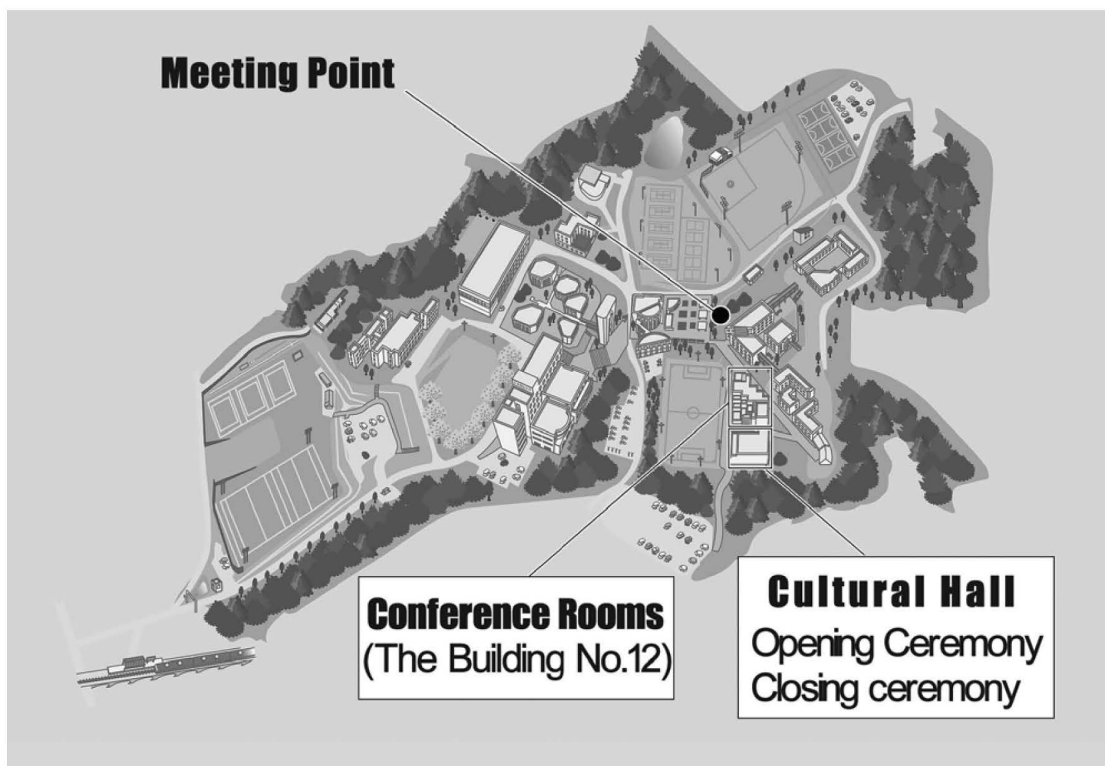
**Keywords:** *Online peer feedback, critical feedback, complement feedback, Social Networking Analysis*





