



13TH INTERNATIONAL CONFERENCE

AC-ESI-2018

ACADEMIC
CONFERENCE ON
EDUCATIONAL &
SOCIAL INNOVATIONS



**AC-ESI
@2018
MILAN.IT**

CO-ORGANIZED BY:

CO-SPONSORED:
THE EURASEANS -
JOURNAL ON GLOBAL SOCIO-ECONOMIC DYNAMICS

OFFICE OF GENERAL EDUCATION AND INNOVATIVE
ELECTRONIC LEARNING, SUAN SUNANDHA
RAJABHAT UNIVERSITY, BANGKOK, THAILAND

RUSSIAN PRESIDENTIAL ACADEMY OF NATIONAL
ECONOMY AND PUBLIC ADMINISTRATION
SOUTH RUSSIA INSTITUTE OF MANAGEMENT,
ROSTOV-ON-DON, RUSSIA



INTERNATIONAL ACADEMIC
CONFERENCE ON
EDUCATIONAL & SOCIAL
INNOVATIONS

AC-ESI-2018

PROCEEDINGS

MILAN, ITALY

MAY, 2018

Dear ladies and gentleman, participants of International Academic Conference on Educational & Social Innovations, academics and scholars, presenters of research centers, educational institutes and business!



Today, in the era of global innovatization, spreading of modern forms of business and public administration, the social and economic role of education for increasing global management competitiveness and self-sufficiency becomes a most important determinant, an effectiveness of international collaboration in discussing on actual educational issues and challenges is timely increasing.

And I would like to express my deep gratitude to partnered journals, educational institutions of Thailand, Russia, Indonesia, Germany, Iran, India, China whose efforts made possible this meeting of scholars and educators, interested in effective solution of global and national economy challenges using powerful resources of social, cultural and innovative success.

And, of course, I would like to thank all participants for coming here, for their wonderful and useful research.

I want to say, that Suan Sunandha Rajabhat University – as a leading public University of Thailand – is very proud to be an organizer of this significant and important conference.

To each participant I wish success, finding a new colleagues and friends, development of scientific and business contacts, new scientific discoveries that are benefit for society, business and government. And also enjoy your time in fashion and design capital of the world.

*Dr. Luedech Girdwichai, professor
President of Suan Sunandha Rajabhat University
Bangkok, Thailand*

On behalf of the Organizational Committee, I welcome you to International Academic Conference on Educational & Social Innovations, in Milan!

AC-ESI-18 attracts researchers, educators and practitioners in all fields of modern education and education institutes management.

Participants have found in these meetings an excellent opportunity to share their experiences with colleagues from distance places and often continued to cooperate with them on their subjects of interest.

AC-ESI – 2018 has been established on a global basis.

We have received more than 80 submissions from 12 countries, each submission was peer-reviewed by at least two anonymous reviewers and a total of 51 papers were accepted for presentation in the conference.

Accepted papers are scheduled for presentation in 5 big sessions.

We would like to express our sincere appreciation to all the reviewers and chairs and members of various committees of AC-ESI -2018 conferences for their precious time and expertise.

I would like to express our sincere gratitude to everyone involved in making the joint conference a success. Many thanks go to the organizing committee, special session organizers, and the organizational committees and reviewers, the conference participants, and of course, to all the contributing authors who will be sharing the results of their research.

It is our great pleasure to have you with us at the joint conference, where I hope new ties will be made and existing ones renewed and strengthened.

Please accept our best wishes for a wonderful stay in Italy!

Grazie !



Dr. Preecha Pongpeng

*Director of Office of General Education and Innovative Electronic Learning
Suan Sunandha Rajabhat University, Bangkok, Thailand*

Dear friends and colleagues!

This conference is a meaningful crystallization of international initiatives among the number of institution towards practical cooperation in interdisciplinary studies, which will be contribute to the strengthening of the national educational systems.

The characteristic of the education in our era is change at the speed of light, which led us to the consensus that experts from many countries and many different disciplines must meet and discuss the phenomena, and then suggest solutions. We should be able to delve deeper by discussing problems across different disciplines as widely as possible, and thus grasping more profound solutions and suggestions.

The motivation for this conference is to help one's country through offering individual expertise and point of view based on one's individual discipline. As we gather from many different countries and many different disciplines, I believe that we should be able to expand the scope of our efforts and must aim at more challenging global contributions.

I hope all the participants of this conference will enjoy and get opportunities to enhance relationships of knowledge exchange.

I would like to extend my sincere gratitude to the organizing committee and especially to my Thai colleagues for given abilities to be a co-organizer and member of organizational board of AC-ESI – 2018, to be involved in the process of new international tradition formation!

*Dr. Elena Zolochevskaya
Russian Presidential Academy of
National Economy and Public Administration,
South Russia institute of management,
Rostov-on-Don, Russia*

Welcome to International Academic Conference on Educational & Social Innovations!

As a co-organizer of AC-ESI-2018 we tried to make a conference aimed to create a strong platform for academic and educational international collaboration.

Sustainable economical development always requires a breaking of any boundaries between scientists, an increasing of international informational and technological exchange, new forms of cross-cultural and transnational collaboration.

Due to this I am very glad to see here, in hospitable Italy, presenters of dozens countries from four continents. It proves that our activity in a direction of common, global study of patters for effective, competitive and successful development of educational practices is important, is required by society, science and business.

