ACE
international
conference

13TH INTERNATIONAL CONFERENCE

AC-ESI-2018

ACADEMIC CONFERENCE ON EDUCATIONAL & SOCIAL INNOVATIONS

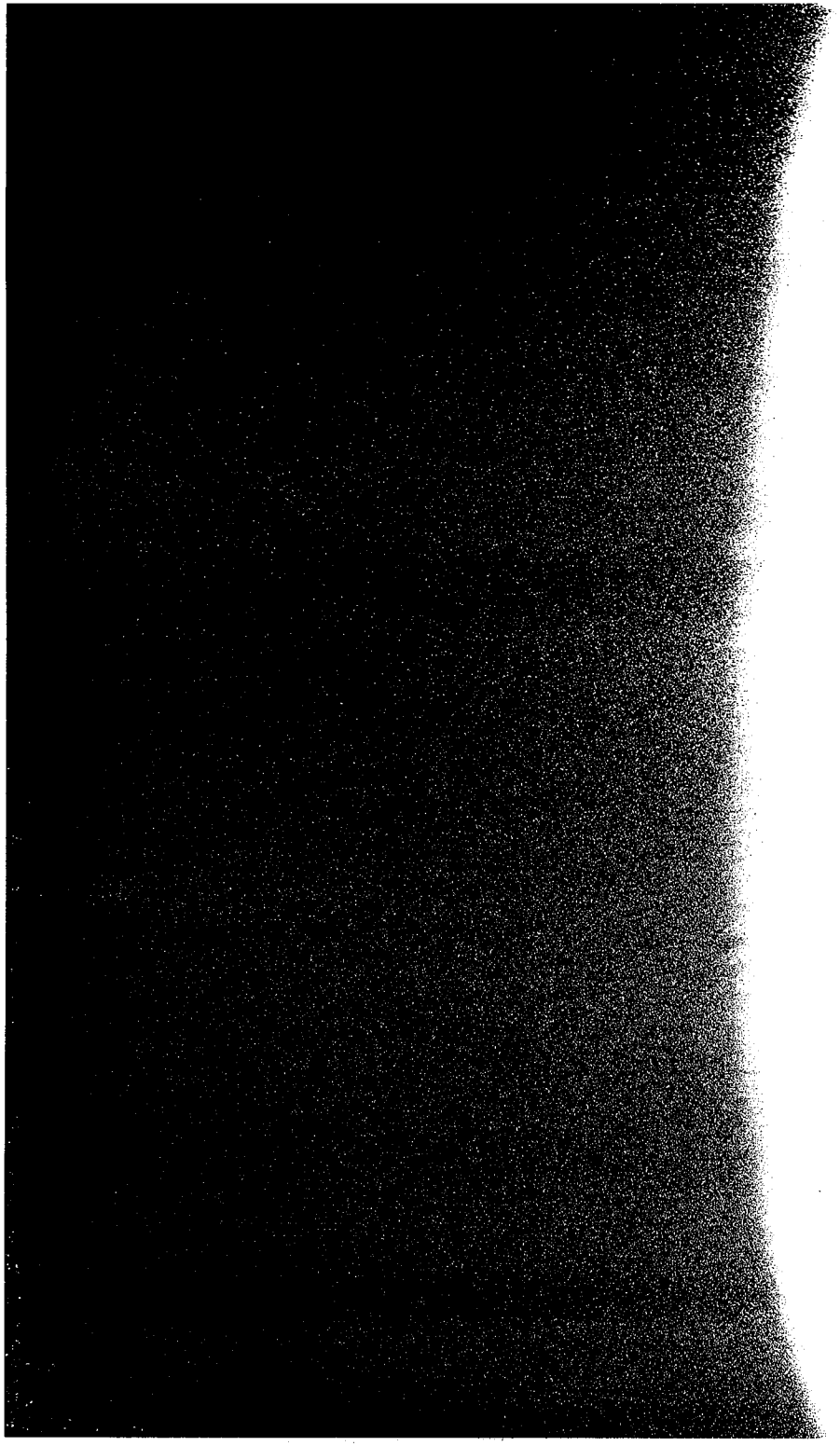
AC-ESI @2018 MILAN.IT

CO-ORGANIZED BY:

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

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



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 becames 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 powerfull 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 Rattanatranurak
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

Dr. Preecha Pongpeng (Office of General Education and Innovative Electronic Learning, Suan Sunandha Rajabhat University, Bangkok, Thailand)

