Experiential learning in the case of Pak Mun Dam, Thailand[1]
การเรียนรู้เชิงประสบการณ์จากกรณีเขื่อนปากมูลในประเทศไทย

Kanokwan Manorom / กนกวรรณ มะโนรมย์[2]

Abstract

This article explains how experiential learning contributes to the creation of knowledge about hydropower dam, based on the case of the Pak Mun Dam. The paper argues that field based experiences lead to knowledge through the transformation of students' experience in different ways. First, experiential learning encourages students to transform their knowledge based on a simple and shallow understanding about the dam into a more complex understanding after the field visit to the site. Second, out-of-classroom learning stimulate students to narrate and reconstruct new stories and the meanings about the dam based on their own memories and perceptions they derived from what people have told them. Lastly, experiential learning supports students'

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[2] Assistant Prof. Dr. Kanokwan Manorom, Faculty of Liberal Arts, Ubon Ratchathani University, Thailand

argumentative explanation of how the Pak Mun Dam issues had been integrated into broader development contexts.

Keywords : Experiential learning, Pak Mun Dam

บทคัดย่อ

บทความนี้อธิบายให้เห็นว่าการเรียนรู้เชิงประสบการณ์มีส่วนสำคัญในการพัฒนาให้นักศึกษาสร้างองค์ความรู้เกี่ยวกับเขื่อนไฟฟ้าพลังน้ำกรณีเขื่อนปากมูล บทความถกเถียงให้เห็นว่าการเรียนรู้เชิงประสบการณ์หรือการเรียนรู้ภาคสนามนำมาสู่การเปลี่ยนแปลงความรู้ของนักศึกษาในหลากหลายแนวทาง ประการแรกการเรียนรู้ภาคสนามสนับสนุนให้นักศึกษาปรับเปลี่ยนจากการมีความรู้และความเข้าใจเกี่ยวกับเขื่อนปากมูลแบบง่ายๆและตื้นเขินสู่การมีความรู้และความเข้าใจที่ซับซ้อนมากขึ้นเกี่ยวกับเขื่อนนี้ ประการที่สอง การศึกษาเรียนรู้ภาคสนามสามารถกระตุ้นให้นักศึกษาสร้างเรื่องเล่าและสร้างความหมายใหม่ๆ เกี่ยวกับเขื่อนปากมูลที่มาจากความทรงจำและการรับรู้ของนักศึกษาที่ได้ยินได้ฟังจากปากของชาวบ้านระหว่างนักศึกษาอยู่ในภาคสนาม ประการสุดท้ายการเรียนรู้เชิงประสบการณ์สนับสนุนให้นักศึกษาได้ตั้งประเด็นการถกเถียงต่างๆเกี่ยวกับเขื่อนปากมูลโดยเชื่อมโยงกับบริบทใหญ่ของการพัฒนาในสังคม

คำสำคัญ การเรียนรู้เชิงประสบการณ์, เขื่อนปากมูล

Introduction

Out-of-classroom teaching on subject of hydropower dam and its impacts on local peoples provides students an experiential learning terrain. Students have a great opportunity to link concepts to the contexts through interaction, immersion and experimentation sequences (Kolb 1984). An out-of-classroom teaching on the subject of hydropower is proven to be a powerful tool to achieve the goal of directly interactive and experiential learning transformation as noted by Kolb (1984: 38) that "learning is the process whereby knowledge is created through the transformation of experience". Additionally, classroom teaching is relatively limited to the learning cycles and complementary to learning (Hirsch and Lloyd 2005: 322). Therefore, bringing students to the villages where this hydropower dam is located would provide a learning space for students to immerse in a situation particularly relevant to subject and allow students to interact with local people through interviews and participation observation.

Unlike most other papers written about student's learning cycles and their behavioral outcomes, this paper describes the process of students' experiential learning; it highlights how students transform, link and interpret the livelihoods of vulnerable groups persistently facing the adverse impacts of the Pak Mun Dam, the most controversial and notorious dam in the history of Thailand's development since its beginning in 1991. This paper will shed light on the concept of experiential learning in social development and sustainability. The field visit is also described, followed by stories of the Pak Mun Dam and how experiential learning transforms knowledge on the dam issues created by students. Finally it discusses a relationship between experiential learning and how knowledge is created.

Research methods

Field data presenting in this paper mainly came from 1) interviews with 20 Ubon Ratchathani University's students majoring in Social Development, Tourism and English language who had participated in field based learning.2) three times class discussions on field based learning with 40 students who enrolled in social development theories in 2009; 3) participatory observation by instructor during field studies in PaK Mun communities and classroom lecture; 4) participatory observation in the Mekong Field School in the Pak Mun communities in a collaboration with the University of Sydney during the years 2007-2010 and 5) literature reviews from journal articles.