Suan Sunandha Rajabhat University is strongly related with educational and science provision for progress of Thailand and AEC. Academics of our university conduct research in all areas of economical and social development of Thailand and ASEAN.

We are science partners with Thai Government, presenters of Thai and international business and non-governmental organizations. Active external collaboration of SSRU with educational and research centers of ASEAN, Europe, Australia and USA opens huge prospects of international science collaboration and science exchange.

Furthermore, for making our conference work more effective and memorable, we tried to provide maximum comfortable conditions for all our delegates.

Therefore, I hope that the AC-ESI-2018 will achieve all set objectives to provide our delegates with education, networking, leadership enhancement and sweet memories.

*Dr. Nattapong Techarattanased
Deputy director of Office of General Education
and Innovative Electronic Learning
Suan Sunandha Rajabhat University,
Bangkok, Thailand*

In the modern conditions world transfers from the multilevel system of national social systems with strictly identified boundaries of economical interests and kinds of international collaboration to the absolutely complicated mix of transnational business, national states and international organizations whose interests are actively interact, intersect, overlap and even conflict each other's! Private sector is effectively using advantages of educational and cultural globalization, is mostly able to create multilevel markets and complex market strategies, to spread internal corporative net-work outside – to the directions of states, customers of educational products, institutes and competitors.



It shows how important and how significant is international science collaboration, international research and discussions on different issues of actual education and social development. Practical experience in economical stimulation, reformation of educational systems, regional integration, governmental support of educational and research institutes, increasing of national external competitiveness is very difficult to over-evaluate.

Being an educational and science leader of Thailand and ASEAN, an effective example of business-government-science collaboration, Office of General Education and Innovative Electronic Learning at Suan Sunandha Rajabhat University is really appreciated to be a co-organizer and informational partner of Academic Conference on Educational & Social Innovations, to be involved in the processes of international science collaborations and innovative ideas' transfer! Hope these collaborations will have bright and significant prospects.

Finally, I would like to welcome all participants of AC-ESI – 2018 and to wish new science results and findings, ideas and conclusions!

*Dr. Jarumon Nookhong
Deputy Director of Office of
General Education and Innovative Electronic Learning
Suan Sunandha Rajabhat University,
Bangkok, Thailand*

As a Member of Editorial board of Academic Conference on Educational & Social Innovations - 2018 I am delighted to welcome all participants in Milan!

The aim of AC-ESI- 2018 is to serve as a primary channel of knowledge sharing and the promotion of educational and social innovations internationally.

An important goal of the conference is to encourage learning from each other by exchanging ideas and views, and building networks.

A successful conference cannot be organized without the effort of many persons.

I would like to thank both working teams from the Office of General Education and Innovative Electronic Learning Suan Sunandha Rajabhat University and South Russia institute of management of Russian Presidential Academy of National Economy and Public Administration for their enormous contribution towards the detailed arrangement of this conference.

Furthermore, I would like to express my gratitude to the authors who submitted their papers to the AC-ESI 2018 as well as reviewers for their contributions and effort to an excellent conference proceeding.

Finally, I hope you will enjoy the conference and have a wonderful time during your stay in Italy.



Warmest Regards,

*Mr. Apisit Rattanatanurak
Deputy director of office of
General Education and Innovative Electronic Learning
Suan Sunandha Rajabhat University,
Bangkok, Thailand*

Warm greetings from AC-ESI – 2018 organizing committee!

As a coordinator of our International conference organization I tried to do everything for making this year conference the best one!

We spent many hours for choosing venue; we spent gigabytes of internet traffic sending mails and calls for papers!

Hope, all these spent were not useless. And our conference will be very successful, productive and important for society, science and business.

I am glad to note, that a number of AC-ESI – 2018 participants is still high!

Geography of our conference is covered 9 countries from Asia, East Europe, Middle East and even Africa!

Enjoy Italian natural and cultural heritage, world most famous outlets and restaurants! Don't forget to taste risotto with local wine, visit Da Vici museum and listen magic opera in La-Scala!

And to get new knowledge, new ideas and new friends from AC-ESI-2018!!!



*Dr. Denis Ushakov, professor
AC-ESI – 2018 coordinator
International college
Suan Sunandha Rajabhat University,
Bangkok, Thailand*

AC-ESI-2018

ORGANIZATIONAL BOARD

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**INTERNATIONAL ACADEMIC CONFERENCE ON
EDUCATIONAL & SOCIAL INNOVATIONS**

AC-ESI – 2018 @ MILAN.IT

=AGENDA=

- Day 1** 07 May 2018
Venue: Sheraton Milan Malpensa Airport Hotel, Italy
- 13.00 Registration open Foyer
Participants arrival, registration
- 14.00 Organizational meeting Meeting Room
Networking
- 15.00 **Seminar “International publishing: guidelines to success”**
By Ms. Darina Prokhorova
Editor –in – chief of Journal of International Studies, Poland
- 17.00 Welcoming dinner Restaurant