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

Dr. Nattapong Techarattanased (Office of General Education and Innovative Electronic Learning Suan Sunandha Rajabhat University, Bangkok, Thailand)

Hathaipan Soonthornpipit (College of Innovations and Management, Suan Sunandha Rajabhat University, Bangkok, Thailand)

Dr.Rudolf Kucharcik (University of economics in Bratislava, Slovakia)

Dr. Ľudmila Lipkova (University of economics in Bratislava, Slovakia)

Dr.Katarina Brockova (University of economics in Bratislava, Slovakia)

Dr.Sergey Ivanov (University of the District of Columbia, Washington, DC, USA)

Dr. Parimal Chandra Biswas (Adamas University, Kolkata, India)

Dr. Shieh, Chih - Jen (Huaqiao University, China)

Dr. Serhiy Yerokhin (National Academy of Management, Kyiv, Ukraine)

Dr. Frank Ebinger (Nuremberg Institute of Technology, Germany)

Dr. Tatiana Podolskaya (Russian Presidential Academy of National Economy and Public Administration, South Russia institute of management, Rostov-on-Don, Russia)

Dr. Muhammad Imtiaz Subhani (Director Research Innovation & Commercialization, Iqra University, Pakistan)

Dr. Blanka Poczatková (VŠB –Technical University Ostrava, Czech Republic)

Dr. Vladimir Bandurin (State Science-Research Institute of system analyze of Account Chamber of the Russian Federation, Moscow, Russia)

Dr. Yusifov Sabuhi (Azerbaijan Technology University, Azerbaijan)

Dr. Evelyn Chiloane-Tsoka (University South Africa, South Africa)

Dr. Raeni Dwi Santy (University Komputer, Bandung, Indonesia)

Dr. Aleksey Arkhipov (South Federal University, Rostov-on-Don, Russia)