Experiential learning in the teaching of social development courses

Social development is a field of study which has been offered in many programs in Thai universities. This field has a wide range of subject areas covering theories and contents of diverse development aspects, one of which is a sustainable development of natural resource management. A literature review shows that teaching sustainable development and public awareness of environmental impacts have been steadily growing (Posch and Steiner 2006; Fien, 1995; Cotton *et al*., 2007; Dawe*et al*; 2005 and Tilbury1995). Since the publication of the World Commission on Environment and Development 'Brundtland' report, the establishment of an international agenda for action on sustainable development (Agenda 21, 1992) and later reinforced at the Johannesburg Summit in 2002 on environmental management and

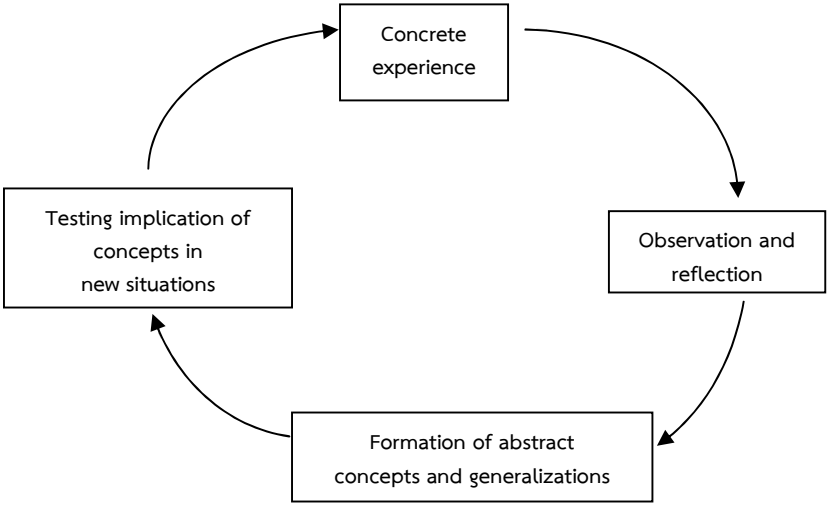
sustainable development, students are increasingly required to visit real cases and link the concepts to actual social lives (Cotton *et al*., 2007).

Environmental education has been promoted in the United Nations Agenda 21 (Bonnett 1999). According to this, education is one crucial way of promoting sustainable development as it can increase people's concern over environment and development issues and to raise ethical awareness, values and attitudes consistent with sustainable development (Tilbur, 1995). In practice, Cotton *et al* (2007) notes that practical examples are a very useful tool to aid students' understanding and involvement in the subject of sustainable development issues via experiential teaching and learning practices.

Kolb's experiential learning theory is developed mostly from the Dewey's ideas on philosophical pragmatism, Lewin's on social psychology and Piaget's on cognitive development (Kolb, 1984). Four key components of this theory include concrete experience, observation and reflection, formation of abstract concepts and generalizations, testing implications of concepts in new situations (Kolb 1984: 21).

Kolb (1984: 21) characterizes key aspects of an experiential learning. He posits that learning is best conceived as a process, not in terms of an outcome. Learning enquiry is adaptively stimulated and modified. Learning is a continuous process grounded in experience. Knowledge is often obtained from and tested out of the experience, and re-learning of the learner. Educators' job is to implant new ideas, dispose of or modify the learner's old idea who has held some certain beliefs or knowledge. Thus a learner should have the ability to learn from or adopt a new experience through integration and substitution. Experiential learning is a resolution of conflicts between dialectically opposed modes of adaptation to the

world. There are two dialectics of learning and adaptation of human– a conflict between observation concrete experience and abstract concepts and a conflict between the observation and action. In the real world learning situation, the learner is often confronted by these dialectics. Kolb (1984) further argues that to achieve new knowledge and skills, learners need to have four different kinds of abilities, namely, concrete experience ability (CE), reflective observation abilities (RO), abstract conceptualization abilities (AC) and active experimentation (AE). His idea is then developed into an experiential learning cycle as shown in Figure 1.



Kolb (1984: 38), describes experiential learning as involving the whole person (intellectual and sensory faculties as well as emotional responses. It is an active use of all previous relevant life and learning experiences. It reflects upon earlier experiences so as

to allow an evolution of thought and hence a deeper understanding. He further argues that process of learning is very key stage of learning. Behavioral outcomes of learning are seen to be fixed and immutable, which are of course a good indicator of how much someone can learn and accumulate knowledge or subject matters. But experiential learning, he posits, "proceeds from a different set of assumptions. Ideas are not fixed and immutable elements of thought but are formed and re-formed through experience" (Kolb, 1984: 26).

Additionally, experiential learning is a holistic process dealing with human adaptation to the social world and physical environment. It involves the integrated functions and interconnectedness of total organism and human process such as thinking, feeling, perceiving and behaving. Learning often involves a transaction between a person and his or her environment, reflecting a relationship between a learner's personal subjectivity and objectivity about the environment. Finally, an experiential learning is a process of creating knowledge. Knowledge creation can occur in learning at different stages of human beings and is a result of the transaction between objective and subjective experiences. Kolb refers to the work of Stephen Pepper on world hypothesis, which states that "all knowledge systems are refinements of common sense based on different assumptions about the nature of knowledge and truth" (1984: 38).

Integration of field trips into the classroom-based courses

Two field based learning activities are carried out in the Pak Mun Dam area: field visits of students majoring in social development at the Faculty of Liberal Arts, Ubon Ratchathani

University, Thailand and the Southeast Asia Field School of the University of Sydney, Australia.

The Social Development program offered at UbonRatchathani University consists four main types of courses. The first group is compulsory courses emphasizing on concepts and theories in social sciences and development. After taking these courses, the students are expected to have basic abilities to explain critical issues in development studies including environmental and sustainable development issues from different development and social aspects. The second group of courses consists of content areas in development including local, regional, and global issues such as environment, development planning, gender studies, human rights, globalization, social dynamics, community, and so on. The third group of courses offers practical activities such as field trips and a three-month summer practicum. The last group focuses on methods such as basic social science research, training and seminar skills.