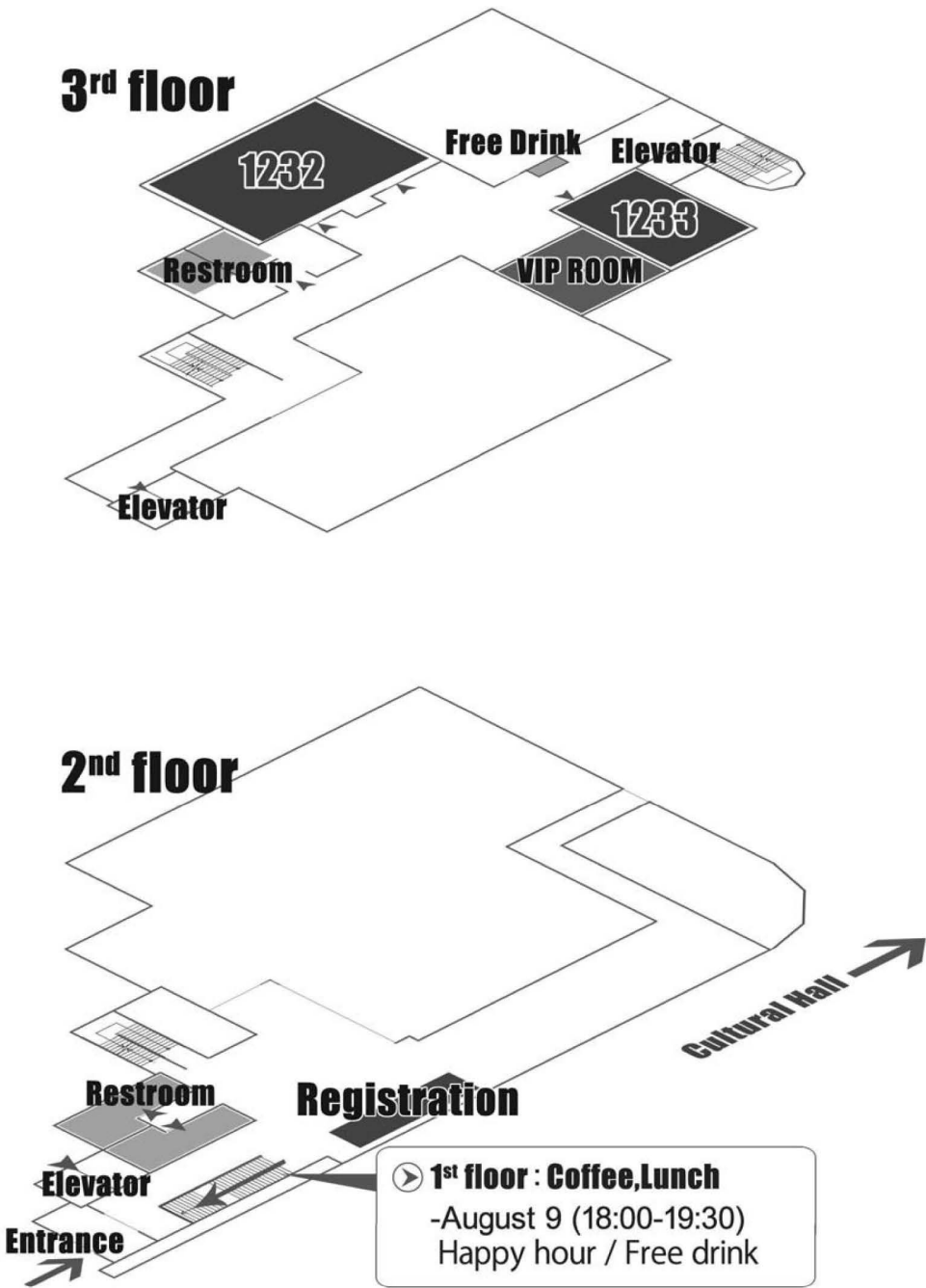


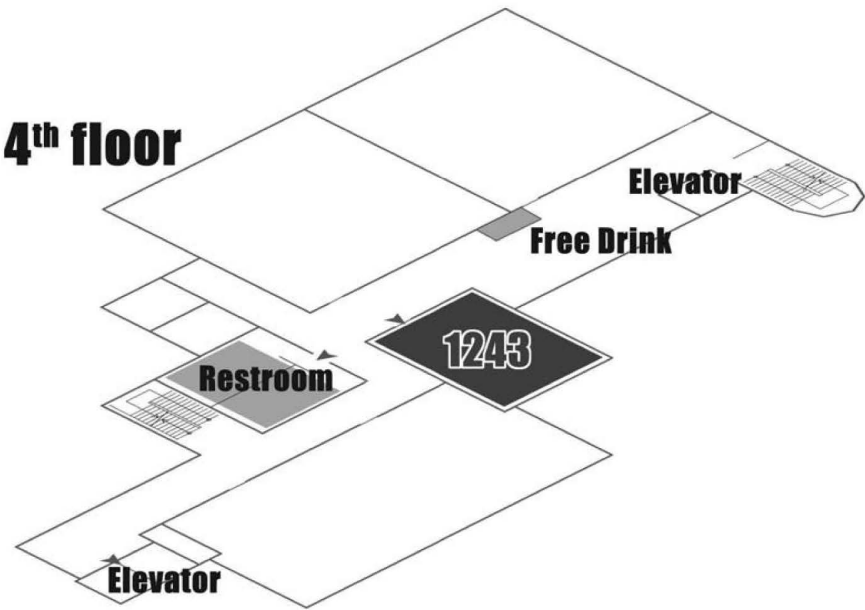
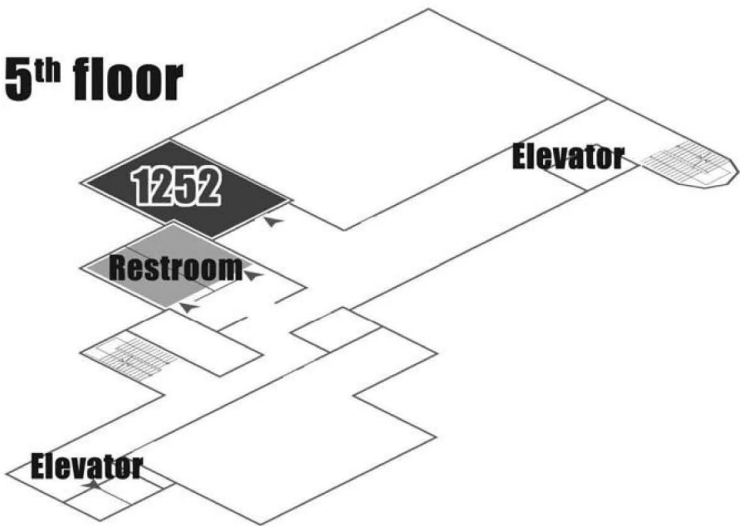
**Nihon Fukushi University  
Campus Map**



**Conference Location**

**An entrance is the 2<sup>nd</sup> floor**









# **Media Driven International Collaboration**

**Breaking Through !**

**Gaining Insight !**

**Broadening Connections !**

