European Journal of Education Studies
ISSN: 2501 - 1111
ISSN-L: 2501 - 1111
Available on-line at: www.oapub.org/edu

doi: 10.5281/zenodo.1127790 Volume 3 | Issue 12 | 2017

TRANSFORMING EDUCATION IN CENTRAL VIETNAM BY INTEGRATED CURRICULUM APPROACH: FROM INITIATIVES TO SUSTAINABILITY

Thi Kinh Kieu[i],
Van Minh Vo
The University of Danang,
University of Education, Vietnam

Abstract:
Global changes pose an urgent demand to education that produces citizens with relevant competences to deal with a complex world. By creating connection among different disciplines and connection between lessons and real life, integrated curriculum has been pondered to be an appropriate approach to transform education. In Vietnam, though integrated education concept had been introduced since early 2000s and promoted by the government recently, it remains a new concept to many school teachers. 76% of interviewed teachers claimed that integrated curriculum was indispensable trend of education but only 26% of them practiced IC. Based on the study results, several solutions were proposed to motivate integrated education in Vietnam and those can also be applied in other developing countries

Keywords: integrated curriculum, teachers, reform, collaboration, Vietnam

1. Background

It is widely recognized that humans learn through creating connections and all the things in reality depend upon each other. Educators thus must teach through connections, not fragmentations, of knowledge (Burns & Sattes, 1995) as life is not divided different subjects (James Moi, 1992). Therefore, since the early of the 20th century, integrated curriculum has been considered as the most effective approach to reform the conventional teaching and learning in many countries, including Asian

[i] Correspondence: email kieukinh@gmail.com

countries where Confucian system had been predominantly influenced for a long time. Singapore and Japan are among the leading countries that promote integrated approach to improve their education system to provide the citizens to meet the demand of globalization (Reza, 2008; Tan, 2008).

Integrated education is widely accepted by the educators, educational policy makers and scholars yet to apply it remains facing innumerous challenges, particularly in developing countries where education system is still lag behind. This paper will firstly present the difficulties in implementation of integrated education through investigation in Central Vietnam. Then, the paper will draw some lessons-learned by examining two initiatives of integrated curriculum (IC) and interviewing teachers before it proposes solutions to mainstream and sustain IC that can be referenced in similar developing countries.

1.1. Integrated curriculum

Integrate curriculum experienced a lengthy process to become vibrant and relevant (Drake & Burns, 2004). As reviewed by Burns & Sattes (1995), the first efforts of curriculum integration 1920s when there was a progressive education movement that advocated integration ton construct students' relevant content via themes. There are similar terms used to describe integrated curriculum among researchers. According to Dowden (2007), "*some alternative terminologies associated with subject integration has been used, including integrated curriculum, interdisciplinary curriculum, multidisciplinary curriculum, fused curricula, transdisciplinary curriculum, cross-disciplinary curriculum and integrative curriculum*" (p55).

"Integrated curriculum is a holistic approach to learning that stresses connections and relationships rather than delineations within and across the academic disciplines and between academic and vocational programs" (Burns & Sattes, 1995, p3). There are three levels majorly indicating for IC: multidisciplinary, interdisciplinary, and transdisciplinary. The essential difference between the three approaches was the perceived degree of separation that existed between subject areas (Drake & Burns, 2004). However, the boundary of such approaches in implementation sometimes is dissolved. The literature review indicates that among the three approaches, there is an increase in researches of interdisciplinary curriculum. Since the context of rapid and complex changes requires each individual must enhance their interdisciplinary knowledge and skills to cope with such changes. Interdisciplinary approach can facilitates the possibility of more creative teaching that "*intended to encourage students to make connections between what they learn at school and in their everyday lives, and to provide them with opportunities to develop an*

understanding of various life contexts and envision possible actions in specific situations" (Drake & Burns, 2004, p7).

IC is constructed based on students' needs and interests thus contrary to traditional discipline-based curriculum that focuses on content objectives, IC provides students generic knowledge, skills, and habits of mind (Burns & Sattes, 1995). Students can see the connection between their life and the topics under study and also experience personal growth and a sense of awe and wonder for people, events, and nature. In a research of Erlandson & McVittie. (2001), students reported that they were being motivated and they had constructed new meanings about themselves and their world. Not only students but teachers also benefits from IC. IC allows teachers to reduce knowledge fragmentation and avoid duplication of both skills and content. Teachers who have designed integrated curriculum and worked on an interdisciplinary team also report personal feelings of increased efficacy, empowerment, and enthusiasm for teaching; learning from their colleagues; increased creativity; and professional renewal (Drake & Burns, 2004). Indeed, IC encourages teachers to use the interactive pedagogies and plan interesting teaching strategies and assessment.