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. Zolochevskaya 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 Tunnukul	
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 Sungkobol & 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 & Raweewan Khankham	
09.15	Amber Osman & Muhammad Imtiaz Subbani	
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	Supaporn Wimonchailerk & Rutchanewan Panbua	
11.15	Runglaksanee 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 Meenanan & Naruecha Narapong	
14.50	Atef Abuhmaid	
15.10	Pirawat Chaiyaphoomsakul, Sawitree Charamporn & Apisit Rattanatranurak	
15.30	**Coffee – break**	Foyer
15.50	Nuntiya Noichun	
16.10	Nuntinee Nakdontee & Patompong Punnabhum	
16.30	Sudarat Srima & 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	*Suan Sunandha Rajabhat University, Bangkok, Thailand*	Environmental education and behavioral change
2	Jürgen Drissner	*University of Ulm, Germany*	Environmental education outside school: effects of a half-day teaching programme
3	Pattamaporn Kaewkongka Apirati Triyawat	*Suan Sunandha Rajabhat University, Bangkok, Thailand*	"Public-based-learning": environmental controversies for pedagogical purposes
4	Wipada Chaiwchan Kittipat Bualek	*Suan Sunandha Rajabhat University, Bangkok, Thailand*	Considering students' environmental self determination
5	Kvetoslava Rešetová	*Slovak University of Technology in Bratislava, Slovakia*	Publishing opportunities of doctoral candidates
6	Pawinee Ratabakorn Uraiwan Tunnukul	*Suan Sunandha Rajabhat University, Bangkok, Thailand*	Educational environment for teenagers' moral relations development
7	Anosha Rojanapanich Prem Thanatripop	*Suan Sunandha Rajabhat University, Bangkok, Thailand*	Analyzing business factors of students' environmental attitudes
8	Pachara Wangmee Worakarn Jantarasingharn	*Suan Sunandha Rajabhat University, Bangkok, Thailand*	Conceptual model for teaching the relationship of daily life and human environmental impact
9	Unnop Panpuang Saysunee Sangphueak	*Suan Sunandha Rajabhat University, Bangkok, Thailand*	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	Nutcha 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*	Environmentors: 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 *Suan Sunandha Rajabhat University, Bangkok, Thailand*	Academic freedom and leadership in modern academic institutions
2	Amber Osman Muhammad Imtiaz Subhani *Iqra University, Karachi, Pakistan*	Misuse of higher education
3	Bundit Phrapratanporn Kulnidawan Dumkum *Suan Sunandha Rajabhat University, Bangkok, Thailand*	Extension analysis of employee management based on social network model
4	Vera Gnevasheva *Moscow University for the Humanities, Moscow, Russia*	Student's view of education as the merit and private economic goods
5	Yuttana Rattanasuwan Piyanun Thanchai *Suan Sunandha Rajabhat University, Bangkok, Thailand*	High school students' conceptions of learning in different domains
6	Ratanaporn Sukserm Thidarat Choknakawaro *Suan Sunandha Rajabhat University, Bangkok, Thailand*	Educational pedagogy for sustainability: developing programs to transform behaviors
7	Juan Francisco Aguirre Chavez *Autonomous University of Chihuahua, Chihuahua, México*	A gender study on college students' academic self-efficacy
8	Supaporn Wimonchailerk Rutchanewan Panbua *Suan Sunandha Rajabhat University, Bangkok, Thailand*	Multi-subject incentive cooperation of students' network entrepreneurial education
9	Runglaksamee Rodkam Paphitchaya Silpaksa *Suan Sunandha Rajabhat University, Bangkok, Thailand*	School-community participation in developing a local sustainability agenda
10	Vanthangpui Khobung *Educational Research and Training NCERT Bhopal, India.*	Tribal self-help groups in Manipur: a gender perspective
11	Aina Jacob Kola *College of Agriculture, Igboora, Oyo State, Nigeria*	Repositioning science education in nigerian colleges of education through public-private partnership (PPP)
12	Paakpoom Klaythong Patcharida Wisaiket *Suan Sunandha Rajabhat University, Bangkok, Thailand*	Vocational education by transferring notions and all-round cultivation
13	Arun Sumdee Anutsara Chanprapas *Suan Sunandha Rajabhat University, Bangkok, Thailand*	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 *Suan Sunandha Rajabhat University, Bangkok, Thailand*	Application of classroom assistant software based on Android
2	Chun-Pei Lin *Huaqiao University, Quanzhou, China*	An effect of existing knowledge assets to inbound/outbound disruptive innovation
3	Piched Girdwichai *Suan Sunandha Rajabhat University, Bangkok, Thailand*	Analytical study on improving expertise of university students through innovative training project
4	Siriporn Meenanan Naruecha Narapong *Suan Sunandha Rajabhat University, Bangkok, Thailand*	College students' information quality and study on correspondence and education system in "Internet+" era
5	Atef Abuhmaid *Middle East University, Amman, Jordan*	Information and communication technology integration within the practicum
6	Pirawat Chaiyaphoomsakul Sawitree Charamporn Apisit Rattanatranurak *Suan Sunandha Rajabhat University, Bangkok, Thailand*	Video converter using GPU on web application
7	Nuntiya Noichun *Suan Sunandha Rajabhat University, Bangkok, Thailand*	Applications as IT-element of special disciplines teaching
8	Nuntinee Nakdontee Patompong Punnabhum *Suan Sunandha Rajabhat University, Bangkok, Thailand*	Designing of individual educational path of teacher's professional development in conditions of information educational environment
9	Sudarat Srima Krisana Aree *Suan Sunandha Rajabhat University, Bangkok, Thailand*	Trend of visual communication design education in the cultural and creative industries
10	Natalya Grigoryeva *Southern University (IMBL), Russia* Zhanna Kolycheva *Don State Technical University, Russia*	Taxation and employment: considering relationships and factors of efficiency
11	Vasyuta Eugenia *The Russian Presidential Academy Of National EconomyAnd Public Administration, South Russia Institute of Management, Rostov-on-Don, Russia*	Medical tourism in Russia: growth potential and competitiveness issues

ENVIRONMENTAL EDUCATION AND BEHAVIORAL CHANGE

Sinchai Poolklai
Adisak Chuchat

Suan Sunandha Rajabhat University, Bangkok, Thailand

In this paper, the effectiveness of environmental education (EE) programs at fostering ecologically responsible behavior is analyzed through the lens of psychology. In section I, a critique of knowledge and attitude appeals is presented using contemporary psychological understandings of these constructs to show why many EE programs have been met with mixed results. It is argued that knowledge and attitudes are misunderstood in precisely how they are employed in decision-making and that these misunderstandings hamper the impact of EE programming. In section 2, the theoretical foundation for applying identity research is developed further and is shown to engage both the automatic and controlled cognitive processes—the key distinction of the IBEE model. In section 3, this research is applied to develop a novel program for producing ecologically responsible behavior through EE using self-identity as a more sophisticated and effective behavioral mediator, as is how a 'pro-environmental identity' could be developed. Self-identity is a durable and robust behavioral mediator that has been shown to be highly predictive of an individual's behavior and can be shaped to lead one toward ecologically responsible behavior across behavioral domains.