- Day 2** 08 May 2018
Venue: Sheraton Milan Malpensa Airport Hotel, Italy
- 9.00 Opening ceremony Meeting Room
Welcome speeches:
Dr. Preecha Pongpeng
*Director of Office of General Education and Innovative Electronic Learning,
Suan Sunandha Rajabhat University, Bangkok, Thailand*
- Dr. Zolocheskaya Elena
*Dean of faculty of Public Administration,
South Russia institute of Management of
Russian Presidential Academy of National Economy and Public Administration*
- Dr. Bundit Pungnirund
*Dean of College of Innovations and Management, Suan Sunandha Rajabhat
University, Bangkok, Thailand*
- Ms. Darina Prokhorova
*Editor –in – chief of Journal of International Studies,
Poland*
- Dr. Oleg Patlasov
Omsk Humanitarian Academy, Omsk, Russia
- Dr. Denis Ushakov
Organizational board of AC-ESI– 2018
- 09.40 **University’s Management And Students’ Satisfaction: An Empirical Study
Through Structural Equation Modelling**
Key-note speech by Dr. Johan W de Jager
*Tshwane University of Technology,
Pretoria, South Africa*
- 10.30 Group photo
- 10.40 **Coffee-break** Foyer
- 11.00 **Formation of the Social Successfulness of Students with Disabilities in the
System of Continuous Inclusive Education**
Key-note speech by Dr. Preecha Phongpheng
*Office of General Education and Innovative Electronic Learning Suan Sunandha
Rajabhat University, Bangkok, Thailand*
- 11.40 **Human capital and decentralization of education (the case of Tlajomulco de
Zuniga Jalisco, Mexico)**
Key-note speech by Dr. José G. Vargas-Hernández
*University Center for Economic and Managerial Sciences,
University of Guadalajara, México*
- 12.20 **Educating Young People in Multicultural Environment of Higher
Education Institution**
Key-note speech by Dr. Nattapong Techarattanased
*Office of General Education and Innovative Electronic Learning Suan Sunandha
Rajabhat University, Bangkok, Thailand*
- 13.00 **Lunch** Restaurant

14.00	Session 1 – Environmental education: ways and challenges of implementation	
14.00	Sinchai Poolklai & Adisak Chuchat	
14.20	Jürgen Drissner	
14.40	Pattamaporn Kaewkongka & Apirati Triyawat	
15.00	Wipada Chaiwchan & Kittipat Bualek	
15.20	Kvetoslava Rešetová	
15.45	Coffee break	Foyer
16.00	Pawinee Ratabakorn & Uraiwan Tunmukul	
16.20	Anosha Rojanapanich & Prem Thanatripop	
16.40	Pachara Wangmee & Worakarn Jantarasingharn	
17.00	Unnop Panpuang & Saysunee Sangphueak	
18.00	Dinner	Restaurant

Day 3	09 May 2018	
	Venue: Sheraton Milan Malpensa Airport Hotel, Italy	
08.30	Registration open	Foyer
09.00	Session 2 – Human capital: educational and managerial issues of formation and development	
09.00	Pramsuk Huanprapai & Sasinan Prajongjai	
09.20	Ria Mardiana Yusuf	
09.40	Nattaporn Srichana & Warawut Chuenkrut	
10.00	Pordee Sukpun & Paweena Sribunrueng	
10.20	Aekkaphob Intarapoo & Pattiya Traiteepung	
10.45	Coffee – break	Foyer
11.00	Bundit Pungnirund	
11.20	Sarawut Yamdee & Supas Amornchantanakorn	
11.40	Mahir Pradana	
12.00	Pimporn Thongmuang	
12.20	Larisa Nevskaya & Svetlana Akhmetova	
12.40	Lunch	Restaurant
13.30	Session 3 – Modern teaching: modern technologies and practical methods	
13.30	Nuntiya Noichun & Narasak Phunaploy	
13.50	Zhang Li-Ping	
14.10	Watchara Sungkabol & Sasiwimon Maneewong	
14.30	Awad Soliman Keshta	
14.50	Kanpetch Saranontawat & Pimporn Thongmuang	
15.10	Toratane Munegumi	
15.30	Coffee – break	Foyer
15.50	Arias Sinthu & Aknarin Piyaphanyamongkol	
16.10	Nutcha Phasuk & Natwalun Wangnil	
16.30	Krit Chaisaengduean, Tospon Pimpa	
16.50	Farangis Saeedi	
17.10	Arunroong Wongkungwan & Sathiya Phunaploy	
18.00	Dinner	Restaurant

Day 4	10 May 2018	
	Venue: Sheraton Milan Malpensa Airport Hotel, Italy	
08.30	Registration open	Foyer
09.00	Session 4 – Management in educational institutes: modern issues and future prospects	
09.00	Pennapha Meeto & Raweevan Khankham	
09.15	Amber Osman & Muhammad Imtiaz Subhani	
09.30	Bundit Phrapratanporn & Kulnidawan Dumkum	
09.45	Vera Gnevasheva	
10.00	Yuttana Rattanasuwan & Piyanun Thanchai	
10.15	Ratanaporn Sukserm & Thidarat Choknakawaro	
10.30	Juan Francisco Aguirre Chavez	
10.45	Coffee – break	Foyer
11.00	Supapong Wimonchailerk & Rutchanewan Panbua	
11.15	Runglaksamee Rodkam & Paphitchaya Silpaksa	
11.30	Vanthangpui Khobung	
11.45	Aina Jacob Kola	
12.00	Paakpoom Klaythong & Patcharida Wisaiket	
12.15	Arun Sumdee & Anutsara Chanprapas	
12.30	Lunch	Restaurant
13.30	Session 5 – Usage of ICT and social networking in educational process	
13.30	Kiattiphoom Phachuen	
13.50	Chun-Pei Lin	
14.10	Piched Girdwichai	
14.30	Siriporn Meenanant & Naruecha Narapong	
14.50	Atef Abuhmaid	
15.10	Pirawat Chaiyaphoomsakul, Sawitree Charamporn & Apisit Rattanatanurak	
15.30	Coffee – break	Foyer
15.50	Nuntiya Noichun	
16.10	Nuntinee Nakdontee & Patompong Punnabhum	
16.30	Sudarat Srirama & Krisana Aree	
16.50	Vasyuta Eugenia	
17.10	Grigoryeva Natalya & Kolycheva Zhanna	
17.30	Dinner	Restaurant
	Awards and closing ceremony	