Despite the mention above advantages, implementation of IC faces various difficulties. Most of researches imply that socio-ideological issues and organizational problems in particular are the main obstacles to using interdisciplinary/integrated teaching (Burns & Sattes, 1995; Drake & Burns, 2004; Lenoir & Hasni, 2016). There remains a huge gap between theory and reality in implementation of IC. In fact, teachers at times are not supported and valued by their institutions or schools to conduct integrated teaching and many of them find difficult to cooperate with their colleagues to plan for an integrated curriculum (Bekerman & Nir, 2006; Drake & Burns, 2004; Lenoir & Hasni, 2016). As suggested by Burns & Sattes (1995), there are four conditions for curriculum integration: Collaborative School Culture, Compatible Core Beliefs, Supports for Change and Facilitating Structures. In order to answer the question how to start an IC at a certain school, Burns & Sattes (1995) draw a process with the following steps: (1). Recruit the core team that includes volunteering teachers who are willing to change and spend their time and energy to design an IC; (2). To facilitate this team with relevant assistances such as reducing the amount of work and providing autonomy that enable and empower the members to construct a IC; (3). To apply trial IC at small scale and adjust and; (4). Mainstream the new curriculum across school. This process has been proposed based on the successful IC of many schools of US and Canada.

Theory of integrated education is relatively advanced in many developed countries yet the examples of successful implementation of IC remains limited in

developing countries where education systems are constrained by poverty. The question is without development of modern facilities, can such education of developing countries keep pace with developed countries? This paper will partly answer such questions via two examples of low cost approach to promote integrated education in Vietnam that may apply in other countries.

1.2. Practices of integrated education in Vietnam

Education is a prominent focus in the society regardless of the long period of colonization, wars and difficulties during years of a closed economy. The structure of the education system of Vietnam is similar to those in other countries (K-12). School education lasts for 12 years, and the primary level (the first five years) is free and compulsory. After graduating from lower secondary school, students can enroll either in upper secondary schools or in vocational training schools which provide them with job training courses consistent with general knowledge courses. Higher education institutions include universities, colleges and academic research institutes that provide different types of education and training lasting 2-6 years depending on specialization.

Education system in Vietnam has tended to lag behind comparing to other countries in the region according to quality of education (curriculum remains encouraging memorization rather than critical thinking and creative problem-solving) (Nguyen, 2007) and higher education transformation (weak research capabilities of Vietnamese academic institutions) (Hien, 2010). The educational is greatly influenced of Confucian system resulting in the lack of participatory approach in teaching.

Perceiving these strong obstacles, the Vietnamese government has launched many programs to reform the national curricula of which integrated education is determined as the appropriate approach. It is worth noting that integrated education commenced to develop in Vietnam in the early 21st century under the international projects to mainstream environmental education across the countries. Recently Vietnam has been recognized as one of the world's most vulnerable countries to the effects of climate change (World Bank, 2010), hence climate change-linked natural disasters have become an urgent concern to be embedded into the curricula. It is worth noting that the international donors and NGOs (UNESCO, VVOB, JICA, WWF, GIZ, Oxford, etc.) play crucial role in training teachers nationwide to apply interactive pedagogies in their classes.

The Ministry of Education and Training (MOET) has collaborated with some teacher education institutions (TEIs) to organize various conferences and symposiums to propose a master plan of education transformation in the country since 2012. Such efforts led to a draft of new national curriculum which emphasizes the need of

interdisciplinary approach, especially at elementary and secondary level in 2015. In accordance with this policy, a book series written by the leading experts of Hanoi National University of Education, one of the largest TEIs, has provided a number of necessary theoretical bases for competency-oriented teaching and also introduce integrated topics with different levels of integration. During 2014 and 2015, MOET organized a national competition of integrated education for school teachers to collect the initiatives to mainstream IC. In July 2017, MOET approved new general education curriculum across Vietnam with several highlights: 1. At middle school level: Geography and History will be integrated as a Social science subject; Physics, Chemistry and Biology will be Natural science subject; 2. The significant increase of experiential learning (MOET, 2017).

