

Abstracts

Introduction of Faculty of Economics and Tourism in Kagawa Prefecture

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Faculty of Economics, my research theme and tourism in Kagawa prefecture are introduced. Here I'd like to introduce my research theme.

My research theme is rural development and tourism, eco-tourism and workcation. Rural tourism is a traveling style in which travelers stay in rural villages. They can experience a traditional Japanese rural lifestyle, interact with local people and experience a variety of attractive local settings and communities. They can buy agricultural products at farmers markets, eat local foods at farmers restaurants, experience many activities in the countryside, and stay at various types of accommodations, including farm stays. These contribute to vitalizing rural communities which suffer from depopulation and aging.

“Workcation” is a word that combines “work” with “vacation”. Business persons do remote work at tourism destinations while enjoying staying there. Due to the pandemic of Covid-19, inbound tourists disappeared from Japan and many destinations are suffering from the hard condition. Recently many of them pay attention to and try to introduce workcation because of recovery from disappearance of inbound tourists. Workcation is not only for the recovery from it, but also may create new business opportunities by business matching and open innovations between city business persons and local residents.

A study of developing the educational robots course for pre-service teachers

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In order to promote pre-service teacher professional abilities in teaching STEM with robots, the researcher design a new course of educational robot and investigate how students react and learning during this class.

The content of this course consists of three components, namely pedagogical knowledge (theoretical foundation related to robots), content knowledge and pedagogical content knowledge. The researcher, as the class lecture, used participating observation to study students' development.

Using Social Stories to Modify Hitting Behaviors of an Early Childhood Student with at Risk of ADHD

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This research study aimed to examine the learning strategy of using social stories to modify hitting behavior of an early childhood boy who was 6 year-old and at risk of ADHD. The research tools consisted of two social stories, two individualized education plans, Q&A exercises, and classroom behavior observation form. The data were collected in February 2021 and analyzed using frequency and means, then presented in tables and graphs with descriptive explanation.

The results showed that the mean rate of the case study hitting his friends in the classroom from baseline, during experiment, and follow-up were reduced, i.e., 4.5, 3.2 and 1, respectively. In addition, each social story was read 5 times in 5 different days and at the end of each reading, the case study was asked to answer 5 questions regarding the situation in the story. The results showed that the case study was able to answer all of the questions with an increasing in-depth details from the first to the fifth answer. The conclusion is that social stories can be powerful and effective learning strategies to facilitate young children change undesired behavior on their own under adult's supervision.

Development of elementary school programming materials to experience AI using Scratch and Raspberry Pi

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In this research, in order for elementary school students to experience AI, we developed a prototype of an emotion recognition program that uses Scratch and the Raspberry Pi to capture a person's face with a web camera and estimate their emotions in real time on the Raspberry Pi.

In this program, emotion recognition is done on the Raspberry Pi side, so it is not possible to train the AI itself. However, with this system, elementary school students can expect to actually experience AI and become aware of things that have been difficult for computers to learn (and difficult to describe with conventional programming), such as image recognition and voice recognition.

As a result, they will be able to think about how AI and humans can help each other, something that has not been done in conventional programming education, and think about the future that programming education aims for AI that can help humans do their jobs.

Facilitating Sustainable Development of Preschools: A National Project for Teacher Training

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Early Childhood Education and Care institutions are understood as learning organizations in a context of rapid global change. In addition to the external changes, such as government policy and education market, the internal issues including teachers' teaching capacity, values, attitudes and learning goals are crucial to educational practices. The purpose of this study is to assist the preschools to achieve sustainable development by providing PDCA training for teachers. Therefore, the training aim to help preschool staff and teachers to construct their own knowledge and culture for organizational growth and effective operation to achieve the program objectives by promoting the systematic thinking. Three stages of training programs, namely knowledge diffusion, knowledge adaptation, and support network, were designed and implemented in form of training lectures, workshops, and professional community.

Quantitative and qualitative methods are used to collect the research participants' perception and intention on these training. The results indicate that three kinds of training developed all are positively perceived by preschool teachers. From the response of the participants, the professional community and workshops are higher than the training lectures on overall satisfaction of the training, perception of usefulness for preschool work, and the willingness to adopt PDCA in work-related projects.

So Close yet So Far (Inspired by Jimmy Liao), stories around our faculty

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Faculty of Political Science and Public Administration aims is to support the SDGs. This presentation presents stories related to few stakeholders; students, staffs, and communities around Chiang Mai Universities.

