PROCEEDINGS OF

The IRES

INTERNATIONAL CONFERENCE

Date: 16th -17th February, 2018  |  Venue: Zurich, Switzerland

In Association With
About IRAJ Research Forum (IRF):

The IRAJ Research Forum is an International non-profit academic association under ‘Peoples Empowerment Trust’ with the stated goals of promoting cooperation among scientists, defending scientific freedom, encouraging scientific responsibility, and supporting scientific education and science outreach for the betterment of all humanity. It is the one of the world’s largest and most prestigious general scientific society.

Objective of IRF:

- To provide a world class platform to researchers to share the research findings by organizing International/National Conferences.
- To use the research output of the conference in the class room for the benefits of the students.
- To encourage researchers to identify significant research issues in identified areas, in the field of Science, Engineering, Technology and Management.
- To help dissemination of their work through publications in a journal or in the form of conference proceedings or books.
- To help them in getting feedback on their research work for improving the same and making them more relevant and meaningful, through collective efforts.
- To encourage regional and international communication and collaboration; promote professional interaction and lifelong learning; recognize outstanding contributions of individuals and organizations; encourage scholar researchers to pursue studies and careers in circuit branches and its applications.
- To set up, establish, maintain and manage centers of excellence for the study of /on related subjects and discipline and also to run self supporting projects for the benefit of needy persons, irrespective of their caste, creed or religion.

About TheIRES:

The Institute of Research Engineers and Scientists (TheIRES) is a non-profit organization that promotes the Engineering and Technology, related latest developments and issues to be discussed and experimented through interactions amongst the researchers and academician across the globe at a common platform in association with The IIER, Academics World & ISER.
Conference Committee

Program Chair:

Dr. P. Suresh
M.E, Ph.D. Professor and Controller of Examinations,
Karpagam College of Engineering,
Coimbatore, India

Hani N Hermiz
Agricultural College University of Salahaddin,
Erbil.

Conference Manager:
Mr. Bijan Kumar Barik
Mob: +91-9776047497

Conference Convener:
Miss. Priyanka Yadav, TheIRES
Mob: +91-7809593053

Publication Head:
Mr. Manas Ranjan Prusty, IRAJ, India

INTERNATIONAL ADVISORY MEMBERS

Prof. Goodarz Ahmadi,
Professor, Mechanical and Aeronautical Engineering,
Clarkson University, USA

Dr Chi Hieu Le,
Senior Lecturer, University of Greenwich. Kent ME4 4TB.
United Kingdom

PROF. (ER.) Anand Nayyar
Department of Computer Applications & I.T KCL Institute of Management and Technology, Jalandhar
G.T. Road, Jalandhar-144001, Punjab, India

Prof. R. M. Khaire,
Professor, Dept. Of Elex. and Telecommunication,
B, V University, India

Dr. P. Suresh,
Professor, Karpagam College of Engineering, Coimbatore, Tamilnadu

Mark Leeson
Associate Professor (Reader)
Area of Expertise: nanoscale communications,
evolutionary algorithms, network coding and communication systems

Dr. P. K. Agarwal
Professor, Deptt. of Civil Engineering, MANIT Bhopal, Ph. D: IIT Kanpur
M.E: Civil Engg.IIT Roorkee, Membership: Indian Road Congress (IRC), Institute of Urban Transport (IUT)

Shahab Shahbazpanahi
Islamic Azad University, Department of Civil Engineering, Sanandaj, Kurdistan, Iran,
PhD (Structural Engineering),
University Putra Malaysia, Malaysia, 2009-Present

Harun Bin Sarp
Head of Research and Innovation Dept., UnKL-MICET
Doctorate: Université de La Rochelle, France, Member
International Society of Pharmaceutical Engineer, Singapore Chapter

Dr. Bilal Ali Yaseen Al-Nassar
The World Islamic Sciences and Education University (WISE)
Faculty of Business and Finance
Department of Management, Information System (MIS), Amman-Jordan
Dr. Md. Al-Amin Bhuiyan
Associate Professor
Dept. of Computer Engineering
King Faisal University
Al Ahssa 31982, Saudi Arabia

