The 08th Annual Research Follow-Up Seminar

Join us to
- Listen to the latest research findings
- Ask questions
- Interact with experts
- Publish research articles with the Cambodian Journal of Educational Development (CJED)

December 21, 2022

8:00-17:40 (Cambodian Time)
10:00-19:40 (Japanese Time)

Venue: **National Institute of Education (NIE, Building H)**

Zoom: **844 7332 5107**
Password: **311593**

Presentations on 18 research topics in the fields of education by
- 7 Doctoral students and graduates
- 11 Master's students and graduates

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SCAN ME

Greeting

Greeting from Cambodian Journal of Educational Development (CJED),

On behalf of the Hiroshima University (HU) committees, organizing committees, and CJED editors, we would like to warmly welcome you to the 08th Annual Research Follow-Up Seminar (ARFUS).

ARFUS is an annual follow-up research seminar for HU graduates under programs JDS, PEACE Student Exchange, SPISE and JICA Long Term Training Program. It aims to (1) offer new graduates with an opportunity to share their research findings among policymakers, researcher, and academicians in Cambodia, (2) build good networking among HU alumni, Japanese professors, and international researchers, (3) provide an opportunity for new graduates to publish their research articles with CJED, and (4) promote professional growth of the alumni through research.

To this end, we hope you have learnt and exchanged new perspectives contributing the development of education in Cambodia. We would like to express that your active involvement and contribution to the discussions over the next sessions will be of vitally important to discover and generate innovative and future-oriented dialogues about education research and development.

Thank you very much,

CJED Editorial Board

Welcome to CJED

About CJED

Cambodian Journal of Educational Development (CJED) is a peer-review journal publishing research manuscripts in the field of education. The Journal publishes empirical research studies that have clear significance to educational development prospects. Submission of manuscripts denotes that the submitted work has not been published before; it is not currently under the consideration for publication elsewhere; its publication has been approved by all co-authors and related and responsible authorities at the institute where the study has been conducted. To ensure the quality publication, CJED follows a single-blind-peer-review process. For those who are interested publishing your manuscripts with us, please send us your manuscript to our email at *cameditorialboard@gmail.com*.

For more information, please visit our website at *www.cjed.hiroshima-u.ac.jp*

Seminar Program

Date: Wednesday December 21, 2022

Time: 8:00 am–17:40 (Cambodian Time)

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Time	Agenda
7:30 – 8:00	Registration
8:00 – 8:05	Welcome remark (MC)
8:05 – 8:15	**Opening speech** **Dr. Kinya SHIMIZU** Professor, Graduate School of Humanities and Social Sciences, Hiroshima University, Japan
8:15 – 8:35	Presenter 1: **Dr. Soeung Sopha** (JDS fellow PhD 2019 – 2022) Factors Influencing Engagement of Private Tutoring at Cambodian Upper Secondary Schools
8:35 – 8:55	Presenter 2: **Miss May Thu Kyaw** (MEXT PhD fellow 2021-2024) Research Engagement of Teacher Educators at Thailand's Rajabhat Universities
8:55 – 9:15	Presenter 3: **Ms. Chea Chanponna** (ADB PhD fellow 2021-2024) Exploring the Implementation of Mentoring during the Teaching Practicum in Cambodian Teacher Training Institutions: A Comparative Analysis