An Opportunity for Multicultural Students to Learn and Practice SDG 14

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The presenters will introduce a course called "Project Sanuki", which is a common subject in which students find social problems and foster problem solving abilities. Since 2020, the focus of the course has been on SDG 14 "Life below Water". The students are required to do a group work and each group is intended to have members of international and Japanese students. The international students are mainly exchange students and the Japanese students are mainly first year students. Each group can choose Japanese or English as a working language, depending on the abilities and preference. The presenters collaborated with Satoumi group, Kagawa prefecture and Archipelago, an NPO, as well as faculty members from other areas of study. The opportunities of special lectures were provided: they could learn the history, water environment administration

and problems of Seto Inland Sea that is adjacent to Kagawa prefecture. In addition, a fieldwork was planned and the students were supposed to observe and collect debris at beaches in Kagawa, and classify them based on ICC data card. However, it was cancelled due to COVID-19 and other reasons. The students could learn knowledge on SDGs and the sea, and have practical academic communication with each other.

Social sciences Knowledge and SDGs contribution

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The Thai military government's repatriation of forest policy (2014-2018) and the recently-implemented new National Park law are being enforced currently. Villagers who had lived in mountainous areas for more than 60 years before the law was applied were restricted from using natural resources, farming in the forest, collecting firewood and mushrooms and were charged with trespassing, and ordered to leave.

Upon a request from the head of Muang Kham, a mountainous village near Chiang Mai with a history of 200 years, the CMU Faculty of Social Sciences started to provide support in negotiations between the village and the National Park Department. At the same time, the faculty provided the residents of the district with knowledge of social sciences. The two aims of the project were to utilise Social Science Knowledge to help solve conflicts and to combine the two missions of student teaching and academic service, allowing students to participate in assisting marginal people. Students conducted behavioural surveys combining geography, sociology, and anthropological methods, and the faculty played a role in supporting vulnerable groups.

The practices were as follows: 1) meetings were held with the National Park Department, students, and locals; 2) they were then divided into a geography team, and a sociology and anthropology team, to establish methods for gathering information and resource management; and 3), as an output method for local villagers and executives, GIS maps are then used to clarify the boundaries between land and forests, protect the cultural resources of the indigenous people, and support sustainable economic activities.

A Case study on the practice of remote education policy:

Local government and rural school

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According to the core values of the 12 years of basic national education in Taiwan, the various educational policies and local education policies are in the process. The local government and school leaders need to innovative operations to achieve the implementation of remote education

policy. Based on this, this micro-study is focus on the case local government and the rural school practice. By using interviewing and document analysis, the research aimed to analyze the practice of local government and the case school in terms of the five dimensions: Policy characteristics, structure and system, local government and school leadership, the influence of remote education policy interpretation, feedback on the quality of local and school education.

The findings of the research are mentioned as the following:

1. Although the implementation of relevant remote education policies, it seems that there is protection by relevant laws and regulations, but the education situation cannot solve the dilemma in accordance with the law.
2. Only a small number of rural schools are formal teachers, and most of them are acting teachers or substitute teachers.
3. In rural schools, since many students come from disadvantaged families, the ability of students to learn independently is an opportunity to improve their learning ability in rural areas.
4. Rural schools need the support of internal and external resources of the local government to survive and develop the characteristics of the school.
5. The local education authorities and rural schools need to support teachers to continue teacher professional development in a harmonious 'learning and teaching' environment.

Based on the findings mentioned above, the research offered many implied applications for reference.

**Smart Sustainable Governance:
A new paradigm for achieving SDGs through sound public policies**

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Effective accountability and inclusiveness are the pillars of SDGs. There is a framework to consider paradigm shifts in public administration from 'ancient public admin' to 'smart sustainable governance.' This includes a shift from citizens being 'commoners' to the 'public', and an inclusive shift from the public not only being citizens but also to include those such as refugees and expats. As an example of such a paradigm shift, trash collection was cited. The first paradigm used obedience and loyalty, respect for elders, and for the nation. The second used laws, fines; the third used the market and competitive style with customers as its focus. The fourth viewed trash as a commodity in which the user pays for collection. The fifth focused on community group management and sustainable governance and a focus on planetary health, to lead to sustainability. The paradigm cited for trash can also be applied to such SDG goals such as vaccination and healthcare programmes.

English Literature and Meiji Japan

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In early years of Meiji period, many English literary works gave Japanese writers a great shock. For them, not only did the foreign literature (and language) threaten Japanese own literature (and language) , but also it was one of the models to write their 'new' novels, which were different from stories written in the Edo era. From this point of view, the plays of William Shakespeare and the novels of Walter Scott and Bulwer Lytton were widely read, and works of Charles Dickens, one of the greatest English novelists in 19th century, had also been frequently translated and/or adapted since 1882.