Keywords: environmental education, environmental behavior, environmental psychology, conservation

Introduction

While the recent past has been marked by an increasing number of efforts at fostering ecologically responsible behavior, the environmental problems we face today cannot be solved by slow-to-react, incremental changes or the shoehorning of additional behaviors into existing patterns of consumption. Behaviors such as florescent bulb use, reusable shopping bags, or even recycling are not enough to stop global warming or reverse the precipitous decline in oceanic productivity.

Furthermore, even these simple acts have proven difficult to induce despite a generally high level of environmental literacy (Zelezny, 1999). Behavior, in a broad sense, has many psychological antecedents and there are considerable material limitations present in any decision-making situation. If we are ever to escape the compensatory cycle of environmental remediation, it is the very moment of decision that must be understood and addressed.

Moreover, all of the studies cited above found positive effects; that is, the researchers were able to induce the desired behaviors. A parallel strand of research—albeit less focused on inducing certain behaviors— has been evolving at the same time in the field of environmental education (EE).

In practice this difference is subtle, but likely responsible for why 'knowledge' and informedness continue to be the most commonly used proxies for measuring the effect of an EE program (Heimlich & Ardoin, 2008) What is needed if we are to develop a method for

producing long-lasting behavioral change toward more ecologically responsible decisions is blending of certain elements of the two strands. EE primarily focuses on information attitudes as a means of producing change (Heimlich & Ardoin, 2008; Pooley & O'Conn 2000).

While these approaches have been met with generally disappointing results, the foundational aim is correct. That is, information is assumed to be able to affect behavi across many domains. The logic here states that if people understand what pollutes wat and what wastes trees, they can employ this information in myriad situations producing le destructive behavior across domains. The one-off initial position that these studi commence from, however, produces a bias in terms of analysis of resultant behavior. Tl assumption that information necessarily informs behavior is difficult to move past; this ten to bias EE research toward improving characteristics of information delivery, such relatability and framing, as a means of improving its effectiveness.

The psychology research more fully understands the processes involved in informatic processing and behavior in general, but due to the experimental environment in which muc of these theories are tested, there tends to be a near-term bias. That is, factors are identifie that cause a behavior in an immediate setting. There are studies in both fields that devia from the generalizations depicted here, but such studies are in the minority.

What is needed is a psychological construct that is durable and robust in that it is n easily or quickly adapted to or bent by new situations and contexts, yet still constructed developed so as to be shapeable. This construct must also be predictive of behavior; it mu function as how information is hoped to function in the EE literature.

That is, it is not just active in certain environments but must be present in all, or nearl all, decision-making environments. Furthermore, the influence it has on behavior must b unidirectional—it must consistently push behavior toward less environmentally harmful consumptive decisions. This unidirectional influence is akin to a behavioral reorientatio Self-identity has emerged as a construct fitting these requirements. The ways in which sel identity operates on behavior is discussed in a later section, as is how an ecologicall responsible reorientation could be attached to it.

The research presented here applies social psychclogical theory to analyze why E programs intended to foster ecologically responsible behavior have been met with margina and sporadic success. Why many techniques do not succeed in this regard is important t understand in order to better inform future attempts at fostering this behavior. Then, drawin predominantly on research in the field of automatic and controlled cognitive processing, novel approach for operationalizing this research in EE programming—defined for th purpose of this analysis in the following section—in order to achieve a sustainabl relationship between people and natural resources in perpetuity is proposed.

Information and Attitudes

Before approaching EE from the perspective of psychology, it is important to clarif how EE is conceptualized for the purpose of this analysis. The term 'environmenta education' in this paper is conceptualized in a broad sense to include all educationa programs, information campaigns, or any other organized effort at confronting peoples' understanding of, attitudes toward, or behavior affecting our natural resources.

This is consistent with the literature in the field in that articles in EE journals have analyzed everything from brief, school-based environmental literacy interventions (Goodwin, et al., 2010), informal environmental programs in state parks (Negra and Manning, 1997), residential nature-based summer camps (Dresner, et al., 1994), popular media such as the documentary 'An Inconvenient Truth' (Nolan, 2010), and everything in between.