9:15 – 9:35	Presenter 4: **Mr. Ly Sochea** (ADB PhD fellow 2021-2024) Professional Learning Activities of Teacher Educators at National Institute of Education, Cambodia
9:35 – 9:55	Presenter 5: **Mr. Lay Vichera** (JDS Master's fellow 2020-2022) Individual-and School-Level Factors Influencing Student Performance in Cambodia
9:55 – 10:10	**Tea Break Session**
10:10 – 10:30	Presenter 6: **Miss Ouch Sreypouv** (JDS PhD fellow 2021-2024) Assessing Cambodian Science Teachers' Inquiry-Based Practice in Junior High School Classrooms
10:30 – 10:50	Presenter 7: **Mr. Shintaro Murohashi** (Master's student 2021-2023) Developing the Basic Science Process Skills Assessment Test in Lower Secondary Schools
10:50 – 11:10	Presenter 8: **Mr. Khut Sokha** (JDS PhD fellow 2021 – 2024) Integrating STEM Approach in K-12 Science Education Teaching Practice: A Systematic Literature Review
11:10 – 11:30	Presenter 9: **Mr. Chheang Sophea** (JDS Master's fellow 2020-2022) Investigating Cambodian Student Teachers' Misconceptions about Acids and Bases: A Case of Teacher Education Colleges
11:30 – 13:30	**Lunch Break Session**
13:30 – 13:50	Presenter 11: **Mr. Kodai Miura** (Master's student 2021-2023) Content Analysis of Science Curriculum and textbooks in Zambia from Science Process Skills

13:50 – 14:10	Presenter 12: **Ms. Khek Samnang** (ADB PhD fellow 2021- 2024) Developing effective teaching and learning materials on Electromagnetism in Cambodian high school
14:10 – 14:30	Presenter 13: **Ms. Chap Sereiratana** (JICA Master's fellow 2020 – 2022) A study of pre-service teachers' misconceptions about "the factor affecting the rate of reaction" in Cambodia
14:30 – 14:50	Presenter 14: **Mr. Ung Sarart** (JDS Master's fellow 2021-2023) Identify Scientific Attitude Among Grade 12 Students in Cambodia
14:50 – 15:10	Presenter 15: **Mr. Lang Borat** (JICA Master's fellow 2020-2022) Effect of Lesson Study on Lesson Planning Skills: A Case of Training Workshop for Improving Primary Mathematics Teaching in Cambodia
15:10 – 15:25	**Tea Break**
15:25 – 15:45	Presenter 15: **Mr. Thy Sophorn** (JICA Master's fellow 2020- 2022) Cambodian Kindergarten Teacher's Knowledge of Autism and Their Perceptions of Play-Based Activities for Students with Autism in Special Classrooms
15:45 – 16:05	Presenter 16: **Mr. Kim Pheng** (JDS Master's fellow 2020 – 2022) The Improvement of Social Studies Textbook for Child-centered approach in Lower Secondary Schools: A Case Study in Kampong Chhnang Province, Cambodia.
16:05 – 16:25	Presenter 17: **Miss Ith Chanthoeun** (JDS Master's fellow 2020-2022) Teachers' Knowledge and Perception in Implementing Critical Thinking Practice in Social Studies: A Study of Lower Secondary Schools in Battambang Province, Cambodia

16:25 – 16:45	Presenter 18: **Mr. Seng Nol** (JICA Master's fellow 2020 – 2022) Advanced ICT Education in Cambodia: A Study of Teacher Education Colleges on Perception of Digital Citizenship and ICT Integration in Education
16:45 – 17:25	**Commentary and reflection session** **Dr. Taiji HOTTA** MORITO Institute of Global Higher Education, Hiroshima University **Dr. Takuya BABA** Professor, Graduate School of Humanities and Social Sciences, Hiroshima University **Dr. Kinya SHIMIZU** Professor, Graduate School of Humanities and Social Sciences, Hiroshima University **Dr. Yasushi MARUYAMA** Professor, Graduate School of Humanities and Social Sciences, Hiroshima University
17:25 – 17:35	**Publication announcement** **Mr. Pov Sokunrith**, Editor-In-Chief (JDS PhD fellow 2022-2025) Introduction to Cambodian Journal of Educational Development (CJED)
17:35 – 17:40	Closing (MC)

Note:

- This schedule is subject to change.
- Each presentation takes **20** minutes, including **10** minutes for presentation and **10** minutes for question-and-answer session.