LIST OF SESSIONS:

	Day 2	Meeting room
	14.00-17.30	
	Session 1	Environmental education: ways and challenges of implementation
		Chairman: Dr. Jürgen Drissner
1	Sinchai Poolklai Adisak Chuchat <i>Suan Sunandha Rajabhat University, Bangkok, Thailand</i>	Environmental education and behavioral change
2	Jürgen Drissner <i>University of Ulm, Germany</i>	Environmental education outside school: effects of a half-day teaching programme
3	Pattamaporn Kaewkongka Apirati Triyawat <i>Suan Sunandha Rajabhat University, Bangkok, Thailand</i>	“Public-based-learning”: environmental controversies for pedagogical purposes
4	Wipada Chaiwchan Kittipat Bualek <i>Suan Sunandha Rajabhat University, Bangkok, Thailand</i>	Considering students’ environmental self determination
5	Kvetoslava Rešetová <i>Slovak University of Technology in Bratislava, Slovakia</i>	Publishing opportunities of doctoral candidates
6	Pawinee Ratabakorn Uraiwan Tunnukul <i>Suan Sunandha Rajabhat University, Bangkok, Thailand</i>	Educational environment for teenagers’ moral relations development
7	Anosha Rojanapanich Prem Thanatipop <i>Suan Sunandha Rajabhat University, Bangkok, Thailand</i>	Analyzing business factors of students’ environmental attitudes
8	Pachara Wangmee Worakarn Jantarasingharn <i>Suan Sunandha Rajabhat University, Bangkok, Thailand</i>	Conceptual model for teaching the relationship of daily life and human environmental impact
9	Unnop Panpuang Saysunee Sangphueak <i>Suan Sunandha Rajabhat University, Bangkok, Thailand</i>	Sustainable development and teaching perspectives

Day 3 Meeting room
09.00-12.30

Session 2

Human capital: educational and managerial issues of formation and development

Chairman: Dr. José G. Vargas-Hernández

- 1 Pramsuk Huanprapai
Sasinan Prajongjai
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Social capital and knowledge management in the context of staff empowerment
- 2 Ria Mardiana Yusuf
*Hasanuddin University,
Makassar, Indonesia*
The practice of human resource strategic roles by "ulrich" model
- 3 Nattaporn Srichana
Warawut Chuenkrut
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Student's research work as the condition of professional education
- 4 Pordee Sukpan
Paweena Sribunrueng
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
University students' entrepreneurial intentions: ways for in-study implementation
- 5 Aekkaphob Intarapoo
Pattiya Traiteepung
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Strengthening the basic competence of sciences for master students
- 6 Bundit Pungnirund
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Interpersonal intelligence: how gender difference impacts
- 7 Sarawut Yamdee
Supas Amornchantanakorn
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Egocentrism and development of students identity
- 8 Mahir Pradana
*Telkom University, Bandung
Indonesia*
Do employees' performances depend on their motivations? (case study at Indonesian National bureau of plantation)
- 9 Pimporn Thongmuang
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Self-health care behaviors of elderly
- 10 Larisa Nevskaya
Svetlana Akhmetova
*Perm National Research Polytechnic University,
Russia*
Current trends in the development of innovative activeness of enterprise personnel

Day 3 Meeting room
13.30-17.30

Session 3

Modern teaching: modern technologies and practical methods

Chairman: Dr. Bundit Pungnirund

- 1 Nuntiya Noichun
Narasak Phunaploy
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Problem based learning (PBL-civics) model development to improve the motivation and learning outcomes
- 2 Zhang Li-Ping
*Yu Qiu Shanghai University of
Engineering Science,
Shanghai, China*
Study of cooperative education pattern
- 3 Watchara Sungkobol
Sasiwimon Maneewong
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Analysis of mathematical education on economics specialty
- 4 Awad Soliman Keshta
*Islamic University of Gaza (IUG),
Gaza, Palestine*
The effectiveness of a blended learning program on developing palestinian tenth graders english writing skills
- 5 Kanpetch Saranontawat
Pimporn Thongmuang
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Innovative methods of teachers' practice-orientation development
- 6 Toratane Munegumi
*Naruto University of Education,
Naruto, Tokushima, Japan*
Considering future directions for the specialized evaluation of educational programs for science teachers
- 7 Arias Sinthu
Aknarin Piyaphanyamongkol
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Dialogue-based teaching model in college English teaching
- 8 Nutch Phasuk
Natwalun Wangnil
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Business field trips impact on education processes
- 9 Krit Chaisaengduean
Tospon Pimpa
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Project-based hybrid business education of graduate and undergraduate group
- 10 Farangis Saeedi
Guilan University, Rasht, Iran
The effect of negotiation on second language acquisition
- 11 Arunroong Wongkungwan
Sathiya Phunaploy
*Suan Sunandha Rajabhat University,
Bangkok, Thailand*
Environentors: mentoring at-risk through university partnerships