Research on the causes, definitions, and consequences of ecologically responsible behavior have been analyzed from the perspective of virtually every social science. However, EE has long been the operationalized arm of this work (Disinger, 1982). The majority of literature in the field of EE that considers the larger, societal role of environmental education takes behavioral change, in varying degrees of explicitness, to be the ultimate purpose of these programs (Hungerford & Volk, 1990; Kollmus & Agyeman, 2002; Nolan, 2010; Goodwin, et al., 2010; Pomerantz, 1990-91; Rioux, 2011; Zelezny, 1999).

That is not to say, however, that there are no EE researchers or practitioners who dissent from this perspective. The opposition to this function of EE is perhaps most directly expressed in an article by CourtneyHall and Rogers (2002), where the authors criticize Kollmuss and Agyeman's (2002) work which attempts to bridge the gap between the educational understanding of behavioral antecedents with psychological principles. This debate stems primarily from an ethical questioning of endeavoring to directly change peoples' behavior. The central rift over which this debate forms is that of behavioral volition.

This debate arises when one views promoting proenvironmental behavior as supplanting an individual's volitional behavior with adherence to a predetermined program or set of behavioral objectives. The underlying logic of this debate assumes that achieving behavioral change necessarily means achieving compliance with a set of discrete behaviors that are determined by the particular program creator or manager. The research presented here sidesteps this debate by proposing a new definition of pro-environmental behavior that deviates from the discrete behavior model. Furthermore, the direct consequences of environmental harm—increased food prices, restricted travel due to extreme weather events, increased insurance costs, behavioral constraints imposed as a result of environmental regulation, etc. (Tol, 1996)—all put limitations on the behavior of individuals.

Either as a result of the consequences of anthropogenic harm or the policies and practices designed to address this harm, individuals' behavior will be directly affected. In light of the broader, societal context in which this debate is situated, the ethical question of affecting behavior becomes moot. For purposes of clarification, the model presented here does take behavioral change, albeit defined differently, to be its purpose.

Information

From an educational standpoint, the objective of behavioral change is problematic. Education relies heavily on conveying information as a means of affecting behavior, and as an established body of research now indicates, being informed is only marginally and often unreliably predictive of related behavior (Thapa, 2010; Kollmus and Agyeman, 2002; Kaiser, et al., 1999). Comprehensive reviews of information campaigns conducted by Stern (1999) and Schultz (2002) found, unequivocally, that these efforts do not result in long-lasting changes in behavior.

The most recent and statistically rigorous meta-analysis conducted by Osbaldiston and Schott (2012) on the effects of different EE interventions found that information (coded 'instruction' in their study) produced only marginal effects. This study is particularly important as it used observed behavior, opposed to selfreported behavior, as its dependent variable.

The results of information campaigns designed to engage workplace conservation behaviors (Staats, Wit, & Midden, 1996; Siero, et al., 1996) and those in more traditional educational settings have been met with similarly mixed results (Goodwin, et al., 2010; Kaiser, 1999). A counterpoint to the majority of this work comes from Zelezny (1999), who did find that schoolbased interventions produced small but positive results.

However, the author cautioned the use of the study in making broader inferences regarding these results due to often poor research methods employed in many studies as well as reliance on self-reported behavior as a measure of resultant behavioral change. Information can be distorted, ignored, selectively employed, or overshadowed by a host of situational factors that are endemic to virtually all decision-making environments.

The saliency of particular social norms (Cialdini, Reno, & Kallgren, 1990); behavioral conformity as a function of social belonging or as a source of information itself (Asch, 1956; Festinger, 1954; Aronson and O'Leary, 1982-83); accessibility of an attitude regarding the action or object at hand (Fazio, 1989); and the saliency of a social role or social-identity can all affect how information is employed in decision-making (Ross, Amabile, & Steinmetz, 1977). This list is by no means comprehensive but simply intended to demonstrate that there are a variety of ways in which information can be given a backseat role.

Furthermore, these processes are complex and the degree to which they affect behavior or precisely how they interact with information is not done justice simply by listing them. As it is not the purpose of this article to fully elucidate these theories, suffice it to say, information alone is only one small piece of the behavior equation. There is one pernicious psychological mediator—cognitive dissonance—that bears tremendously on how individuals engage information and warrants a brief discussion. Much of the information we receive regarding the use and state of our natural resources is disconcerting to say the least. Two of the most fundamental tenets of modern psychology state that human beings have a deep motivation to perceive our world accurately (competency needs) and to perceive ourselves as decent, good people (self-esteem)—that is, to be correct and to protect our egos (Aronson, 2010, p. 167-175; Markus, 1977). These needs, however, can be put at odds with one another. The theory of cognitive dissonance (Festinger, 1954; Aronson, 1969) states that when an individual holds two psychologically inconsistent cognitions, a state of psychological tension is created.