Abstracts

Presenters	Abstracts
1. Sopha Soeung	**Study of Private Tutoring in Cambodia: Incidence and Development between 1980s and 2014** This limited topical life historical study aimed to gain insight into private tutoring (PT) incidence and development between 1980s and 2014 – year of the remarkable national examination reform. The data were collected from 59 informants who experienced in PT during their schooling purposively. The study employed holistic approach to narrative analysis through interactive model for qualitative analysis component for its analysis after the transcript had been verified by each informant. This study unwrapped that PT market existed in Cambodia particularly at the senior grade of the lower secondary school during in the 1980s, albeit previous studies reported its incidence in former socialist countries after the collapse of former Soviet Union. However, PT in this study context was labelled as a *hidden* one because not could everyone access regardless of their family economy, but trust between parents and teachers as tutors. Additionally, the study unveiled teacher malpractices and parents/peers influence were key factors influenced PT incidence during the post socialist period (1990s – 2014). Although this study's findings are largely aligned with the previous literature of PT, it unpacks some new perspectives of PT incidence and development as well as teacher professionalism in Cambodian context. *Keywords:* hidden market, life history, narrative analysis, private supplementary tutoring, shadow education
2. May Thu Kyaw	**Research Engagement of Teacher Educators: Cases of Rajabhat Universities in Thailand** Research-based teacher education is a prominent trend in the field of education globally and research of teaching staff at teacher education programs has received increasing attention from scholars and governments. This qualitative case study investigates how teacher educators engage research-related activities, exploring motives for

and challenges to their research engagement. Data were drawn from semi-structured interviews with 20 teacher educators who provide teacher education programs at two Rajabhat Universities in Thailand. Inductive content analysis of the data showed that Thai teacher educators pursue and conduct practitioner research on teaching strategies to improve their teaching and academic research concerned with subject matter to polish their expertise. Their main motives included to fulfill the requirement by the university, to enhance their personal and professional development, to build reputation as an educator, to get promotion and extra income by conducting research. Challenges faced by teacher educators were limited time, insufficient research fund, and the quality issues of research equipment and data resources. The study points out the importance of personal connection and collaborative colleagues in the Thai context for teacher educators' research engagement.

Keywords: teacher educator, research engagement, qualitative case study, Rajabhat Universities, Thailand

3. Chea Chanponna

Exploring the Implementation of Mentoring during the Teaching Practicum in Cambodian Teacher Training Institutions: A Comparative Analysis

This is a qualitative study sought to explore the implementation of mentoring process during the teaching practicum of the Preservice Student Teachers at the teacher training institutions in Cambodia. The aim of this study is to develop a theoretical framework for the improvement of mentoring practice in Cambodian teacher education through exploring the perception and practice of mentoring and their effects on mentoring relationships during the school-based practicum. In-depth interviews were conducted with a purposive sampling techniques. The participants engage in this study are the Student Teachers, Supervisors, Cooperating Teachers, Mentors, and Pupils. Data collection included semi-structured interview, observations of participants' classroom practice, post observation conference, and document analysis.

Keywords: mentoring, teaching practicum, preservice teacher, comparative study

4. LY Sokchea

Professional Learning Activities of Teacher Educators at the National Institute of Education, Cambodia

Recruited from various sources and with no formal preparation into the institution and profession, teacher educators at the National Institute of Education (NIE), Cambodia essentially needs to develop professionally in order to fulfill duties and responsibilities. The purpose of this study was to describe the teacher educators' professional learning activities valued and needs perceived. Among 105 teacher educators, 89 completed the survey administered. These data were analyzed based on these main themes including professional roles perceived, professional learning opportunity and needs valued and research use and conduct as a teacher educator-researcher. A role as a teacher has been perceived by most teacher educators, who would like to receive further study in the 'subject knowledge' area, followed by the needs in enhancing technology and teaching methodology skills. In order to achieve their mentioned needs, further education, even into Ph.D., would fulfill them. Additionally, conducting research and workshop equally were believed meeting their needs. Equally important, 'research' was deem necessary for their profession, though the teacher educators moderately actively conduct research. Interestingly, the groups of the subject taught stream statistically differ significantly on the professional learning needs and research use. This study provides better understanding of the professional development and learning activities of teacher educators in Cambodia and the optimal ways to motivate the teacher educators to develop their professional needs.