Day 4 Meeting room

Session 4 Management in educational institutes: modern issues and future prospects
09.00-12.30

Chairman: Dr. Muhammad Imtiaz Subhani

- | | | |
|----|---|--|
| 1 | Pennapha Meeto
Raweewan Khankham
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | Academic freedom and leadership in modern academic institutions |
| 2 | Amber Osman
Muhammad Imtiaz Subhani
<i>Iqra University, Karachi, Pakistan</i> | Misuse of higher education |
| 3 | Bundit Phrapratanporn
Kulnidawan Dumkum
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | Extension analysis of employee management based on social network model |
| 4 | Vera Gnevasheva
<i>Moscow University for the Humanities,
Moscow, Russia</i> | Student's view of education as the merit and private economic goods |
| 5 | Yuttana Rattanasuwan
Piyanut Thanchai
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | High school students' conceptions of learning in different domains |
| 6 | Ratanaporn Sukserm
Thidarat Choknakawaro
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | Educational pedagogy for sustainability: developing programs to transform behaviors |
| 7 | Juan Francisco Aguirre Chavez
<i>Autonomous University of Chihuahua,
Chihuahua, México</i> | A gender study on college students' academic self-efficacy |
| 8 | Supaporn Wimonchailerk
Rutchanewan Panbua
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | Multi-subject incentive cooperation of students' network entrepreneurial education |
| 9 | Runglaksamee Rodkam
Paphitchaya Silpaksa
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | School-community participation in developing a local sustainability agenda |
| 10 | Vanthangpui Khobung
<i>Educational Research and Training NCERT
Bhopal, India</i> | Tribal self-help groups in Manipur: a gender perspective |
| 11 | Aina Jacob Kola
<i>College of Agriculture, Igboora,
Oyo State, Nigeria</i> | Repositioning science education in nigerian colleges of education through public-private partnership (PPP) |
| 12 | Paakpoom Klaythong
Patcharida Wisaiket
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | Vocational education by transferring notions and all-round cultivation |
| 13 | Arun Sumdee
Anutsara Chanprapas
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | The function of physical education for building social values |

Day 4 Meeting room

Session 5 Usage of ICT and social networking in educational process
13.30-17.30

Chairman: Dr. Atef Abuhmaid

- | | | |
|----|---|---|
| 1 | Kiattiphoom Phachuen
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | Application of classroom assistant software based on Android |
| 2 | Chun-Pei Lin
<i>Huaqiao University, Quanzhou, China</i> | An effect of existing knowledge assets to inbound/outbound disruptive innovation |
| 3 | Piched Girdwichai
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | Analytical study on improving expertise of university students through innovative training project |
| 4 | Siriporn Meenanon
Naruecha Narapong
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | College students' information quality and study on correspondence and education system in "Internet+" era |
| 5 | Atef Abuhmaid
<i>Middle East University,
Amman, Jordan</i> | Information and communication technology integration within the practicum |
| 6 | Pirawat Chaiyaphoomsakul
Sawitree Charamporn
Apisit Rattanatanurak
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | Video converter using GPU on web application |
| 7 | Nuntiya Noichun
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | Applications as IT-element of special disciplines teaching |
| 8 | Nuntinee Nakdonte
Patompong Punnabhum
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | Designing of individual educational path of teacher's professional development in conditions of information educational environment |
| 9 | Sudarat Srma
Krisana Aree
<i>Suan Sunandha Rajabhat University,
Bangkok, Thailand</i> | Trend of visual communication design education in the cultural and creative industries |
| 10 | Natalya Grigoryeva
<i>Southern University (IMBL), Russia</i>
Zhanna Kolycheva
<i>Don State Technical University, Russia</i> | Taxation and employment: considering relationships and factors of efficiency |
| 11 | Vasyuta Eugenia
<i>The Russian Presidential Academy Of
National Economy And Public Administration,
South Russia Institute of Management,
Rostov-on-Don, Russia</i> | Medical tourism in Russia: growth potential and competitiveness issues |

“PUBLIC-BASED-LEARNING”: ENVIRONMENTAL CONTROVERSIES FOR PEDAGOGICAL PURPOSES

Pattamaporn Kaewkongka
Apirati Triyawat

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Following a pragmatic learning approach, we focus our discussion on a triadic relationship between supervisors, students and various concerned publics. A local flood management controversy in Thailand will help to illustrate our approach and point to some learning outcomes. On the basis of this pedagogical experience, we propose to shift from Problem-based-learning towards Public-based-learning that rests on the comparison of the various ways a problem is defined by publics. This comparative approach allows us to deduce a plurality of modes of involvement mobilized in the management of the environmental problems.

Keywords: Public-based-Learning, pragmatic learning approach, higher education, environmental controversies, posture, symmetry

Introduction

Environmental crises confront scientists and managers with a paradox that they cannot solve but with which they must work. On the one hand, they call for the identification of effective solutions, at the risk of seeing the situation deteriorate quickly, but on the other hand, they are and continue to be rife with scientific or technical uncertainty that necessitates caution. How does one train future managers to tackle a complex environmental problem with “scientific rigour”, when knowledge of the issues and the solutions for them are uncertain?