Overall, about two thirds of the courses in the program involve a combination of field and classroom-based learning activities. An example of such course is the one titled Development Theories. In some years, students who were enrolled in this course were required to have a one day visit to the Pak Mun Dam, 75 kilometers far from the University. After that, in the classroom, bringing together concepts and practice was done through case studies using many materials and methods such as VDOs, newspapers, lectures, internets, role plays and readings. Students were asked to discuss a topic according to a conceptual framework provided by instructors. In the case of the Pak Mun Dam, instructors presented key pieces of information about the Dam including its background information, villagers' livelihoods, emerging conflicts,

protests by the Assembly of the Poor (AoP), responses by the government and the Electricity Generating Authority of Thailand (EGAT) and ongoing attempts at conflict resolution. Prior to visiting the Pak Mun area, students were divided into several groups. Each group had to discuss among its members in terms of what issues about the Pak Mun Dam to be investigated after the instructors gave some guidance on the subject matters and the report to be submitted after the trip.

The University of Sydney 2001 Southeast Asia Field School is a collaborative program between the University of Sydney and five universities located in Laos, Vietnam and Thailand. This program offers a five-week field school during a summer break. Twenty-four Australian students were required to finish various comparative report presentations based on both conceptual frameworks and fieldwork; these presentations included short essays, papers, and group presentations with their Thai, Lao, and Vietnamese counterparts (Hirsch and Lloye, 2005). Ubon Ratchathani University joined this program in 2006, participating every two years. In the case of the Pak Mun visit, both Thai and Australian students were required to stay in Pak Mun villages for 2 nights and expected to do a group presentation.

Critical selection criteria to recruit students from the Ubon Ratchathani University to participate in the program were highly rigorous and competitive. Requirements include English language communication skills, an interest in development and environmental issues, a motivation to be exposed to multicultural interactions, endurance, and commitment to stay in the villages with only basic facilities available. About 10-12 students who majored in social development, history, tourism, and English and communication were recruited to join the field trip. Preparation of these students before joining the Australian and Lao students had

been made ahead including English language communication, contents and technical terms in development and environment issues especially with respect to the Pak Mun Dam ones, adaptation to cross-cultural interaction, and awareness of multicultural interactions.

Pre-trip Instructors' Lecture Notes: Information on the Pak Mun Dam

Pak Mun Dam, the most unique example in Thailand's history of development, was selected as a case study to reflect students' experiential learning process and allow them to create knowledge about the dam. Prior to visiting the villages affected by this Dam, students were given key detailed information about the dam. The following information was briefly given to students.

The dam is considered to the most notorious and controversial hydropower construction since the country had launched its first national development plan in 1961. The history of the Pak Mun Dam in Thailand has been one of tensions between social costs/economic gains, exploitation/development and sustainability. Competition between vocal interest groups and key players has characterized the history of the dam from its completion until today.

The Pak Mun hydroelectric project was initiated by the National Energy Authority (NEA) in 1970, but was transferred to the Electricity Generating Authority of Thailand (EGAT) in 1979 for further study. At the time electricity demand in Northeastern Thailand was estimated to be 670 MW, but only 20% could be reliably generated by local power plants. With load growth forecast at 14% per annum, the Pak Mun Dam was proposed. The project was transferred to the

Electricity Generating Authority ofThailand (EGAT) to continue further study in 1979. It was planned to provide 136 MW and was included in the Power Development Plan of Thailand in November 1987 (EGAT, 2005).

The dam is located approximately 80km downstream from the provincial centre of Ubon Ratchathani and 5.5 kilometers upstream of the confluence of the Mun and the Mekong. The Mun's living aquatic resources are noted for their high biodiversity and contribution to subsistence and trade (Roberts, 1993). Constructed during 1990–94, the dam is 17meters high, 300meters wide, with eight hydraulic gates that can be fully opened to release water.

From the start, the dam was opposed by local people as the blasting of rapids had an immediate impact on their fisheries. Opposition to the dam gave birth to a powerful people's organization that was eventually to force the government to negotiate. It stimulated the emergence of the AoP, which became a highly influential force within four years. The AoP, supported by many NGO workers and academics, claimed that the commissioning of the dam (through closure of the gates) had harmed their livelihoods as it had prevented fish from migrating from the Mekong and had inundated their riverbank gardens. The AoP used a variety of methods to pressurize successive Governments over a decade. These included street demonstrations, media presentations, documentation of their livelihoods, leaflets, CDs, local songs, rituals, workshops, seminars, conferences, campaigns, presentation of petitions, vows and so on (Missingham, 2003).

The AoP adapted its negotiating strategy with successive governments (four in 10 years). The AoP produced marathon demonstrations for livelihood restoration in 1994–95 (157 days) and again in 1997 (99 days) and established a 'protest village' adjacent to the dam between 1999 and 2002. The protestors staged actions

in ways that were calculated to maximize the odds of favourable media coverage. Outcomes were mixed: the 157-day sit-in (during the Chuan I government) and the 99-day rally in Bangkok (during the government of Chavalit Yongchaiyudh) led to negotiations resulting in unprecedented agreements to compensate for damage to fishery-dependent livelihoods (Foran, 2006).

Often this entailed having to mount pressure on the new Government if it failed to keep promises made by the previous administration. For example, in 1997 Chavalit's administration had agreed to provide 2.4 hectare of land (or monetary equivalent at US$8,750 per hectare) for 3,080 Pak Mun fishing households but had not fulfilled this promise before being replaced. When the incoming Chuan II government refused to pay the compensation promised by its predecessor, the AoP made another bold demand: that the government decommission the Dam in order to restore natural flows and fisheries to the river (Missingham, 2003). To maintain the pressure, in March 1999, the AoP launched a new campaign, establishing a protest village occupying several hectares of a public park and river bank immediately adjacent to the Pak Mun Dam site. This continued until the Thaksin Government came to power in 2001.