Keywords: professional learning activity, teacher education, teacher educator, NIE, Cambodia

5. Vichara Lay

Student-level and School-level Factors Influencing Student Performance in Cambodia

This study examines student-level and school-level factors influencing student performance of fifteen-year-old students in Cambodia. The study uses data from the Program for International Student Assessment for Development (PISA-D) for Cambodia, which included 5,162 students and 4,263 teachers

from 170 schools. This information was then applied to the multilevel model. The results show that intra-class-correlations in the null models of reading, mathematics, and science achievement were 0.37, 0.40, and 0.34, respectively. Although they indicate that individual students differed more from each other than their differences in student performance did, school-level data can explain differences more than in high-income countries. At the student level, the grade, gender, student life satisfaction, absenteeism, parents' motivation, students' work responsibilities, and the number of books at home significantly affected achievement in all three subject areas. Grade repetition negatively affected student achievement in all three subject areas, but less so for mathematics. The availability of home resources significantly affected achievement but parents' education level negatively affected the science achievement. At the school level, the school type and teachers were late for class significantly affected all three achievements. The school location significantly affected reading achievement and private tutoring significantly affected mathematics achievement.

Keywords: school effectiveness research, individual level, school level, student achievement, Cambodia, PISA-D

6. Ouch Sreypouv and Kinya Shimizu

Assessing Cambodian Science Teachers' Inquiry-Based Practice in Junior High School Classrooms

Cambodian junior high school students performed lower than average scores in science and could only understand the simple pattern of science content according to the result of the Programme for International Student Assessment in Developing Countries, PISA-D, 2016. This reflected the quality of science teachers, especially the quantitative and qualitative constructivist teaching approaches being implemented in their classrooms. The inquiry-based approach is considered a central approach for constructivist teaching in Cambodia since 2009 through the Secondary School Teacher Training Project in Science and Mathematics (STEPSAM) project. Less known about the quality of inquiry-based practice in science classes in Cambodia, therefore this study aims to investigate to what extent of the science teachers' inquiry-based practice and which parts of the inquiry-based phase challenge them a lot. Stratified random sampling was used to

select four types of schools New Generation Schools, Secondary Resource Schools, Normal Public Schools, and Schools related to RTTC that are high in inquiry-based; and the random science classes in each school will be observed and evaluated. The analysis of teachers' practice followed the EQUIP (Marshall, 2012) by measuring the four constructs: instructional, discourse, assessment, and curriculum.

Keywords: Inquiry-based, science teacher, secondary education, teaching practice

7. Shintaro Murohashi

Developing the Basic Science Process Skills Assessment Test in Lower secondary Schools

This study focused on Basic Science Process Skills, and the purpose of this study was to develop a method to measure them. Basic science process skills consist of the six sub-concepts of observing, measuring, classifying, communicating, predicting, and inferring and contribute to the acquisition of science literacy, which is the primary goal of science education. Therefore, in this study, we developed test items to measure basic science process skills in Cambodia. We surveyed 441 students (153 Grade 7, 119 Grade 8, and 168 Grade 8) at the secondary school level was conducted using Google forms and analyzed based on the two-parameter logistic model of IRT (item response theory). The results showed that the developed items had sufficient discrimination, except for a few test items. Observing, measuring, and classifying had high discriminability for people with somewhat higher than average abilities. Moreover, communicating, predicting, and inferring had high discriminability for populations with slightly lower than average abilities.