This presentation explores and historicizes the central significance of Dickens's acceptance in 19th and early 20th century Japan. There are two major writers in Meiji period, who are especially interested in English literature: Tsubouchi Shoyo and Natsume Soseki. Both of them referred to Dickens' works, but, as a matter of course, their receptions of are slightly different each other. So, we will be considering the differences between the two by reading works of Shoyo and Soseki.

**Factors of Elementary School Teachers' Participation
in Interdisciplinary Teaching in Taichung City**

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At present, Taiwan is promoting the twelve-year Basic education curriculum, emphasizing cross-field and interdisciplinary curriculum development, focusing on topics, experience, exploration, practice, performance, and utilization. It is expected that students will have key literacy abilities and have integrated learning experience; therefore, interdisciplinary teaching allows students to integrate the knowledge concepts of the learning content, and use multiple teaching and learning methods to stimulate students' motivation, so that they can classify and connect when facing problems in different life situations. The learning content of the subject area can effectively solve the problems in life, and then deepen and enrich self-learning. The knowledge, attitudes and skills learned in life can produce good learning transfer experience. The twelve years Basic education emphasizes the core spirit of students. This research is mainly to understand the background of teachers in elementary schools in Taichung City in interdisciplinary teaching, the reasons for their participation, and the current status of cross-disciplinary implementation.

The method of this research adopts the questionnaire survey method, and the data analysis adopts the SPSS statistical software. According to the statistical results from the t test and ANOVA test, we provide conclusions of this article, and future research suggestions based on the findings of the research results.

Characteristic Libraries Evaluative Construction in Elementary School

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For developing characteristic libraries, promoting the functions of education, advocating children reading cultivation and learning abilities, this thesis carries on designing evaluative indicators and assists in finding problem and resolving. The research contains literature review and case analysis to construct the management of services and characteristic concepts. As well, characteristic collection and distinctive atmosphere are organized into evaluative indicators of characteristic library analysis standards.

Interview the teachers of elementary school by what their point of view in evaluative indicators of characteristic libraries and their perspective of characteristic libraries nowadays. Through IPA (Importance-Performance-Analysis) analysis, investigate and discover the developments and adjustments for characteristic libraries in Taiwan.

Key Words: mixed methods research, Characteristic Libraries, Special Libraries, IPA analysis.

Impact of the climate change and adaptation strategy in Asian countries

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Asian countries are highly vulnerable to the climate change due to the global warming in different perspectives such as agriculture, water resources and natural disasters. To mitigate and adapt to these impacts on the people living in the region of the monsoon Asia, it is highly important to project future climate change scenarios in these countries. However, due to the complex topography and highly non-linear interaction between the land surface processes and the hydroclimatological aspects of the hydrosphere and the atmosphere, the understanding of the climate change impact is not accurate enough. The action to combat the impact of climate change is one of the important goals of the SDGs, having important interlinks to other SDGs. In this presentation, we will show the hydroclimatological niche of the countries in the monsoon Asia using climatological parameters. We will present key understanding of the current climate science on the status and future projection of the climate change in this area. And we will promote discussion on the different phenomena due to the climate change and different adaptation strategies in different countries.

Equitable Quality Education and Digital learning: How would Assam fare?

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The Sustainable Development Goal 4 is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all; but hit by the pandemic and the subsequent shift to remote teaching-learning mode, the goal became more difficult to be achieved in the developing and least developed countries. India has shown a decreasing score in Goal 4 in the Sustainable Development Report 2020 with some challenges still remaining. Assam, one of the eight North-eastern states of India, has a shrinking score in the SDG India Index 2020-21 as compared to the previous SDG India Index 2018 and 2019. Of the eleven national level indicators identified to achieve six out of ten SDG 4 targets for 2030, Assam has performed relatively better only in three indicators and with an Index score of 43, the state occupies 24th rank of the 28 states considered. An online survey conducted by the researchers in 2020 to comprehend the problems and prospects of digital education highlighted unequal digital inclusivity. The study will draw upon past studies as-well-as the current digital accessibility of education in the state and investigate how Assam would fare in SDG 4 in 2021-22 based on both primary and secondary data.

Ensuring Water Security for Sustainable Development: Assessment of Availability and Utilization Dynamics of Water in Assam from SDG-6 Perspective

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Water being one of the most essential elements for survival of human beings, ensuring water security has become a prime concern for any sustainable development initiative. Although water is a renewable resource with huge global reserve, the fresh water necessary for human use is highly limited. India's potential water resources from surface (rivers) and underground sources is currently 1869.35 BCM (Billion cubic meter) and 431.86 BCM respectively, while its corresponding utilizable capacities are 690.1 BCM and 392.70 BCM. So far Assam is concerned, despite its considerably high water resource potential, it has not been utilized efficiently for agricultural and domestic purposes. Moreover, its utilization level varies spatially from one district to another depending on variation in terrain condition, cropping pattern and other economic activities. The level of utilization of ground water for agricultural and domestic purpose has also been quite insignificant in the state as compared to many other states of the country excluding the north-east region. The present paper attempts to assess the level of water availability and to examine its utilization dynamics in spatio-temporal contexts in Assam in the light of SDG-6 based on secondary data from various reliable sources.