In early 2002, Thaksin established two committees to look at the Pak Mun issue. The first committee, chaired by Deputy Prime Minister Pongpol, was tasked to address 16 concerns brought to the table by the AoP. The second committee, chaired by Deputy Prime Minister Chawalit, was tasked to look specifically at flow allocations. The two committees worked closely together. Later that year, Thaksin's cabinet accepted the recommendations of the committees to open all eight sluice gates of Pak Mun Dam for four

months, May–August, and for Ubon Ratchathani University (UBU) to conduct a multi-disciplinary impact assessment (Foran, ibid).

The study by UBU academics offered four flow allocation options: 1) closing the sluice gates so as to use the Dam for year-round electricity generation; (2) opening the sluice gates during the rainy season for five months, July - November; (3) opening the sluice gates from April - November, for a total of eight months and (4) opening the sluice gates year-round.

The UBU report recommended the fourth flow allocation option to the government as the first three would not adequately compensate for the impacts of the dam on the ecosystem, notably for loss of fisheries, the destruction of riverbanks, changes in the diversity of aquatic animals and riverside vegetation. This recommendation was based on the consideration that while auxiliary energy could be obtained from other sources in Thailand (or from Lao PDR) the fisheries and livelihoods could not easily be restored or sustained by technical means (UBU, 2005).

According to Foran (2006) the Thaksin government regarded this option as too regressive and institution-bending and therefore maintained what it saw as a compromise position. The January 2003 cabinet resolution was followed by a three-year period in which Pak Mun's opening and closing was regularly contested, but the flow allocation not significantly changed. To better accommodate wet-season upstream fish migrations, AoP requested that the Thaksin government allow Pak Mun's annual four-month opening to begin slightly earlier, in May rather than June. The change was agreed upon and announced in a June 2004 cabinet resolution (Kanokwan, 2005).

In June 12, 2007, the interim government (installed by the military) overrode the decision by the Thaksin government regarding Pak Mun through a resolution to keep the dam gates closed. This

was done with the EGAT's support and on the 'advice' of the Internal Security Operations Command (ISOC), better known for its suppression of leftist groups than for its management of water resources. The ISOC claimed that the closure was supported by 20,000 signatories who wanted the gates closed, ignoring the fact that most of these signatories were not affected by the dam and had simply signed the EGAT-sponsored petition on the understanding that this would result in a reliable electricity supply (Bangkok post June 12, 2007)

The Multi-Stakeholder Committee (MSC) was appointed and tasked with making a decision on how to manage flows in a manner that would restore the ecology for fish production, while the dam was still generating some electricity. The MSC members came from six main groups: (1) affected villagers (from either groups that were pro or against the dam); (2) academics; (3) line agencies at the provincial level; (4) local administrative organizations; (5) the EGAT and 6) NGOs. As the decision had been taken to re-open the gates for four months a year, the MSC was asked to consider four key issues: (1) the opening and closing dates of the gates; (2) the improvement of the quality of life of affected people; (3) the agricultural and irrigation needs of farmers and (4) public relations and communications with stakeholders (Pak Mun Dam Provincial Committee, 2008)

However, in 2010 a new multi-stakeholders committee on the Pak Mun Dam was appointed again to finalize the Pak Mun Dam's resolution as the existing 2007 multi-stakeholders committee could not resolve the conflict. In 2011, the new multi-stakeholders committee recommended that the government permanently opened the sluice gates of the Pak Mun Dam, in order to restore the Mun River's ecosystem. The committee also recommended to

restore people's livelihoods and compensate for the losses suffered by more than 65 dam-affected fishing communities. However this proposal has been deferred by the government in March (Bangkok Post, March 7, 2011).

Experiential learning and knowledge production

Social development students were taken to the village after attending a lecture on the issues of the Pak Mun Dam. Australian students from the University of Sydney had received lectures and given some readings on the dam issues ahead of their visit to the affected villages. The following observations are based on the process of experiential learning in which students from both universities underwent as a result of the visit with affected villagers. Since cultural differences in experiential learning between the Thai and Australian students are not the focus of this paper, all information described in the following section is mainly a linkage between experiential learning and knowledge production.

1. Transformation of a basic to a complex understanding

Relationship between process of experiential leaning and knowledge created by students about the Pak Mun Dam were recorded and conceptualized by instructors through the course of the field visit. Students had transformed a simple and shallow understanding about the dam toward a more complex understanding after the field visit. Given the fact that people's livelihoods are very complex, the DFID sustainable livelihood framework identifies five types of capital assets associated with local livelihoods: financial, physical, natural, social and human (DFID 1999), the field visit of the Pak Mun Dam then provided students

with a chance to immerse themselves in the communities and understand the multifaceted river-based livelihoods.

Both Thai and Australian students were divided into several groups. All students were assigned to write a paper on any issues they were interested to explore. Prior to being assigned to various households in the village, they were asked to assemble at the village head's house to receive his welcoming remark and background information about the village and the Pak Mun Dam. The village head told students broadly about the history of the villages, main livelihoods of villagers who were dependent on fishery resources, impacts of the dam on the Munriver and the villager's livelihoods, the struggles of the AoP, and the government's roles in resolving the conflict.

Some students asked questions about the village and the dam both during and after the presentation by the village head. Examples of those questions were: Why did villagers decide to settle by the Mun river? What were the main sources of the villager's income? Where were the market places for the fish? Who were the people that told villagers about damming the river? What were the impacts of the dam on local people and the river? Who were the actors that helped the poor to fight against the EGAT? And what were the roles of government in solving the conflict? Answering to the above questions was promptly made by the village leader. Then, the students spread throughout the village to conduct their interviews with villagers at their houses.