This tension is processed in much the same way the brain processes pain; instinctively, there is a need to reduce this psychological tension. The process that reduces this tension is generally termed rationalization—that is, one automatically changes, dismisses, or adds cognitions that reduce the tension. Cognitive dissonance reduction operates below the level of conscious awareness; it is a fundamental aspect of the so-called psychological immune system. Cognitive dissonance is not only reactive, however; the longer this process operates on cognition or if the threat is in a domain with which the individual strongly identifies, he or she may come to internalize these distortions as deeply held attitudes, beliefs, and values, shaping behavior and judgments in subsequent related situations. In this way, dissonance becomes proactive as well.

There are a host of psychological phenomenon for which dissonance reduction is responsible, such as blaming the victim (Janhoff-Bulman, Timco, & Carli, 1985), viewing inevitable actions or irrevocable decisions more favorably (Kay, Jimenez, & Jost, 2002), the separation of alternatives after a decision has been made (Gilbert, 2006), the principle of justification of effort (Gerard & Mathewson, 1966), and the sequential escalation of commitment to a cause (Freedman and Fraser, 1966).

Dissonance reduction can often lead to maladaptive environmental behavior in that it may prevent individuals from accurately perceiving destructive behaviors. From the perspective of producing ecologically responsible behavior, cognitive dissonance is a tremendous barrier. For instance, Global Warming presents a material threat to an individual. The information that he or she is actively engaging in behavior that is increasing the likelihood and severity of that threat creates cognitive dissonance. There would be a variety of ways to reduce this dissonance, but convincing oneself that the threat is not as severe as is reported is the likely option. And indeed, researchers have found negative correlations between knowledge of global warming and stated concern (Kellstedt, Zahran, & Vedlitz, 2008), as well as with other 'sick baby'-type environmental appeals (Obermiller, 1995).

Furthermore, EE interventions designed to target cognitive dissonance with respect to pro-environmental behaviors have been found to produce positive results in terms of behavioral change, lending credibility to the importance of acknowledging cognitive dissonance's role in mediating how individuals engage environmental information and pro-environmental behaviors (Osbaldiston & Schott, 2012).

Attitudes

Recognizing the weak relationship between information and ecologically responsible behavior, a growing number of EE programs and education researchers are looking to attitudes as a more durable and potent behavioral antecedent (Pooley & O'Connor, 2000). While there is evidence that attitudes—under certain conditions, which will be discussed shortly—can be reasonably predictive of behavior, there is tremendous variability within the EE literature regarding the precise definition and operational characteristics of attitudes. Attitudes are a more nebulous psychological construct than 'information' or 'knowledge' and no less subject to biases of their own. Three major patterns emerge regarding the ways in which attitudes are inconsistently addressed in the EE literature.

It is important to understand these misunderstandings and misapplications to better understand why EE programs—even those which effectively target this more sophisticated behavioral mediator—often fall short of their objective. First, while many of these studies are correct in generally treating attitudes as the evaluative or emotional component of a corresponding cognition, they vary widely in what they define as the object of this attitude. Attitudes necessarily form in relation to an object of thought. If the purpose of EE is to change behavior, then attitudes are not measured simply to gauge general affect toward the environment. Attitudes are measured as a means of determining an individual's desire to behave in a responsible manner toward these objects.

This is evidenced in the way that the terms attitudes, beliefs, values, and behavior are used indiscriminately in many studies (Nolan, 2010; Negra & Manning, 1997). In the EE literature, and much of the environmental psychology literature as well, attitude objects can

be placed into two general categories. The first is evaluations of tangible resources themselves, such as 'wildlife' (Dettmann-Easler and Pease, 1999); and the second is evaluations of the human actions that affect these resources, such as those used to measure environmental concern in the commonly used New Ecological Paradigm Scale (Stern, Dietz, Guagnano, 1995).