Overall, the educational policy makers in Vietnam are attempting to take the first steps to promote IC. Yet, the concepts of IC is merely introduced to school teachers and recently has been taught at some TEIs (Cuong, Tsuji, Ashardianto, & Komiyama, 2016). There is a lack of long term training program which enables teachers to have a through grasp of integrated education rather than just a competition or training workshops. Currently, there is also a lack of academic research related to such topic. Hence, IC remains the new research area to be explored in Vietnam.

2. Methodology/research design

The study was conducted from August 2015 to September 2017 in Quang Nam Province and Danang City, Central Vietnam. In this study, the authors apply both qualitative and quantitative methods to collect the data. The research design is illustrated in Figure 1.

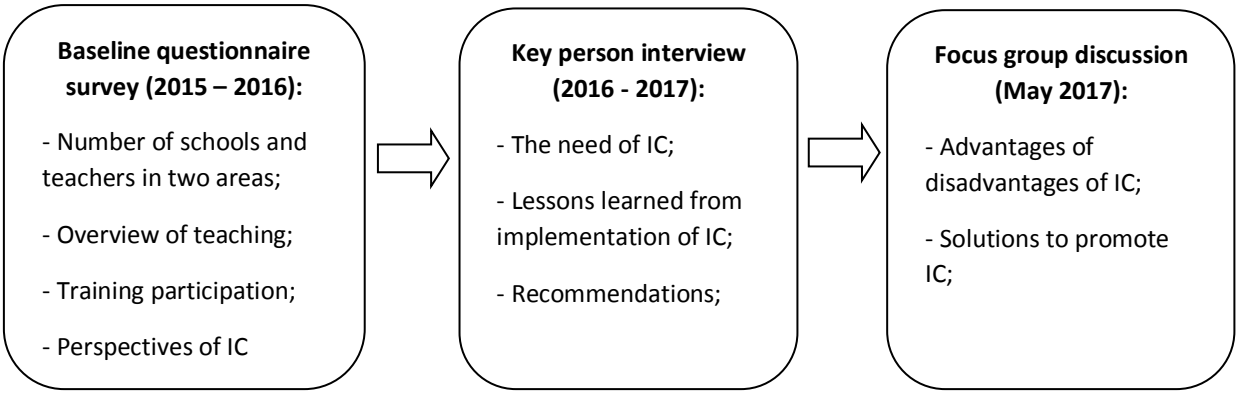

Figure 1: Research design

Through the baseline investigation, the authors learned that biological teachers at middle and high schools have participated many training workshops related to integrated education than others such as integrating environmental education, climate change and gender education into biology subject. Therefore, 101 were interviewed by a questionnaire using both open-ended and multi choices questions. Subsequently, we conducted 10 key person interviews with teachers who had showed their efforts in IC implementation during the survey. Finally, we organized a focus group that gathered seven teachers to discuss how to promote IC at their schools. The quantitative data were later input into Excel spreadsheets to provide a clear statistical information of the overview of IC. The emerge codes rising from interviews and discussion were analyzed to identify the main themes and problems related to obstacles and driving forces for IC promotion.

3. Results

3.1. Teachers' implementation of integrated education

The baseline investigation show that in average, teachers spend 17 to 20 periods (45 minutes/period) per week for teaching and two hours per month for faculty meeting related to their teaching subject. Teachers revealed that in order to improve their teaching, sometimes teachers were invited to participate training activities organized mainly under projects of MOET or outside donors. The training topics are presented in Figure 2.

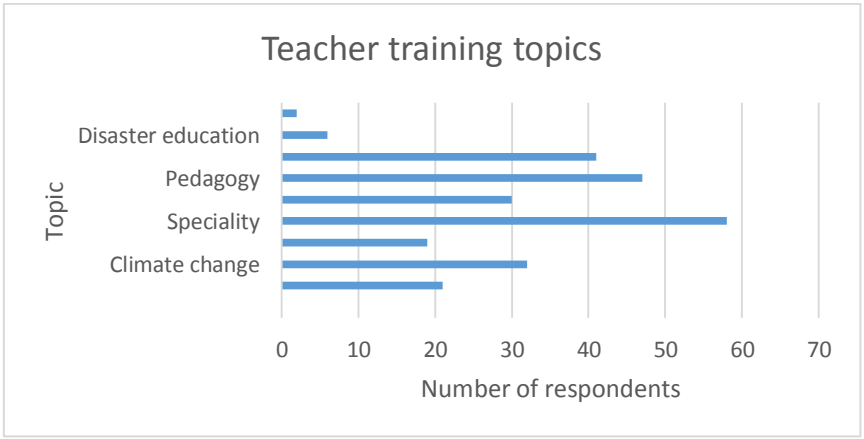

Figure 2: Teacher participation in training workshops
(one interviewer can choose more than one topic)