The instructors had observed the student's learning during the village head's presentation and the students' interviews with the villagers. Topics chosen to be investigated by students included villagers' livelihoods based on river resources, river-related culture, fish trade, the AoP's roles, impacts of the Pak Mun Dam, conflicts

and resolutions, the EGAT's roles, the government's roles, utilization of riverine resources, and media's roles.

During the debriefing and discussion after the field visit, instructors found that students initially explained the Pak Mun Dam's issues based crucially on their simple understanding about the dam. Their presentations were mostly based on the information about the dam from some sources, such as readings, instructors, papers, news and the Internet. Some of them had had fixed and immutable presumptions, beliefs and attitudes about the dam before entering the village.

For example, some students went to the affected village with sympathetic views. They understood that dam had made mostly negative impacts on local people. Those impacts included a loss of local income made from fishery resources. Villagers had lost food security as river resources for household's food had completely gone after the dam. The dam caused bad social division among local people. The AoP was relatively homogenous and well organized. The EGAT (Electricity Generating Authority of Thailand)caused a lot troubles to local communities.

On the other hand, some students visited the affected village with optimistic perspectives. They had thought that the dam was a good example of development that helped to stimulate national growth; otherwise, it would not have been built and it would not have been supported by many local people who were not members of the AoP.

During students' presentations, the instructors added to the students' perspectives a conceptual framework, such as political economy of dam development, and social and biophysical dimensions of river and basin management; this was done in order to set a theoretical scope and stimulate a discussion, feedback and

analysis among the students and between the students and instructors.

Based on an observation, some students came up with some new ideas and interpretation about the dam issues. For example, they started to see that the Pak Mun Dam issues were associated with many different aspects, agencies, and levels; this was not the same as what they thought before. It appears then that they have learnt that the dam issues were very complicated. Some of these complex dam issues were raised in the discussion. For example, they became aware that the livelihoods of local people were changed in many ways after the Pak Mun Dam. The river had more than just physical attributes; it had social aspects such as cultures, politics and economy. There were many actors involved in the dam management. Politics played crucial role in the dam issues. Therefore, the debriefing session has provided a learning process for the students to reshape, re-explain and re-think their observed data. Debriefing also helped the students to use their learning abilities to reform new thoughts and knowledge about the dam issues especially when it comes to the complexity of the hydropower development.

2. Construction of narratives

Vandsemb (1995: 415) elaborates a construction of personal narratives that “personal narrative involves remembering but also reconstructing the past meaning in the light of the present. Stories are subjected to reformulation in the light of new stories. Narrative helps form the experiences. Narrator’s narrative biases, subjectivity, and beliefs influence what narrators want to remember and chose to remember”. He also addresses that social contexts shape personal narratives.

Vandsem's argument was applicable to incidents of experiential learning regarding the Pak Mun Dam visit. Many students, who met some members of the AoP, reported that they had been told mostly about the severe impacts of the dam to the villagers' livelihoods and the sufferings which the villagers had been through. They mostly complained about the loss of their fishery income and the need for them to demand both the EGAT and the Thai government to resolve the problem by opening of the dam's sluice gates permanently.

One student reported, "a villager told me that the Pak Mun Dam must be opened for good in order to restore the Mun river and his income". Another student said that according to the affected villager, the Pak Mun dam was very poorly constructed at the mouth of the river, and thus blocked all the fish migration from the Mekong to the Mun River. The dam destroyed his life. His children had no opportunity to earn any income from river resources, which were once so abundant. Villagers could not adjust themselves to new ways of lives because they have always been fishers."

On the other hand, students interviewing villagers who were not the members of the AoP, were told mostly about the positive sides of the dam, the rehabilitation programs supported by the EGAT and their new way of life after the dam. One student reported that EGAT had tried to improve local livelihoods after the dam. The EGAT has offered villagers some new development projects including roads, schools, fish stocking and so on. They sponsored development projects such as prawn stocking and cloth- and fireworks-making projects. The villagers had to accept the dam as it was already built with a big financial investment. They had to make use of it. It was still useful. They villagers had already adjusted to new livelihoods, depending more on other resources than the Mun river resources as before. Their children would never care

about the dam issues anymore. They would depend more on off-farm income. They went to school and cities and got new jobs there.

Some students who interviewed NGO staff supporting the AoP were told that the Pak Mun Dam was completely a bad project which caused great harm to local livelihoods and the ecological systems of the Mun River. The NGO workers selected some stories to tell the students because this group of people had been working with the AoP and helping them to negotiate with the EGAT and the government. Narratives of NGOs workers are entirely based on their experiences associated with the environmental and moral issues, as well as unfair development for affected peoples and political struggles revolving around the Pak Mun Dam over the years. To them, the only solution to resolve the conflict over the dam was to open the dam's gates permanently. The narratives made by the NGO workers on the dam conflict resolution reflected a concept of deep ecology associated with a self-reliance approach based on recourses endowment extraction and availability which reflects Roe's (1995) idea that personal narratives framed problem in a particular way and in turn suggests particular suggestion.

The EGAT staff members were also chosen to be key informants for Pak Mun Dam field visit. They created counter narratives to those given by affected villagers and NGO workers about the dam during their presentation to the students. Stories told about the dam made by the EGAT staff seriously took into consideration the grievances of the AoP and other information. These included facts and merits of the dam, compensation for relocation and income loss during the dam construction, energy generation and its benefits after its commission, key events such as the occupation of the dam by the AoP, conflict resolution made by

the government, the opening the dam's gates for 4 months a year, impacts of the opening of the sluice gates on pumping, mitigation plans and implementation supported by the EGAT such as prawn and fish stocking in the Mun river, irritation canal expansion, and their opposition to the attempt to open the gates proposed by anti-AoP groups.