Keywords: scientific literacy, science process skills, validity, reliability, item response theory

8. Khut Sokha

Integrating STEM Approach in K-12 Science Education Teaching Practice: A Systematic Literature Review

Integrated science, technology, engineering and mathematic (STEM) in K-12 education is deemed as a crucial means to ensure future prosperity, security, and workforces in these fields in both developed

and developing countries. Integrated STEM approach is the mean which four STEM discipline is taught integrated way. However, to date, several barriers have emerged. For instance, it continues to have unclear consensus of the main features of the operational implementation of integrated STEM approach. The type of science subject was integrated with other three of STEM disciplines technology, Engineering and mathematics and its application at a certain level of K-12 science education remain unidentified. Therefore, the present study aims to provide a well-defined framework of integrated STEM approach in science education and type of integrated S.T.E.M disciplines utilized in various educational settings through a systematic literature review. Secondary data such as scholarly journal articles and books chapter were gathered through the search in databases of Database Educational Resource Information Center (ERIC), and Web of science. Within-case and cross-case analysis method was used to conduct data analysis. The findings reveal that generally, the framework consist of six elements, including inquiry-based learning, engineering-based learning, technology-based learning, problem-based learning, teamwork-based learning, and robotic-based learning. This approach primarily focuses on primary and lower secondary education. And the contents related to engineering and technology are dominantly integrated in science subject. Meanwhile, science and engineering (SE) and science and technology (ST) are extensively used at primary education, whereas science, engineering, and mathematic (SEM), science, technology, and engineering (STE) or STEM are commonly utilized at lower and upper secondary education. The findings will be discussed with a call for solid implications to implement integrated STEM education.

Keywords: K-12 science education, integrated STEM approach, systematic review, actual teaching practices

9. Chheang Sophea

Investigating Acid-Base Misconceptions of Cambodian Students in Teacher Education Colleges

The construction of chemical concepts is complicated and challenging because those concepts are abstract and require critical thinking. The difficulties can make students' understanding and knowledge, which are not in line with scientific conceptions, called misconceptions. Cambodian teachers stills prefer memory-based learning by explaining

the formulas and phenomena to students, so they fail to link scientific concepts with students' misconceptions. Understanding student teachers (STs)' misconceptions is essential to enhancing the quality of science teaching. Therefore, this study aimed to determine STs' misconceptions of acids and bases and find a significant difference in STs' misconceptions across demographic variables. The two-tier diagnostic test about concepts of acids and bases was administered to 146 year-3 STs in two teacher education colleges. Then descriptive statistics were utilized to determine the percentage of STs' misconceptions and find a significant difference. The result revealed six common misconceptions, from 28% to 64%, including acid-base indicators, neutralization reactions, pH scale, titration tools, and characteristics. There were only two misconceptions, which has significant differences between gender. In conclusion, the study revealed three common misconceptions not found in previous literature. These misconceptions could derive from their difficulties in understanding the concepts, confusing terminologies, and focusing on memorizing the concepts.

Keywords: misconceptions, student teachers, acids, bases, teacher education colleges

10. Kodai Miura and Kinya Shimizu

Content Analysis of Science Curriculum and textbooks in Zambia from Science Process Skills

This study examined the characteristics of science process skills included in Zambian 8th- and 9th- grade integrated science syllabus and textbook activities. This study adopted content analysis as the research method. We utilized 12 science process skills as a framework for the analysis, including the skills of observing, inferring, measuring, communicating, classifying, predicting, controlling variables, defining operationally, formulating hypotheses, interpreting data, experimenting, and formulating models. In syllabus analysis, we captured 71 skills listed in the syllabus and calculated the percentage of each skill. In textbook analysis, we developed a coding rubric and identified the inclusion of each skill in all the textbook activities. The coding process was validated by two experts and showed high reliability with a 93.6% agreement rate between two coders and a kappa coefficient of 0.847. The results revealed that both the Zambian science syllabus and textbook activities emphasized the skills of

observing, inferring, measuring, communicating, interpreting data, and partial experimenting. Whereas skills such as predicting, classifying, controlling variables, defining operationally, formulating hypotheses, and formulating models were rarely included. This study highlighted that students may not be able to develop science process skills in a balanced manner under the current Zambian curriculum.