Prof. (Er.) Anand Nayyar
Department of Computer Applications & I.T.
KCI. Institute of Management and Technology, Jalandhar
G.T. Road, Jalandhar-144001
Punjab, India

Prof. Aleksandr Cario
institution or Company: West Pomeranian University of Technology, Szczytn

Dr. P. K. Agarwal
Professor, Deptt. of Civil Engineering, MANIT Bhopal, Ph. D: IIT Kanpur
M.E: Civil Engg. IIT Roorkee, Membership: Indian Road Congress (IRC), Institute of Urban Transport (IUT)

Dr. VPS Naidu
Principal Scientist & Assoc. Prof., MSDF Lab, FMCD
CSIR - National Aerospace Laboratories, Bangalore, India

Mr. P. Sita Rama Reddy
Chief Scientist, Mineral Processing Department, CSIR - Institute of Minerals & Materials Technology
Bhubaneswar, India, M.Tech. (Chem. Engg., IIT, KGP)

Dr. P.C. Srikant, 
Professor & Head, E&C Dept, Malnad College of Engineering, Karnataka
Senior Member IEEE, Secretary IEEE Photonics Society,
M.Tech. IIT, Kanpur, Ph.D: In EEE Photonics lab

Prof. Lali Kumar Awasthi,
Professor, Department of Computer Science & Engineering
National Institute of Technology(NIT-Hamirpur),
Ph.D, IIT, Roorkee, M. Tech, IIT, Delhi

Dr. Chandra Mohan V.P.
Assistant Professor, Dept. of Mech. Engg., NIT Warangal,
Warangal. Ph.D: Indian Institute of Technology(IIT),Delhi
M.B.A: Alagappa University

Prof. L. Suneetha,
Associate Professor, Dept. of ECE, AITS, Tirupati, India

Dr.s. Chandra Mohan Reddy,
Assistant Professor (SG) & Head, Dept. of Electronics & Communication Engineering, JNTUA College of Engineering, Pulivendula,
Ph.D, J.N. T. University Anantapur, Anantapuramu

Gurudatt Anil Kulkarni,
I/C HOD E&TC Department, MARATHWADA MITRA MANDAL’S POLYTECHNIC

***
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Authors</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.</td>
<td>Information Literacy of Foreign Undergraduate Students</td>
<td>Siriporn Poolsuwan, Thanakorn Uipanith, Ratanavadee Takerngsukwatana, Ansaya Arumpoolsub</td>
<td>109-113</td>
</tr>
<tr>
<td>27.</td>
<td>The Application of the Principal-Agent Theory to Thai Governmental Management: A Case Study of Suansunandharajabhat University</td>
<td>Vilasinee Jintalikhitdee</td>
<td>114-117</td>
</tr>
<tr>
<td>28.</td>
<td>Guideline of Cultural Tourism Management Case Study The Arts and Culture Office at Suansunandharajabhat University</td>
<td>Weera Weerasophon</td>
<td>118-121</td>
</tr>
<tr>
<td>29.</td>
<td>English Learning Strategies of Chinese Major Students</td>
<td>Wichuda Kunnu, Chantima Wangsomchok</td>
<td>122-124</td>
</tr>
<tr>
<td>30.</td>
<td>Domestic Tourists Motivation Towards Kamchanod, Udonthani, Thailand</td>
<td>Kankanith Kullachatteeratham, Kwankhao Poonperm</td>
<td>125-128</td>
</tr>
<tr>
<td>31.</td>
<td>Demand Forecasting of Emergency Resource in Humanitarian Supply Chain</td>
<td>Iman Ghasemian Sahebi, Ahmad Jafarnejad</td>
<td>129-136</td>
</tr>
</tbody>
</table>