During the wrap-up and debriefing session on the Pak Mun visit, many narratives were presented including students' own narratives, narratives made by affected villagers, NGO staff members, villagers supporting the EGAT and the EGAT's own staff members. Based on the instructors' observation, each student gave a personal narrative about the dam which was relatively different from one another. This depended on who each of them had heard from (affected villagers, villagers who supported the EGAT, the EGAT or NGO workers) and on those people's standpoints and perceptions about the dam. Hence, students' own narratives were also influenced by conceptualization by the instructors.

For example, students selected different issues to report. Some presented the impacts of the dam on local livelihoods, roles of the AoP and the EGAT, conflict resolution and gender's roles in the resistance. Some students proposed dam management based on win-win solution which was not based on the request made by the NGOs or affected villagers, that is, the opening of the dam's gates permanently. Some students critiqued the government's roles in terms of its ignorance of people's participation in resource management. All these narratives reflect student's experiential learning in which they tried to organize their own narrative from the words that they heard from the villagers and from the instructor as well as from their personal understanding and experience about the Pak Mun Dam.

Spence (1984) argues that listeners, in this case,the students, have to listen to three elements: the contents, the words that the informant selected and build up the meaning based on the information given by informants. So in the case of experiential learning, all of students' narratives about the Pak Mun Dam were obtained from re-learning and implanted concepts and perspectives provided by the instructors. Students seemed to build up meaning based on what each group of people expressed about the Pak Mun Dam. Some students came up with new perspectives based more on an abstract conceptualization such as sustainable development, livelihoods, modernization, or feminism, which reflect their ability to learn and link concepts to actual contexts. Some students made narratives about the dam based on their perception, personal feelings, attitudes or prejudice such as sympathy or passion about affected people who had long been suffering from the Pak Mun Dam.

3. Integration into broader development contexts

Merrey et al., (cited in http://www.sarpn.org/documents/d0000575/) situate their discussion in a placement of local livelihoods related water management in the broader context of regional water governance. They state that to understand livelihoods one must "take a holistic approach especially a reduction of poverty, encouragement of better livelihoods and balanced economic growth through effective democratic development and management of water and other natural resources in an integrated multi-level framework that is as equitable, sustainable and transparent as possible, and conserves vital ecosystems". Ratner (2003: 59-76) gives an example of integration of local to regional perspectives of a hydropower dam in the Mekong

region. He points out that analyzing a loss of local livelihoods resulting from hydropower dam must take a regional views on how hydropower dam promotion have been configured by multi-stakeholders at different levels.

The field visit to Pak Mun Dam has provided the students basically with concrete experiences as students had direct interaction with different key informants in the real setting. In grasping this experience, not only did the students see what affected people had been doing for their livelihoods, but they also heard words that the villagers expressing about the Pak Mun Dam and its impacts on their lives. During the interviews, the students learned to use their learning abilities to observe and perceive tangible information. Their knowledge on the dam issues also relied on theirown perceptions of the dam. Some students reflected that physical, socio economic and political contexts revolving around the dam made them understand the dam thoroughly.

During the debriefing, instructors broadened student's perspectives by giving them a lecture on the contexts of Pak Mun Dam development in order to stimulate students' analysis and their ability to link the dam project and the contexts of the Northeast regional development[3] and Thailand.

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[3] The Northeast Region of Thailand (called Isan) Isan's soil quality is among the poorest in Thailand, characterized by low fertility, sandy composition and poor water retention. Large swaths of the region contain rock salt deposits and saline groundwater, resulting in high levels of natural soil salinity. The high salinity level depletes the annual crop yields. It is estimated that more than 30 % of Isan's arable land is affected by salinity, and the problem appears to be escalating. The condition of the soil makes large areas unsuitable for cultivation (Kanokwan and Hall 2008).

These contexts of Isan enable students to place issues of their interest within some contexts of the Pak Mun dam and allow them to link field data with broader contexts of the country's development. For example, some students presented that national economic growth warranted energy demands, and thus hydropower dams were constructed in the Northeast region. Poverty in the Northeast region could be eradicated through hydropower dams. Modernization was promoted through dam building.

Discussion

In the paper, the concept of experiential learning and a detailed field visit of the Pak Mun Dam as a sample case have been elaborated on. Experiential learning is acknowledged as a useful and critical tool to support students to grasp, transform concrete knowledge, scale up and generalize data based on a particular conceptual framework. Relationships between the process of experiential learning and production of knowledge created by the

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The process of nation-building and 'Thaification' continued throughout the 20th century, with the Lao language being effectively suppressed in all official quarters in Isan. Since the rule of the last absolute monarch (Rama VII – 1925-1935), both military and democratic governments in Bangkok have effectively ensured that Isan's social and economic development is controlled by central government. Concrete example of development projects provided in Isanis a number of hydropower dams had been built dating back to 1971 when the Lam Dom Noi (Sirinthorn dam) was completed. Currently, Isan has 17 hydropower dams with the Pak Mun Dam, completed in 1998, being the latest one. Despite the large number of dams, demand for electricity exceeds supply and Isan imports power from the national grid and from neighboring countries, particularly Laos (Kanokwan and Hall 2008).

students about the dam were described. These include: the transformation of simplistic stereotypes into a deep understanding and the construction of narratives and their integration to broader development contexts.