Urban Planning in Context of Tourism Development: A Case Study of Gauhati City, India

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Tourism is an economic as well as industrial activity in which many individuals, firms, corporations, organizations and associations are involved. The industry is generally known as “smokeless” and “ecofriendly” industry because instead of goods it generates services for customers. It is also considered as an important industry for the all-round development of a place or a region. Therefore, there is an umpteen need to develop various sectors related to tourism industry to provide the best possible services and satisfactions to the tourists. Guwahati being the capital city of Assam and the Gateway of NE India has a great prospect for tourism to develop, as the city is full of several tourist destinations in and around it which bears lots of importance throughout the nation. In spite of many potentialities, due to poor infrastructural and allied other tourism related services and facilities, lack of proper marketing and lack of proper coordinated efforts tourism development in the city has not been able to take the pace as compared to other industries. The present study is an attempt to analyse the current status and need of the sustainable urban planning and management to support the growth and development of tourism industry in Guwahati city, India.

**Risk Associated With Rohingya Refugee Settlements at Ukhia Camp, Cox’sbazar,
Bangladesh-A Threat for Sustainable Development**

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The humanitarian crisis due to ethnic cleansing of Rohingya citizens from Myanmar to Bangladesh since 2017 has been creating a major environmental crisis for Bangladesh. Due to this cleansing more than one million people have fled from Myanmar to Ukhia, Teknaf, Cox’sbazar area Bangladesh. These refugees have been forced to build temporary shelters on the steep, deforested slopes of sand and clay hills of Kutupalong –Balukhali camps of Ukhia, Cox’sbazar. Thousands of hand-built tarpaulin (heavy-waterproof sheet used as a covering) and bamboo shelters on hill slopes are threatened by slope failures, slumping, sliding, strong winds, rains and cyclones during monsoon season. This low cost adaptation system with water proof sheets for Rohingya refugees housing helping to survive more than half million refugees in the camp area during monsoon in a unsustainable way of living (without light and air passing facilities) in addition to the risk of slope failure and earthquake induced liquefaction.

From the numerical stability & liquefaction analyses at different earthquake magnitudes suggest that these hills are at high risk and are not suitable for sustainable community based living in the camp area. At higher earthquake magnitudes (M= 5 or above) these soils are susceptible

to liquefy up to a depth of 5 m. An integrated rainwater harvesting system with other sustainable solutions are recommended to reduce the risks. Proper measures must be taken immediately by the concerned authorities for alternate sustainable housing and to relocate the refugees in a safer land.

**Scales of Hydrologic alternations:
How to relieve water stress in areas of abundant water resources**

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Hydrologic alternation is a feature in areas with seasonal drought like conditions across the globe. The areas just outside the influence of the Equatorial convective system experience a sequence of wet and dry periods in each calendar year. One such area in focus is the southern part of Meghalaya which receives a huge volume of rain each year yet water resources dwindle almost immediately after the rains cease.

The SDGs aim at a successful and equitable distribution of resources to the global population with an expectation to provide adequate amenities but the forces of nature exerts a negative role. Considering the efforts of reaching each household with reasonable amount of water, the unrelenting natural phenomenon may negatively outweigh human efforts.

Each year in this area there is an alternation of dry and wet period. The length of the dry period varies from year to year ranging from 2 months to 4 months starting from around November. The hydrological conditions over the area allows very less water retention and hence, sources of water run dry immediately as the rainfall ends. When the dry period is longer, the areas face a huge water stress. Paleoclimate studies have indicated extreme climate changes in these areas and the scale of such changes may even touch several years c.f. the Mega drought around 4000 years BP, affected almost the entire planet. Beyond this there were periods of extreme precipitation which must have brought unimaginable amounts of rainfall and may cause havoc. It is therefore a great need to understand different scales of hydrologic alternations occurring in this area while trying to achieve the SDGs.

Student collaborative research on climate change with open data

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A number of prior studies implied that climate change education would change students' awareness on the environment issues, instead of their behavior. Also, many studies suggested that students' hands-on experiences would change their attitude toward science. Therefore, in order to promote students' knowledge and attitude toward the issue of climate change, a collaborative research on climate change by college students with on-line data including GIS, satellite images,

and open data is proposed. By holding workshop, implementing project, and sharing research findings for students, this cooperation will help to enhance their perception on climate change.