***
EDITORIAL

It is my proud privilege to welcome you all to the TheIRES International Conference at Zurich, Switzerland. I am happy to see the papers from all part of the world and some of the best paper published in this proceedings. This proceeding brings out the various Research papers from diverse areas of Science, Engineering, Technology and Management. This platform is intended to provide a platform for researchers, educators and professionals to present their discoveries and innovative practice and to explore future trends and applications in the field Science and Engineering. However, this conference will also provide a forum for dissemination of knowledge on both theoretical and applied research on the above said area with an ultimate aim to bridge the gap between these coherent disciplines of knowledge. Thus the forum accelerates the trend of development of technology for next generation. Our goal is to make the Conference proceedings useful and interesting to audiences involved in research in these areas, as well as to those involved in design, implementation and operation, to achieve the goal.

I once again give thanks to the Institute of Research and Journals, TheIIER, TheIRES for organizing this event in Zurich, Switzerland. I am sure the contributions by the authors shall add value to the research community. I also thank all the International Advisory members and Reviewers for making this event a Successful one.

Editor-In-Chief

Dr. P. Suresh
M.E, Ph.D. Professor and Controller of Examinations,
Karpagam College of Engineering.,
Coimbatore, India
INFORMATION LITERACY OF FOREIGN UNDERGRADUATE STUDENTS

1SIRIPORN POOLSUWAN, 2THANAKORN UIPANITH, 3RATANAVADEE TAKERNGSUWKATANA, 4ANSAAYA ARUNPOOLSUB

1,2,3,4Information Sciences Department, Suan Sunandha Rajabhat University, Bangkok, Thailand
E-mail: 1 siriporn.po@ssru.ac.th, 2 thanakorn.ui@ssru.ac.th, 3 ratanavadee.ta@ssru.ac.th, 4 ansaya.ar@gmail.com

Abstract - This survey research is a case study of Chinese undergraduate students in Tourism Industry and Hospitality Management Program, Suan Sunandha Rajabhat University. The research aims to examine information literacy of Chinese undergraduate students and to compare the information literacy between Chinese and Thai undergraduate students. Data was gathered by using multiple choice test from 49 Chinese and 280 Thai undergraduate students in Tourism Industry and Hospitality Management Program, Suan Sunandha Rajabhat University. Mean, percentage, standard deviation and T-Test were applied for data analysis. This research revealed that Information literacy of Chinese undergraduate students possessed in moderate level (\( \bar{x} = 14.76 \), S.D. = 2.10), and the information literacy level between Chinese undergraduate students and Thai undergraduate students was not statistically significant different at 0.05.

Index Terms - Information literacy, undergraduate students.

1. INTRODUCTION

Information is vital and crucial to the society as it is humanity's intellectual heritage recorded in many medias. Nowadays, mankind is able to exploit information for quality of life improvement. In addition, when facing problems, accurate and up-to-date information is involved in decision-making and problem-solving [1], [2]. Information has become an essential tool in livelihood in every profession. In searching of information, even a large amount of information can be found without relying on technology. Some is necessary to rely on it. The technologies such as computer network, telecommunication and database are important tools that bring information closer to us. [3]

Several campaigns have been organized by academic libraries to improve existed undergraduate student's information literacy, e.g. library tour, library orientation, bibliographic instruction, training on database searching, library skill instruction and plagiarism. Meanwhile the Association of College and Research Library or ACRL [4] has stipulated undergraduate students' 5 information literacy competency standards: 1) the information literate student determines the nature and extent of the information needed 2) the information literate student accesses needed information effectively and efficiently 3) the information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system 4) the information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose and 5) the information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

Moreover, W. Phalanan[5] has stipulated 4 information literacy standards namely 1) to be aware whenever the information should be utilized, 2) to access information with suitable means, 3) to be able to assess information based on the key concept and 4) to be able to utilize information efficiently. Seemingly, the definition of information literacy is the knowledge, competency and skill of individual for accessing information, assessing information and efficiently utilizing information in every form.