Inspired by Dewey (1938/1963) and Kolb (1984) that pedagogies of adult education should be done through re-grounding knowledge in contextualized and diverse life experiences, field trips taking place in the community settings are believed to be a classic example of out-of-class activities in environmental and development education. Experiential learning through field trips enables students to hear people's voices, see the place where they live, and imagine the storylines of the Pak Mun Dam. With this direct experience, students are allowed to think, rethink, transform, and retransform their knowledge about the dam overtime.

Learning about the Pak Mun Dam is a very complex matter both in terms of student's own experiential learning and the Pak Mun Dam in itself is a complicated issue. Many students differed in their simple understanding of the dam issues prior to having the visit. Many of them visited the affected village from the dam with a polarized belief about it; they either had a positive or negative view about the dam. After having direct interaction and interviews with different agents including affected villagers, villagers supporting the EGAT, NGOs and EGAT staff members, students' perception and knowledge about the dam were relatively changed.

Hence, the instructors' lecture about such conceptual frameworks as sustainable development and environmentalism provides abstract views and a foundation for the students in their further analysis. The students had learnt that Pak Mun Dam issues were highly diversified and socially and politically constructed. Likewise, Kolb and Klob (2005, p.195), development of learning is complex "as it is multilinear based on individual styles and life part-

development of CE increases affective complexity, of RO increases perceptual complexity and of AC increases symbolic complexity and of AE increases behavioral complexity."

For example, real experience gained from a field visit provides an opportunity for students to realize that the Pak Mun Dam involves complicated issues. Interaction with many groups of people in the real settings aids some students to learn that a simplistic conclusion and dichotomist interpretation of the Pak Mun Dam, which they had in mind before coming into contact with these people, are not enough to capture multifaceted layers of the Pak Mun Dam stories.

According to Kolb (1984), adults construct knowledge differently depending crucially on their background experiences and learning styles. Therefore, in writing a portfolio or presenting their knowledge about the dam, some students could only reiterate what they heard from the people while some other students could be place their data within complex abstract categories. Some students present their knowledge about the dam with reference to their personal prejudice about the dam, be it similar either to that of the NGOs or to that of the EGAT staff members. Michelson (1996, p. 190) states, "experience itself is, at least in part, knowledge-driven. Knowledge is not in isolation from experience". Similarly, Haraway (1991) and Harding (1991) highlight that knowledge is shaped by social norms and discourses, and it is socially constructed. It can be distorted through disinterested and disengaged reasoning.

In terms of narrative construction, Vandsemb (1995) points out that personal narrative is considered as autobiographical specific life stories of individual based on the narrator's experiences associated with times, events, places, peoples and social contexts. If we accept that a narrative is one form of knowledge, then

knowledge is socially constructed and partially true. A personal narrative has a variety of individual experiences. Barnes (2000) argues that all knowledge is partially true, including knowledge about oneself. Blumenfeld-Jones (1995) assert that a narrative is one of the many knowledge forms that is partially representative of the truth. It is formulated through social interaction. Thus, during the field visit, it was found many narratives about the Pak Mun Dam were made by many different groups of people associated directly with the dam. Some were considered to be counter narratives to others based on their background experiences, perception, bias and knowledge about the dam.

First, they were narratives by different informants including affected villagers, NGOs staffs, the EGAT and villagers supporting the EGAT. Stories that students were told by these people were voices of agents in terms of their perceptions and facts about the Pak Mun Dam. These narratives inform those peoples' own perception, standpoint and actions towards the dam. For example, the stories given by affected villagers were mainly about the negative sides of the dam.

Second, some narratives were given by students who re-told the Pak Mun stories in the debriefing session after the field trip. Students learned to transform narratives told by informants using analytical skills directed by instructors in order to make selective field data more scientific and theoretically grounded. According to Grant and Hall (1991) and Gudmunsdottir(1991), narratives reported by the *knowers*, in this case, never represent the whole story, rather it has been transformed. Similarly, Kenyon and Randall (1997) point out that transformative learning regards people's narratives as a process of restoring, which in not necessarily coherent. To link it with Kolb's experiential learning, transformative learning through narratives stimulates student's further conversation and thinking.

As Kolb (1984: 41) points out that roles of subjective experience in learning process are very critical. He states, “the process whereby knowledge is created through the transformation of experience. Knowledge results from combination grasping and transforming experience.”

Kolb and Kolb (2005) explain that experiential learning is a process of construction of knowledge through a recursive process which involves experiencing, reflecting, thinking and acting. Four of these are responsive to a learning situation and what is being learnt. In the learning situation regarding the Pak Mun case ,the students see, think and reflect their learning by producing some sort of knowledge about the dam such as putting the particular issues within the bigger contexts of national development. This reflects students’ experiential learning process.

Conclusion

This article analyzes a linkage between experiential learning by students from the University of Sydney and UbonRatchathani University and knowledge production through a field-study visit made to the Pak Mun Dam. The article shows that the process of students’ experiential learning involved students’ transformation, linkage and interpretation about what they had learned, seen and felt in the villages in terms of their river-based livelihoods affected by the Pak Mun Dam. Hence, experiential learning has reflected a construction of students’ own narratives about the Pak MunDam throughtheir prior knowledge, perception, personal feelings, attitudes or even prejudice. Lastly, the students’ experiential learning shows how they somehow integrated the Pak Mun Dam issues into broader development contexts.

References

Bangkok Post, 20 July 2007.

Barnes, J. Trevor J. (2001) Retheorizing Economic Geography: From the Quantitative Revolution to the “Cultural Turn”. **Annals of the Association of American Geographers**, 91(3),pp. 546–565.