Keywords: science education, science process skill, curriculum, textbook

11. Khek Samnang	**Developing Effective Teaching and Learning Materials on Electromagnetism in Cambodian High School**

This research aims to improve the skills and knowledge of Cambodian high school students in physics studies. The first step of this study is analyzing the current situation of physics teaching and learning in high school to figure out whether any particular topics could be a difficulty for students' understanding. The teaching material will then be enhanced accordingly and appropriately for students. Multiple sets of questionaries have developed to conduct surveys on high school physics teachers. After that, teaching and learning materials are designed reflecting on the result of analysis. Improvised materials have been used in developing instructional materials to conduct experiments then record and examine the experimental video, or by the use of simulation software. A lesson plan is constructed to compromise with the materials to carry out actual practice in the classrooms. Pre-tests and post-tests are developed along with classrooms observation tools, two perception survey and also focus group discussion. High school teachers are later going to try out the lessons with their students and evaluation of the teaching and learning experience will be taken based on the feedback received.

Keywords: instructional materials, conducting the experiment, analyzing experimental video, simulation software

12. Sereiratana Chap and Kinya Shimizu	**A Study on Pre-Service Teachers' Misconceptions on the Topic of "The Factor Affecting the Rate of Reaction" In Cambodia**

In recent years, studies on students' understanding and misconception of the various concepts have been a part of the challenge that teacher educators and teachers should consider to solve the problem in the science classroom. However, students' misconceptions become a part of the concern for science researchers and educators of science learning in Cambodia. This study is use the quantitative method. The instrument used a two-tier diagnostic test with multiple choice question to identify Cambodian pre-service teachers' misconceptions on factors affecting the rate of reaction comprised ten items, and the use descriptive statistics to analyze the data. The result show that, there are twenty misconceptions, but the dominant misconceptions experience fall into seven misconceptions. They were as follow: the size of particle, pressure, temperature and catalysts factors. The pre-service teachers' misconception in each test item related to their thinking and prior knowledge revealed to teachers' instructional and methodology, based on daily contents and lesson plans. The conclusion, this study found that pre-service teachers have misconceptions about factors that affect the reaction. Most of them have difficulty in understanding and connecting their prior knowledge with the existing concept. Their memory on the terminologies, phenomenon and scientific meaning seem confusticate and complicated.

Keywords: misconception, rate of reaction, pre-service teacher

13. Ung Sarart

Identify Scientific Attitude among Grade 12 Students in Cambodia

Scientific attitude is an important goal of science education; it is the affective domain outcomes directly from learning science subjects. This study aims to identify the characteristics of the scientific attitude of grade twelve students and to examine the pattern of students' scientific attitudes in Cambodia. The research will answer these questions: What are the characteristics of the scientific attitude of grade twelve students in Cambodia? How do the different scientific attitudes of grade twelve students in terms of gender, strands, and locations? This study will employ a quantitative research method. The data will be collected from 567 grade twelve students by applying two stages of random sampling and using a student survey questionnaire within the five main characteristics of scientific attitude: rationality, open-mindedness, confidence in the scientific method, curiosity, and

aversion to superstition. The significance of identifying the level of scientific attitude of the student is to show the quality of science study. The characteristic of scientific attitudes will reflect the quality of teaching and learning science subjects; educators and policymakers can use it as the crucial indicator of reforming and improving the science strand.