When defining the problem is part of the problem itself? When tested methods, intervention protocols, established operating procedures, and so on seem to miss the mark? “How does one learn from such a complex situation?”

First of all, we wager that our students, as future environmental managers, would not be content with scientific “certainties” about the subject of their study. We urge them to take an exploratory approach that is aimed at both enriching their understanding of the problem and developing their reflexivity as they tackle it.

We also suggest an approach that is in touch with the occupational practices in which they were trained. In the following pages, we will illustrate the ways in which we have addressed these issues in our teaching practices for fifteen years, and how we have engaged them in a collaborative controversy inquiry (Sadler et al., 2007; Savery, 2006) for pedagogical purposes. Yet, a controversy involves not only experts, but also a host of social actors: typically public authorities, NGOs, local residents, or impacted users.

The controversy inquiry discussed by Sadler et al. (2007) fosters the consideration of citizens’ goals, but in an abstract way, as they are brought by teachers and pupils. We go further as we postulate that the social actors have something to teach us, that is, their unique point of view that is embedded in their singular experience and familiarity to the problem and

its consequences. As far as socio-technical or environmental controversies are concerned, the various point of view of all concerned parties matter to enrich the problem and open new possibilities (Callon, Lascoumes and Barthe 2011).

But each time, their testimonies illustrate the tension between making the problem intelligible and the need for a solution and closure (Smith et al. 2002). Indeed, the parties concerned with the controversy are the best teachers since tension, uncertainty, and caution are very much a part of their occupations. Our job, as “supervisors”, is to ensure that the encounters are as fruitful as possible, to avoid turning the case into something cold and clinical (Fabre 2007, Hervé, Venturini and Albe 2013, Jimenez-Aleixandre, Rodriguez and Duschl 2000). This article gives us the opportunity to describe how, in order to achieve our goals, students, the teaching staff, and the protagonists of a problematic situation may constitute a system we call a “triad”. Building on the example of a case study, i.e. the case of flooding in Tubize (see Inset 1 below), we will focus on the main elements of our pedagogical set-up, its rules and its outputs. Then, we will share reflections about the learning process. To conclude, we will define this learning experience, its conditions of felicity and consequences, as an approach that we call “Public-based Learning”. We will see that this learning approach is in line with the current stakes of environmental management and environmental manager’s profession.

The Pedagogical Set-Up

The public nature of a controversy has increased value for learning when it can be grasped through testimonies of the people affected by its management or its effects.

The triad of actors

According to Larochelle and Désautels (2007), the interactions between the actors are a keystone of any learning process. Most teaching approaches induce a format that reduces the teacher/pupil relationship to a transmission of stabilised knowledge to more or less passive individuals, even when they claim to be constructivist. This is especially the case in institutionalized scientific and technical curricula (Hervé, Venturini and Albe 2013, Jimenez-Aleixandre, Rodriguez and Duschl 2000, Savin-Baden 2000).

We tried to avoid this trap right from the beginning. From a constructivist perspective - as Larochelle and Désautels (2007) point out along with other colleagues (Sadler, Barab and Scott 2007, Salomon and Perkins 1998) - the relationships between teachers and students are radically different: teachers and learners cooperate in the learning process and they are altogether transformed by it. This is even more true in collaborative pedagogical set-ups. The learners learn from each other. The supervisors assume a new role: far from the transmission model, they guide active learners in building knowledge.

This guiding role involves new teacher/pupil relationships which are part of a constructivist teaching model. Yet those relationships aren’t tackled by the greater part of research in higher education (Larochelle and Désautels 2007, Salomon and Perkins 1998, Voß 2007). And we introduce a third figure to this learning situation, the various parties involved in the public controversies.

Two main issues must be addressed when learning from public controversies: How does the introduction of this third figure change the relationships between participants in the learning situation? How can we prevent those participants from adopting an academic format

that simplifies, even rationalises, the case? Those issues can be analysed on several levels and we do not have the space to do that here. We will focus on the two main ones. The first level is the design of the pedagogical set-up that we've collectively developed by trial and error during our fifteen years of practice.

The design of the pedagogical set-up

The controversy case was explored by alternating several seminar activities, some of which belonged to the education frameworks specific to problem-based and situated learning: a real problem whose complexity is progressively revealed by a sequence of testimonies, collaborative team work sessions, tutoring, peer-to-peer feedback, intermediary personal output that allows regular supervisors' feed-back, and so on (Anderson, Reder and Simon 1996, Béchard 2001, Jonassen 1997, Lemaître 2007, Pedretti 1999, Savin-Baden 2000, Tan 2007).

The key activity is encountering the various parties concerned by the controversy. On Monday, Tuesday, and Wednesday mornings we invite concerned parties one by one to meet the students in an auditorium, and to answer questions. Their introduction into the university classroom is carefully set-up. Choosing an appropriate panel of speakers is crucial: we are looking for a range of divergent and contrasting testimonies that open up multiple ways of defining the problem and we are aware that it is not possible to include every possible point of view.

They are selected according to their legitimacy and their ability to engage in a specific communication format. Indeed we carefully brief the speakers about our expectations: we ask them not to give explanations or to provide information. Instead we ask them to tell their story, share their experience and their views on the problem, and detail their practices and their doubts. This testimony format leads students and supervisors to make sense of the case rather than to analyze it. In other words they avoid reducing it to a narrow list of components. This is a key component of a successful exploration of the controversy.