From the perspective of actual behavior, however, it is tremendously important how attitude objects are defined if they are to be understood as informing decisions. One of the reasons that environmental attitude-behavior convergence is so low (Thapa, 2010) is because many different attitudes can be made salient in any given situation and even those that would seem pertinent to the particular behavior may vary in their accessibility from situation to situation (Fazio,1989). It is unlikely that the broad, abstract attitude object of 'the environment' or 'natural resources' will be made salient in many decision-making situations.

This is consistent with Ajzen and Fishbein's (1980) Attitude Theory, which predicts that global (in the psychological sense to mean all-encompassing) attitudes are poor predictors of specific behaviors. Conversely, the more limited behavioral attitude objects such as 'recycling' will only be made salient in very specific situations. And even here it is entirely possible that attitudes regarding other present objects—such as the stereotyped image of a 'recycler'—could be made more salient and overshadow positive attitudes toward recycling. The second misapplication in the literature regarding attitudes, and this has been largely alluded to in the discussion of attitude objects, pertains to another facet of their relationship to behavior. The influence that attitudes have on behavior is generally overstated or never explicitly discussed, with the underlying assumption being that attitudes are predictive of behavior (Heimlich & Ardoin, 2008; Pooley & O'Connor, 2000). Attitudes predict behavior insofar as they are readily accessible, salient in the decision environment, and not overwhelmed by contradictory norms, social roles, or material limitations (Ajzen & Fishbein, 1980).

As with the overstatement of the impact of information in the decision-making process, a similar first-person actor/observer bias is likely responsible for the dogged adherence in the EE literature to the notion that attitudes predict behavior. Lastly, there is a misunderstanding of the ways in which attitudes are formed and the purpose they serve in navigating complex environments (Heimlich & Ardoin, 2008). Attitudes operate as heuristic devices (Kahneman & Tversky, 1973). Heuristic devices are cognitive shortcuts used to categorize and process the tremendous volume of stimuli present in everyday environments. The emotional component that distinguishes attitudes from opinions is particularly important because these immediate emotional responses—a flash of emotional evaluation— operate much faster and can process many stimuli simultaneously (Bohner & Dickel, 2011). Attitudes, then, act as the stored evaluations of objects of thought. Understood in this sense, the attitude-behavior relationship is actually bidirectional (Valente, et al., 1998). Attitudes inform behaviors but behaviors also inform attitudes. This bidirectional relationship also helps explain why EE programs that actively involve participants in a given behavior are more effective at changing attitudes; these programs alter the affect associated with the behavior.

What psychological construct, then, are EE researchers and practitioners to look toward to foster pro-environmental behavior? The Identity-Based Environmental Education (IBEE) model posits that self-identity is a more robust and potent behavioral mediator that is still malleable so as to be able to produce long-lasting behavioral change. However, before

discussing how a pro-environmental identity may be developed, it is important to understand precisely the cognitive processes that underlie identity as a behavior-producing construct.

Conclusion

Throughout all of the various evolutions that the field of environmental education has undergone, one facet of EE has remained stable. EE has always and continues to endeavor to create a more sustainable and stable relationship between humanity and the natural resources upon we which we rely. Viewed from this perspective, the challenges that EE faces in this fundamental aim are greater and more pressing now than at any point in our planet's history. These new challenges, however, create the opportunity for new solutions.

The research in this paper presents one possible new approach for addressing environmental issues that are increasingly global in their impacts and diffuse in their causes. All environmental issues arise as a function of consumption and the Identity-Based Environmental Education model presents one approach that stands to address this fundamental relationship. This research is just the tip of the iceberg, however. If self-identity based EE is to become a reality, a great deal more study is required.

Psychological constructs that are as fundamental to human functioning as the 'self' are complex in their operation and sensitive in their development. More research is needed to better understand the formation of self-identities as well as how an ecologically-responsible behavioral orientation may be attached. The research in this paper can serve as a foundation for others, or at least the beginning of a search for new and creative solutions in disciplines that have yet to be tapped in the fight to save our planet.

References:

Ajzen, I., & Fishbein, M. (1980) Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall.

Aronson, E. (1969). The theory of cognitive dissonance: A current perspective. Advances in Experimental Social Psychology, 4, 1-34.

Aronson, E. (2010). The Social Animal. New York, NY: Worth Publishers.

Aronson, E., & O'Leary, M. (1982-1983). The relative effectiveness of models and prompts on energy conservation: A field experiment in a shower room. Journal of Environmental Systems, 12, 219-224.