Keywords: science, attitude, scientific attitude of the student

14. Lang Borath

Effect of Lesson Study on Lesson Planning Skills: A Case of Training Workshop for Improving Primary Mathematics Teaching in Cambodia

Lesson study (LS) is a professional development process for teachers to systematically examine their lesson planning and rehearse teaching (Lewis, 2006). In LS, teachers collaboratively plan, implement, test, and improve research lessons through professional development training (Stigler & Hiebert, 1999). In Cambodia, LS was introduced through the Science Teacher Education Project for Science and Mathematics (STEPSAM) 2 Project (2008–2012) in cooperation with Ministry of Education Youth and Sport (MoEYS) for improving the quality of lesson planning skills with a cyclic process of "Plan, Do, Check, and Act." The research objectives in this study are to identify the status of LS training workshop, and their effect on the lesson planning skills of primary mathematics teachers. Six teacher educators, six principals, and twenty primary school teachers were purposively selected in the process of before (questionnaires, orientation), during (discussion and reflections, digital recordings, questionnaires), and after (questionnaire, lesson plans) the LS training workshop. As a result, primary mathematics could improve their lesson planning skills from lower levels (1–2) to higher levels (3–5); however, at higher levels, they were struggling to move to even higher levels of lesson plan development.

Keywords: lesson study, lesson plan, lesson planning skills, primary mathematics

15. Thy Sophorn

Cambodian Kindergarten Teachers' Knowledge of Autism and Their Perceptions of Play-Based Activities for Student with Autism in Special Classrooms

There is limited research on teachers' knowledge of autism and their use of play-based activities for students with autism in special classrooms. Therefore, the current study aimed to measure teachers' knowledge about students with autism, describe teachers' perceptions of play-based activities, and examine the correlation between teachers' knowledge about students with autism and their perception of play-based activities. The current study conducted quantitative procedures using an online survey through Google Form. First, the outcomes indicated that most Cambodian kindergarten teachers' knowledge of autistic students was moderate. Moreover, public, private, and Non-governmental Organization (NGO) teachers have the same knowledge of autism spectrum disorder (ASD). Second, teachers' perceptions of play-based activities for students with autism in special classrooms were positive. Finally, Cambodian kindergarten teachers' knowledge and perceptions showed no association or relationship. These results implied a better understanding of Cambodian kindergarten teachers' knowledge about students with autism and their perception of play-based activities. Moreover, suggestions were made to focus on teachers' professional development targeting knowledge and interventions for children with autism in early childhood, and appropriate teaching methods were recommended for applying more effective play-based learning to students with autism in special classrooms.

16. Kim Pheng

The Improvement of Social Studies Textbook for Child-Centered Approach in Lower Secondary Schools: A Case Study in Kampong Chhnang Province, Cambodia

This research paper studies teachers' and authors' perceptions of Social Studies textbooks for implementing a Child-centered approach in Cambodian lower secondary schools. Deploying a sequential explanatory mixed method, the data were collected from a random sample of 107 lower secondary teachers and 4 authors. Although textbooks are found to mismatch each tenet of the Child-centered approach, teachers positively considered that textbooks were the essential materials to facilitate this approach. On the other hand, authors believed that textbooks are difficult for teachers and students to adopt this approach since textbooks contain inadequate elements and this approach was integrated into teachers' guidebooks only. However, they believed that textbooks contain unclear instructions to

enable students to understand the contents. Through interviewing, teachers and authors have different views on textbooks. However, they think that textbooks are difficult for students to take responsibility for their learning without teachers' instruction while lacking teachers' guidebooks and textbooks remain challenging. Remarkably, rather than challenges from textbooks, teachers and authors think school environments: overcrowded students, slow learners with poor reading, and lack of teaching hours hindered the implementation of this approach. Gradually, the main factors influencing teachers' and authors' beliefs included low pedagogical knowledge, limited understanding of textbook development, and traditional affected factors.

Keywords: social studies, textbooks, child-centered approach, lower secondary schools.