When it comes to environmental problems, confirmation of spatial and concrete clues is helpful. So, in the middle of the first week, a field trip is organised. Besides visiting the very places where the problem occurs, the students also meet the actors concerned – typically residents and members of the local administration – and sometimes are guided by them in the field. Through this second activity the students can grasp the protagonists' experience, viewpoints, abilities, and expertise "in situ" (Masciotra 2007).

Working in small groups is one of the cornerstones of all case study-based teaching methods to the extent that well-argued discussions of a problem help students both to make their conceptual networks complex and to generate new ones (Larochelle and Désautels 2007, Lewis and Leach 2006, Voß 2007).

During the first week, the students go through the testimonies using a theoretical and methodological framework (i.e. the CATWOE grid presented below) that they learn to use in the course of the process. As we shall see, this framework enables them to summarise and classify the various parties' viewpoints.

During the second week, the students build on this framing process to compare the concerned parties' viewpoints and to identify the key stakes, that is, the ones that unveil tensions. They have to choose one of these stakes, to go deeply into the various points of view expressed about it, and finally to synthesize their findings for both students and

supervisors in an oral presentation. A closing lecture given by a researcher or professional working on a similar situation helps students to build conclusions beyond the specific case.

In our group work approach, supervisors' role and position are radically different from the usual ones. Supervisors actually carry out the exercise along with the students. They discover the testimonies (and the facts) at the same time as the students. Consequently, they are no longer "the ones who know", and can no longer place themselves in the "authoritative communication" register (Hervé, Venturini and Albe 2013, Jimenez-Aleixandre, Rodriguez and Duschl 2000).

The analytical equipment: The C.A.T.W.O.E Grid

Another important aspect of our pedagogical set-up is the theoretical and methodological framework we use to help students summarise and classify the various parties' viewpoints. Actually, CATWOE is both the name of the analytical framework and a mnemonic device to remember what one must investigate in order to understand a problem and envision its solutions.

The CATWOE is a management tool adapted to "messy situations": it deals with understanding problem contingencies, and making sense of a situation without reducing its complexity (Checkland 1985). The CATWOE grid is a main element of our overall educational approach. Firstly, because it creates a common place between the concerned parties' testimonies and experiences, without leading the analysis to a false consensus.

On the contrary, its categories highlight points of convergence and divergence between the various points of view and facilitate the identification and comparison of the key issues.

Beside respecting viewpoints' heterogeneity, it prevents supervisors and students from changing, sometimes unconsciously, their analytical criteria according to the speakers' presumed legitimacy, typically in a way that disqualifies statements from "ordinary people." With the help of the grid and with supervisors' feed-back, social hierarchies that students have integrated and that they reproduce are deconstructed.

In this way, the CATWOE grid allows the concerned parties to be treated symmetrically without assigning them pre-established roles, interests, stakes, or identities.

Keeping symmetry

Secondly, the relationships amongst the actors involved in the learning process are made as symmetrical as possible. As each actor in the triad is shifted and therefore experiences discomfort, symmetry is produced that enables them to meet each other in their respective positions. The supervisors, students, and, to a certain extent, the concerned parties are brought to realise that they have one amongst other possible points of view, depending on their knowledge, world view, and position in a social framework, amongst other things. In the course of the group discussions the students gradually acquire the ability to state explicitly and to discuss this point of view, provided that exploring the divergences is allowed and utilized in the learning set-up (Daniels and Walker 1995, Pedretti 1999).

This symmetry also extends to the relationship between the supervisors and students regarding the collaborative learning process. As we mentioned before, supervisors discovered details at the same time as students - whilst they gather a minimum amount of information in order to select a case study. All members of the triad have to cope with the uncertainties of

the controversy itself and with issues that they can't grasp due to their background, even the supervisors, as they come from a diversity of fields and research teams.

This places everyone in a symmetrical stance with regards to the complexity of environmental situations. On the other hand, the supervisors built up appropriate skills by exploring former cases studies on different topics: how to use the theoretical and methodological framework in order to get the issues to come to light and to define the points of view involved. In this learning process, supervisors' guiding role means sharing those experiences with the students, introducing them to an unfamiliar educational set-up, and providing support and guidance for methodological pathways.

This facilitation work reduces the asymmetrical distribution of resources throughout the exercise. This shared experience results in symmetry between supervisors as well. They share a way of learning and of realising a controversy inquiry. This process challenges their disciplinary assumptions and their specific practices. It shakes up the legitimacy and hierarchy of different kinds of knowledge, and puts them at risk as the supervisor's and student's respective positions became blurred (Melville & Pilot, 2014).

This supporting role, the sharing of experiences, the doubts and the risk that each supervisor faces in their own way are also part of our approach. Finally, as we already pointed out, parties' points of view are explored symmetrically. No privilege is granted to scientific discourse. This approach isn't spontaneous for the students, who had already assumed the culture of over-esteem for objective, rational, and scientific knowledge during their university education. As the supervisors team repeatedly observed, following Pouliot (2008), this culture leads them to opt in the first instance for a [role-] delegation model for managing controversy (Callon, Lascoumes and Barthe 2011).