Three dominant topics of teacher training are specialty (58 respondents), pedagogy (47 respondents) and integrated education (41 respondents). Yet, results of questionnaire

survey and interviews indicates that most of the training workshops are not effective because of: (i) unfixed training time; (ii) boring lectures during training; (iii) lack of master plan in training (only several days last during 1 – 3 years) and; (iv) frequent change of trainees.

> *"I think the trainers do not have teaching experiences so they just lectured the theory which cannot be applied at schools. Because lack of a master planning, the school teachers are nominated to participate the training based on their availability not their speciality and interests.* (I3, female)

Although more than 40% of survey interviewees had joined training of IC and more than 76% of them considered IC as the indispensable trend of education but only 26% of them claimed that they understood integrated education (Figure 3). Notably, 56% of those keep learning IC by themselves (mainly via internet) and they said that is the best way to improve their competence since the training is not much helpful and applicable and many of their colleagues do not care about IC.

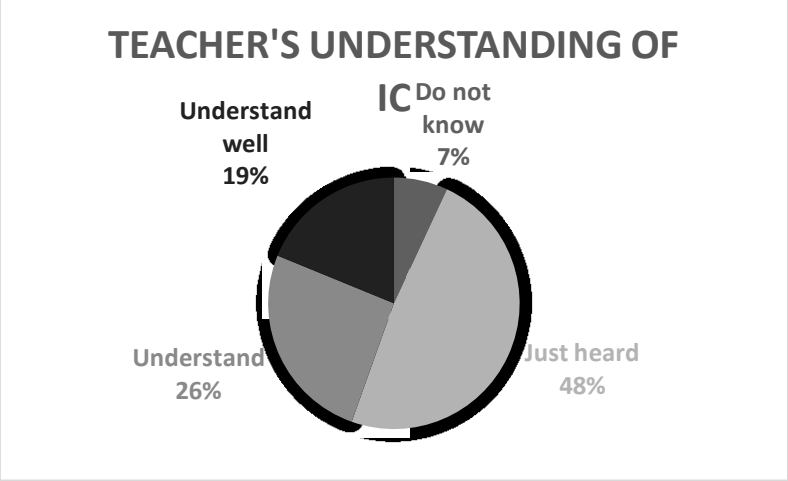

Figure 3: Teacher's understanding of IC

The key person interview results imply that teachers currently are integrating other topics into their teaching subject such as environmental problems, climate change, gender education and energy saving. When explained about the holistic approach of an IC, all of 10 interviewees agree that at least next five years, it will be impossible to design such curriculum even the MOET are launching new curriculum to merge some separate subjects together. The focus group and interviews have identified the crucial factors constraining IC implementation at schools as following:

Internal factor	External factors
- Lack of enthusiasm of teachers to change - Limited understanding of other subjects - Familiar with conventional (top-down) teaching - Lack of collaborative effort	- MOET policy not comprehensively support IC - School leaders do not pay attention - Overwork (teachers do not have time and energy to upgrade their teaching) - Low salary - Lack of priority for IC - Poor performance of students (students get used to passive learning) - Lack of school autonomy

Despite such difficulties, teachers who are trying to implement integrated education in their classes revealed the motivated reasons, including students' interests, encouragement of schools (some of them were awarded by MOET) and, opportunities to enhance their teaching competence.

3.2. Initiatives in practicing integrated education in Central Vietnam

Among the ten interviewees, the research team identified two initiatives that can be typical examples to promote IC at middle schools. The first case is Nguyen Van Linh School where sometimes, students experienced outdoor classes to discover climate change and disasters related phenomena. Teacher arranged experiments of greenhouse effect under the direct sun lights or she organized school tours that enable students to determine the dangerous sites when disasters (typhoon and flood) occur. After the tours, students created several school hazard maps then share with their school mates and families. What has motivated her is presented in the following quote:

> *"I had participated in a training project co-organized by ISET (an international NGO) and Department of Education and Training (DOET) so I learned how to teach climate change and disaster effectively. During the training, I met two university lecturers who introduced me their undergraduate students to assist me in designing experiments and extra-curricular activities (games and school tours). This is a terrific help because I saved much time and energy since most of my colleagues were too busy to help me. Other factors that motivated me are small grants I had received from the project, the direction of DOET which were sent to the school principal to allow me take students around (it is unusual to let your students go around during your teaching in Vietnam) and my 30-year teaching experiences"* (I5, female)

The second case is Tay Son School where a group of two young teachers has been formed to lead a student scientific club. The scientific club included ten students who were interested in biology and physics. After school classes, they were led by the two teachers to go to the forest and learn the nature through real observation, sampling leaves and taking pictures of fauna and flora. Students also take water samples and analyze in school laboratory to learn about water pollution in the city. According to the interviewed teacher, such activities significantly empower students with a high order thinking skills and inspire them to solve problems in their city. What has motivated those two teachers is presented in the following quote:

> *"After being recruited one year, the school principal arranged unofficial meeting with me and my colleague to express his ambition to build our school as a hub of young scientists. I was very eager to start firstly a scientific club that brought studious students. My colleague and I applied experiential learning to construct their research capacity. At beginning, some parents worried because they were afraid that their kids lost learning concentration and just played games yet we tried to convince them our vision and asked them to encourage students more. So far, it had been three years and students' interest motivates me to keep things going on though we may face various challenges"* (I4, male)

It can be seen from the two cases that teachers' enthusiasm and teaching competences are the crucial factors to promote integrated approach at schools. In order to conduct integrated teaching, teachers need the school leader's support to motivate them. Such conditions are similar as reviewed by other researchers (Burns & Sattes, 1995; Drake & Burns, 2004; Lenoir & Hasni, 2016). Additionally, the first case shows the important connection between school and university while the second implies the collaboration of two young teachers to sustain the integrated teaching. Those two initiatives prove that expenditure is not the prerequisite to start IC but human resources.

4. Recommendations

Based on the study results, some solutions can be proposed to commence integrated education at schools:

1. Enhance teachers' competences in interdisciplinary teaching, particularly apply interactive pedagogies
2. Form a working group for IC that gathers enthusiastic and well-experienced teachers

3. Institutionalize the integrated education at schools, including introducing a master plan for a new IC, supporting the working group and organizing regular meetings or workshops across schools to update the initiatives from the working group and mainstream integrated education gradually.

The practice of IC at Nguyen Van Linh School indicates that the collaboration between TEIs and schools can promote and sustain integrated education. Obviously, a teacher cannot devote time and energy to sustain the outdoor activities for students. Thus, for one hand, collaborating with TEIs will enable teacher to apply interactive teaching more often. On the other hand, TEIs can benefit from this collaboration by learning teacher's experiences and researching. In model of magnet school, Blank (1983) suggested a larger network not only between university and school but also among university, school, parents, business and non-profit organizations. It is expected that the university and school partnerships will result in more fruitful collaboration with local community and NGOs to create a learning and researching network. This approach is especially suitable for developing countries where financial issues are the main constraint.

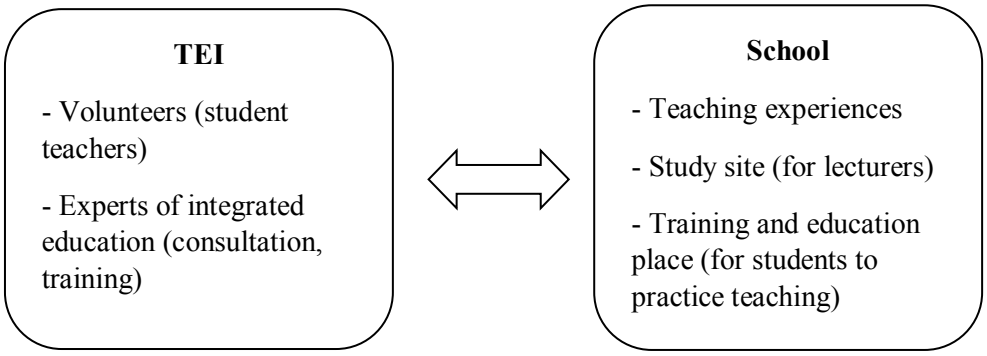

Figure 4: Benefits of TEI – school partnership

5. Conclusion

Education reform is a pressing issue to meet the need of globalization. Integrated and interdisciplinary approach have been developed and applied at many schools worldwide. Yet the implementation of IC faces innumerous challenges of which socio-ideological issues and organizational problems are the main obstacles. Like other countries, the Vietnamese government has made efforts to popularize integrated approach nationwide by training workshops, symposiums, meetings, book publication and latest is the launch of a new curriculum.