17. Ith Chanthoeun

Teachers' Knowledge and Perception in Implementing Critical Thinking Practice in Social Studies: A Study of Lower Secondary Schools in Battambang Province, Cambodia

The study aimed to investigate lower secondary school social studies teachers' knowledge and perception of critical thinking (CT) in Battambang province, Cambodia. An explanatory sequential mixed method was used: a survey questionnaire with 153 social studies teachers, a semi-structured interview with nine teachers, and observation of four classrooms. The results of the survey indicated that most of the teachers have accurate knowledge of CT, and they have positive perceptions of CT teaching. Students' poor ability in reading and writing, less motivation in learning, and lack of thinking habits were teachers' difficulties in engaging students in CT. The teachers also claimed that the challenges in teaching CT were lacking resources and materials, time constraints, overloaded content, and lack of support. The classroom observations showed that the teachers' performance of critical thinking teaching did not promote critical thinking as most of their teachings used the lecture model and gave little time for students to think, discuss or ask questions. The results and findings led to recommendations: the policymakers and curriculum developers should review and make clear definitions of CT in the curriculum; manuals and guidelines with clear instructions for CT teaching should be integrated into teacher training programs.

Keywords: critical thinking, social studies, lower secondary school, critical thinking skills, critical thinking disposition, critical thinking instruction

18. Seng Nol

Advanced ICT Education in Cambodia: A Study of Teacher Education Colleges on Perception of Digital Citizenship Education

The purpose of this study is to measure the digital citizenship perception levels of teacher educators, including all levels of student teachers, and their patterns of digital citizenship. Students who will shape society are required to become digitally literate and use information and communication technologies in accordance with ethical principles, safety, and responsibility. Considering the importance of the education of citizens who are compatible with the information society, ensuring that students acquire competency in digital citizenship skills such as digital ethics, digital security, digital rights and responsibilities, digital communication, digital participation, critical thinking, digital commerce, and digital skills is of great importance. The methodology of quantitative research was utilized throughout the entirety of this study. The data collection was obtained through the completion of an online questionnaire. SPSS is used for a variety of statistical techniques and tests. Results indicated that teacher educators have a positive perception and a high level of awareness of digital citizenship, based on the overall mean score. Years of work experience and internet use experience were found to be significantly different from the demographic characteristics of teacher educators. Student teachers have a medium perception of the overall mean score. No significant differences were found for gender, age, the use of one's own smartphone, or internet connection at home.

Keywords: ICT, digital citizenship, student teacher, teacher educator

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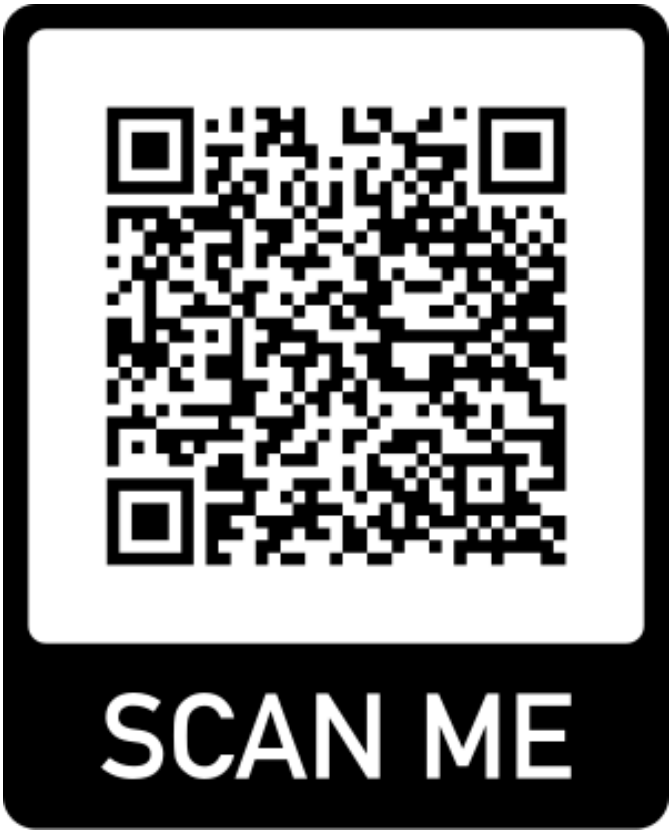

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