Students spontaneously give to scientists the role of producing legitimate scientific knowledge and of informing ordinary people in reference to this model. In the same way, they give politicians and institutions the role of representing the general interest and of guiding populations' behaviour. And finally they gave the people, i.e., "ordinary" people, the role of receiving information and guidance from the scientists and politicians and of endorsing the constraints of the solutions imposed to them by the latter.

This role is at best due to a lack of information and at worst due to an irrational or uncivil attitude. Requirements for symmetrical treatment challenge the "delegation model" to open up new possibilities in the area of environmental management. Our approach's need for symmetry plays a central role in our pedagogy. Along with the CATWOE grid, the supervisors' facilitation work has a central role to play, because it underlines the more or less conscious postulates and hierarchies beyond the students' contribution to the discussions. The regular feedback given to students stresses the refusal to dispel divergences between them. Supervisors foster the need to give up the idea that they expect a single right answer. This respect for the indeterminateness and diversity is also what prevents the case from "cooling down" in the constructivist learning process (Hervé, Venturini and Albe 2013, Larochelle and Désautels 2007, Voß 2007).

Conclusions: Defining Public-Based Learning

Even if our pedagogical approach borrows from Problem-based learning, the inclusion of concerned parties and the specific mode of inclusion make it radically different. The people we refer to as "concerned parties" are concerned both because they are affected by

the consequences of other groups' goals or actions and because they are committed to getting these consequences acknowledged as stakes and questions challenging our societies' choice and future that is, as public issues.

In this respect, they commit themselves to a kind of social inquiry. They match the Dewey (1927) concept of "public". We can define our approach as "Public-based-learning" building around four ideas associated with public. Firstly, the case study should be tackled through the consequences of a situation or action. So the publics emerging from a controversy and their viewpoints should be identified. Moreover they should be considered as resources for understanding the world. That is to say, they are best placed to express their point of view, to testify on consequences and the ways they relate the problem to other actors - human or non human ones -, to reveal tensions and blind points in knowledge fields and management strategies. They thus may become a partner in a pragmatic learning process.

Secondly, some conditions of felicity have to be fulfilled to make their contribution fruitful. The main ones rely on the triad configuration we developed throughout this paper. The concerned parties invited as speakers are selected according to their ability to adopt a communication format of testimony that unveils practices, hesitations and tensions. The pedagogical set-up must also favor symmetrical relationships between actors of the learning process as the diversity of positions and expertise are welcomed, as well as between the points of view that are actually analyzed throughout the exercise.

The CATWOE grid is convenient to ensure students and supervisors will use the same analytical criteria for all of them. It is also helpful to manage imbalances and insecurities and make them contributive to the learning process. The keystone of the triad and the learning process is the shift to a posture that leaves aside conventional roles and hierarchies, to avoid *a priori* identities and stakes of people and objects and to give up the rational myth that separates knowledge issues from political and practical ones.

The point is to become open to discovering how concerned parties define and connect those elements in situ and through the controversy dynamic - or at least through its translation and reinvention as allowed by the pedagogical set-up. This leads to the third dimension we would like to stress. Public-based-learning opens the door to other relationships with publics both in educational and professional contexts.

The publics are neither the subject of research according to the social science model, nor are they mute and disciplined recipients of environmental measures and techniques that are expected by most technical and political frameworks. Instead, the publics involved in an issue are the entity by which ambiguity is brought up. The latter is understood as the connection of rational knowledge and less precise, less explicit, but nonetheless crucial dimensions of the human being's reality (Wynne 2002).

In this respect, ambiguity becomes a resource for investigating, (re)framing the problem, and exploring possible worlds. The process on which we embarked with the actors is one of collective learning in which their legitimacy as publics concerned by the problem at hand (and in the case of the flood victims and their association) was recognised and their knowledge, practices, and experiences were valued.

Consequently, the fourth characteristic of Public-based-Learning is an epistemic one. The triad, and especially the requirements for symmetry and posture, put the problem or problems (that is no longer the framework for the learning situation) aside. Instead, the extent to which this problem or problems are put forward, even transfigured, by these publics comes first. The intersubjective meetings with the concerned parties and the mutual enrichment

contribute to a learning process that is singular, situated, not totally predictable and often surprising. This learning approach enables students to acquire knowledge specific to the environmental problem studied.

Yet mainly they learn a heuristic, if not a methodology, that enables an integrated approach of environmental controversies and, along the constructivist pedagogy tools (like collaborative team group, debates, supervisors' facilitator role, etc.) develops students' critical mind, which is central both to a university course and to a professional performance. Indeed the conceptual purposes of this heuristic are to preserve the complexity of the case studied – and the environmental issues in general –, to uncover the tensions and uncertainties embedded in the attempts to frame and manage the controversy, and to explore how the concerned parties connect the elements of the problem.

It is conducive to hybridisation of the possible world comprehensions (Larochelle and Désautels 2007), which is an essential part of any negotiation process. In addition, the practical purposes of this heuristic are to initiate students to a dialogue-based model for managing the environmental problems that they will face in their working lives (Karl, Susskind, & Wallace, 2007). Since all parties concerned with a public controversy make exploitable contributions, they can and must fruitfully take part in the discussion to define the problem, and to collaborate both on a legitimate generation of knowledge and on building and evaluating possible ways to manage the situation (Callon, Lascoumes and Barthe 2011). This heuristic enables them above all to learn how the tension between the complexification and solving of the problem can be managed in situ and with the publics.

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