Bonnett, M. (1999) Education for Sustainable Development: a coherent philosophy for environmental education? **Cambridge Journal of Education**. 29 (3), pp.313-324.

Blumenfeld-Jones, D. (1995) Fidelity as a criterion for practicing and evaluating narrative inquiry. **International Journal of Qualitative Studies in Education**, 8(1), pp. 25 – 35.

Cotton D, R E. et al., (2007) Sustainable development, higher educationandpedagogy: a study of lecturers' beliefs and attitudes.**EnvironmentalEducation Research**, 13(5), pp. 579-597.

Dawe, G; Jucker, Rolf and Matin Stephen. (2005) Sustainable Development in Higher Education. Current Practice and Future Development. **A Report for the higher education Academy**. Cited in http://scholar.google.com.au/scholar?hl=en&q=teaching+sustainable+development+Dawe+et+al%3B+2005%3B+&btnG=Search&as_sdt=0%2C5&as_ylo=&as_vis=0

Dewey, J. (1938/1963) **Experience and Education**. New York: Collier.

DFID.(1999) **Sustainable Livelihoods Guidance sheet 1-4**. Department of International Development: London.

EGAT.(2005) **Pak Mun Dam**. Public Relations Division, Nonthburi. Unpublished.

Fien, J. (1995) Teaching for a Sustainable World: the Environmental and Development Education Project for Teacher Education. **Environmental Education Research**, 1(1), pp. 21-33.

Foran, T. (2006) **Rivers of Contention: Pak Mun Dam, Electricity Planning, and State–Society Relations in Thailand, 1932–2004**. PhD Thesis, Division of Geography, Department of Geosciences, University of Sydney. http://hdl.handle.net/2123/1984.

Grant, E.G and Hall, Susan. (1991) On what is known and seen. **Journal of Curriculum studies**, 23(5), pp. 423-428.

Gudmunsdottir, S. (1991) Story maker, story teller: Narrative Structure in the Curriculum. **Journal of Curriculum studies**, 23 (30), pp. 207: 218.

Haraway, D. (1991) Situated knowledges: In **Simians, cyborgs, and women.The reinvention of nature**. New York: Routledge.

Harding, S. (1991) **Whose science? Whose knowledge? Thinking from women'slives**. Ithaca, New York: Cornell University Press.

Hirsch, P and Lloyd Kate, (2005) Real and Visual Experiential Learning on the Mekong: Field Schools, E-Sims and Cultural Change. **Journal ofGeography in Higher Education**. 29(3), pp. 323-337.

Kanokwan, Manorom. (2005) Politics of Power and Knowledge: A Case of Government Policy Related to the Pak Mun Dam. **Journal ofLiberal Arts** (Ubon Ratchathani University) 1(2), pp. 45-64.

Kanokwan, Manorom and Hall, David. (2008) **Water Poverty in Northeast Thailand**. Stockholm Environment Institute. Research Project.

Kenyon, G, M. and Randall, W, L. (1997) **Restorying of lives: Personal growth through Autobiographical Reflection**. Westport, Conn: Praeger.

Kolb A. David. (1984) **Experiential Learning: experience as the source of learning and development**. Engle Wood Cliffs and NJ: Prentice Hal.

Kolb, Y. Alice and Kolb, A. David. (2005) Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education. **Academy of Management Learning & Education**, 4(2),pp. 193-212.

Merrey , D.J. et al., **Integrating 'livelihoods' into Integrated Water Resources Management: Taking the Integration Paradigm to Its Logical Next Step for Developing Countries**, In http://www.sarpn.org/documents/d0000575/)

Michelson, E. (1996) Beyond Galileo's Telescope: Situated Knowledge and the Assessment of Experiential Learning. **Adult Education Quarterly**, 46 (4), pp. 185-196.

Missingham, B. (2003) **The Assembly of the Poor in Thailand. From Local Struggles to National Social Movement**, Chiang Mai: Silkworm Books.

Pak Mun Dam Provincial Committee. (2008) **Meeting Minutes on Flow Allocation**, 15, October 2008, unpublished.

Posch, A and Steiner, G. (2006). Integrating Research andTeaching onInnovationfor Sustainable Development. **International Journal for Sustainability in Higher Education**. 7(3), pp. 267-292.

Ratner, B.D. (2003) The Politics of Regional Governance in the Mekong River Basin. **Global Change**. 15(1), pp. 59-76

Roe E. (1991) Development Narratives or making the best of developmentblueprint. **World development**, 19 (4), pp. 287-300.

Roberts, T. (1993) 'Just another dammed river? **Negative Impacts of Pak Mun Dam on Fishes of the Mekong Basin**'. Natural History Bulletin of the Siam Society, 41, pp.105-13

Spence, P. (1984) **Narrative truth and historical truth**. New York: W.W. Norton.

Tilbury, D. (1995) Environmental Education for Sustainability: defining the newfocus of environmental education in the1990s. **Environmental Education Research**, 1(2), pp. 195-212.

UbonRatchathani University.(2003) **Project to Study Approaches to Restoration of the Ecology, Livelihood, and Communities Receiving Impacts from Construction of Pak Mun Dam**. Ubon Ratchathani University.

Vandsemb, B. H. (1995) **The Place of Narrative in the Study of Third World Migration: The Case of Spontaneous Rural Migration inSri Lanka**. The Professional Geographer. 47(4), pp. 411-425.

www.cosis.net/abstracts/EGU06/06026/EGU06-J-06026.pdf, access 20 March 2012.

http://www.aciar.gov.au/project/LWR/1997/150,access 3 February 2012.