Asch, S. (1956). Studies of independence and conformity: A minority of one against a unanimous majority. Psychological Monographs, 70(9), No. 416. doi: 10.1177/0013916511402673

Bargh, J. A. (1989). Conditional automaticity: Varieties of automatic influence in social perception and cognition. In Bargh, J. A. & J. S. Uleman (Eds.) Unintended thought, Guilford Press, 51-69.

Baumeister, R., Masicampo, E., & Vohs, K. (2011). Do conscious thoughts cause behavior? Annual Review of Psychology, 62, 331-361. doi: 10.1146/annurev.psych.093008.131126

Blanton, H. & Christie, C. (2003). Deviance Regulation: A theory of action and identity. Review of General Psychology, 7, 115-149. doi: 10.1037/1089-2680.7.2.115

Bohner, G., & Dickel, N. (2011). Attitudes and attitude change. Annual Review of Psychology, 62, 391-417.

Bramston, P., Pretty, G., & Zammit, C. (2011). Assessing environmental stewardship motivation. Environment and Behavior, 43(6), 776-788. doi:10.1177/0013916510382875

hawla, L. & Cushing, D. F. (2007) Education for strategic environmental behavior. Environmental Education Research, 13(4), 437-452. doi: 10.1080/13504620701581539

larke, A., Bell, P. A., & Peterson, G. L. (1999). The influence of attitude priming and social responsibility on the valuation of environmental public goods using paired comparisons. Environment and Behavior, 31(6), 838-857. doi:10.1177/00139169921972371

ialdini, R., Reno, R., & Kallgren, C. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public spaces. Journal of Personality and Social Psychology, 58, 1015-1026. doi: 10.1037/0022-3514.58.6.1015

ialdini, R. & Goldstein, N. (2004). Social influence: compliance and conformity. Annual Review of Psychology, 55, 591-621. doi: 10.1146/annurev.psych.55.090902.142015

onnor, M. & Armitage, C. (1998). Extending the theory of planned behavior: A review and avenues for further research. Journal of Applied Social Psychology, 28(15), 1429-1464.

orraliza, J. A., & Berenguer, J. (2000). Environmental values, beliefs, and actions: A situational approach. Environment and Behavior, 32(6), 832-848. doi:10.1177/00139160021972829

ourtney-Hall, P., & Rogers, L. (2002). Gaps in Mind: Problems in environmental knowledgebehavior modeling research. Environmental Education Research, 8(3), 283-297. doi: 10.1080/1350462022014543 8

ettmann-Easler, D., & Pease, J. (1999). Evaluating the effectiveness of residential environmental education programs in fostering positive attitudes toward wildlife. Journal of Environmental Education, 31(1), 33-39. doi: 10.1080/00958969909598630

ijksterhuis, A., Chartrand, T., & Aarts, H. (2007). Effects of priming and perception on social behavior and goal pursuit. In Social Psychology and the Unconscious: The Automaticity of Higher Mental Processes, ed. JA Bargh, pp. 51–132. Philadelphia, PA: Psychol. Press

isinger, J. (1982). Environmental education research news. The Environmentalist, 2, 285288. Evans, Jonathan St. B. T. (2008). Dual-processing accounts of reasoning, judgment, and social cognition. Annual Review of Psychology, 59, 255-278. doi: 10.1146/annurev.psych.59.103006.093629

azio, R.H. (1989). On the power and functionality of attitudes: the role of attitude accessibility. In A.R. Pratkanis, S.J. Breckler, & A.G. Greenwald (Ed.s), Attitude structure and function (pp. 153-179). Hillsdale, NJ: Erlbaum.

estinger, L. (1954). A theory of social comparison process. Human Relations, 7, 117-140. doi: 10.1177/001872675400700202 Fischhoff, B. (1975). Hindsight is not equal to foresight: The effect of outcome knowledge on judgment under uncertainty. Journal of Experimental Psychology: Human Perception and Performance, 1, 288-299. doi: 10.1037/0096-1523.1.3.288

reedman, J., & Fraser, S. (1966). Compliance without pressure: The foot-in-the-door technique. Journal of Personality and Social Psychology, 4(2), 195-202. doi: 10.1037/h0023552

rard, H. & Mathewson, G. (1966). The effects of severity on initiation on liking for a group: A replication. Journal of Experimental Social Psychology, 2, 278-287. doi: 10.1016/00221031(66)90084-9 Gilbert, D. (2006). Stumbling on Happiness. New York: Knopf.

TABLE OF CONTENT