However, the study results highlight that integrated education remains a new concept to many teachers and is poorly applied at schools. Though most of interviewees are aware of the demand of IC, they do not think they will be able to practice such approach because of both internal and external factors. Among small number of teachers who are trying to apply integrated approach in their teaching, there are two exemplars which teachers have creatively connect their lessons with real life contexts to teach students. The sustainability of those experiential learning models recommends that teachers' enthusiasm and collaboration within school and outside school are critical to mainstream IC. Based on the study results, three steps to infuse IC at a school is proposed in accordance with the promotion of school collaboration, particularly with TEI as a win-win model.

About the authors

Thi Kinh Kieu is a lecturer of Faculty of Biology and Environment, University of Education – The University of Danang. She obtained her PhD at Kyoto University, Japan. Her research focuses on education for sustainable development in higher education. Thi Kinh Kieu is the corresponding author and can be contacted at: kieukinh@gmail.com

Van Minh Vo is an Associate Professor of University of Education – The University of Danang. His research interests includes environmental education, educational management and integrated education

Acknowledgements

We thank the Vietnamese Ministry of Education and Training for the two-year generous grant that made it possible for the authors to conduct survey in Central Vietnam.

Reference

1. Bekerman, Z., & Nir, A. (2006). Opportunities and Challenges of Integrated Education in Conflict-Ridden Societies: The Case of Palestinian-Jewish Schools in Israel. *Childhood Education*, *82*(6), 327–333. http://doi.org/10.1080/00094056.2006.10522857
2. Blank, R. M. (1983). Survey of Magnet Schools. Analyzing A Model for Quality Integrated Education. Final Report of a National Study., 1–423.
3. Burns, R. C., & Sattes, B. D. (1995). *Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools [and] Facilitator's Guide.*

4. Cuong, T. Q., Tsuji, K., Ashardianto, S., & Komiyama, T. (2016). Teacher Education Integrated Curriculum Mobility : Perspectives for Asean Countries Teacher Education Integrated Curriculum Mobility : Perspectives for Asean Countries. *VNU Journal of Science: Education Research*, *32*(4), 65–76.
5. Dowden, T. (2007). Relevant, challenging, integrative and exploratory curriculum design: Perspectives from theory and practice for middle level schooling in Australia. *The Australian Educational Researcher*, *34*(2), 51–71.
6. Drake, S. M., & Burns, R. C. (2004). *Meeting Standards Through Integrated Curriculum*. ASCD.
7. Erlandson, C., & McVittie., J. (2001). Student voices on integrative curriculum. *Middle School Journal*, *33*(2), 28–36.
8. Hien, P. D. (2010). A comparative study of research capabilities of East Asian countries and implications for Vietnam. *Higher Education*, *60*(6), 615–625. http://doi.org/10.1007/s10734-010-9319-5
9. Lenoir, Y., & Hasni, A. (2016). Interdisciplinarity in Primary and Secondary School: Issues and Perspectives. *Creative Education*, *7*(16), 2433–2458. http://doi.org/10.4236/ce.2016.716233
10. MOET. (2017). *Directions of the new curriculum*.
11. Nguyen, T. P. H. (2007). Sustainable Education Development under Globalization, and the Reforms of Teaching and Learning Methods in Teacher Training. In *Social issues under economic transformation and integration in Vietnam* (pp. 134–135). Vietnam Development Forum. Retrieved from http://www.grips.ac.jp/vietnam/VDFTokyo/Doc/SocialBook1Fulltext.pdf
12. Reza, S. A. M. (2008). Japan's National Curriculum Reforms : Focus on Integrated Curriculum Approach, (22), 1–6.
13. Tan, C. (2008). Globalisation, the Singapore state and educational reforms: towards performativity. *Education, Knowledge and Economy*, *2*(2), 111–120. http://doi.org/10.1080/17496890802223619
14. World Bank. (2010). *Economics of Adaptation to Climate Change: Vietnam*. Retrieved from http://peacewindsamerica.org/wp-content/uploads/2014/02/EACC_Vietnam.pdf