Apart from this, information is essential in lifelong learning. An information literate helps individual to possess several skills; i.e. critical thinking (analytical and discreet thinking), language skills and library skills. Information literacy plays many important roles; i.e. education (formal education, non-formal education and informal education and lifelong education). In routine life, with the support of information literate, individual can analyze, assess and utilize information for their own highest benefits. In profession, individuals can search for information in necessity of their profession and society. In the issues of economics and politics, individuals must possess information literacy in order to adapt to these aspects [1].

In the age of digital-based economy, the information literate supports individuals to gain advantages in all aspects, such as the digital media which cover 80% of them: digital TV, online radio, outdoor media which its content is controlled by ICC (Internet Control Center), electronic game or even mobile phone. Thus, the information literacy is essential for everyone as it is a key leading tool to success in modern way of life [6]. When information retrieving or searching for information, an objective must be determined in order to identify a scope to narrow the information source rapidly, accurately and accordingly. In doing so, it relies on data retrieval's skill and foundation of knowledge, i.e. searching engine usage, appropriate keyword in line with searching topic, appropriate

Proceedings of 103rd The IRES International Conference, Zurich, Switzerland, 15th-17th February, 2018
searching method, conjunction usage in order to specify the searching scope resulting in accurate and desired searching results or data directory [7].

Currently, the demand of personnel who is well-versed in languages in both public and private sectors is high. In 2003, Faculty of Humanities and Social Science signed an academic Memorandum of Understanding (MOU) of education management with Yunnan Normal University's students (Joint Venture 2+2 Bachelor's Degree Program). In this regard, the Chinese students from Yunnan Normal University's students shall study in the university for 2 years and they shall study in Tourism Industry Program, Faculty of Humanities and Social Science, Suan Sunandha Rajabhat University or SSRU for other 2 years (third and fourth years). Chinese students have been studied in Tourism Industry Program since 1st semester of academic year 2005. In 2011, the program changed its title to Tourism Industry and Hospitality Management Program or THIM Program[8]. Since then, academic collaboration on education management have been made between both universities. Nevertheless, as an exchange students studying abroad, language usage, culture, livelihood and information literacy are different from Thai students, therefore, a study regarding information literacy for undergraduate students in THIM of SSRU Program should be conducted.

II. LITERATURE REVIEWED

Several campaigns have been held by higher education libraries to improve existed undergraduate student's information literacy, i.e. library tour, library orientation, bibliographic instruction, training on database searching, library skill instruction, plagiarism. However, it was found that their information literacy was moderate [9]. According to the study by P. Jiaokok [10], the information literacy of Srinakharinwirot University's undergraduate students was moderate and different programs had varied information literacy with statistical significance at 0.1. S. Baikaikom [11] found that overall information literacy of Kasetsart University's 1st-4th year students was moderate and S. Ratajchabhat [12] conducted a study on information literacy on 17 higher education library websites in USA, Australia and Hong Kong and found that only 29.41% had full information literacy according to 5 information literacy competence standards of ACRL and ALA.

III. METHODOLOGY

This survey research is a case study of Chinese undergraduate students, Tourism Industry and Hospitality Management Program, Suan Sunandha Rajabhat University. The research aims to examine information literacy of Chinese undergraduate students, and to compare the information literacy between Chinese and Thai undergraduate students. Data was gathered by using multiple choice test from 49 Chinese and 280 Thai undergraduate students in Tourism Industry and Hospitality Management Program, Suan Sunandha Rajabhat University. Mean, percentage, standard deviation and T-Test were applied for data analysis. A multiple-choice test was utilized as a tool and had 2 parts: The first part - General data of Chinese and Thai undergraduate students and the second part - A test to measure information literacy level of Chinese and Thai undergraduate students in THIM Program, SSRU. Mean, percentage, standard deviation and T-Test were applied. Data collection has been conducted by distributing the test to the students since 19 October 2016 until 25 November 2016. Data analysis are shown in below tables (see Table I-Table V).

Part 1: General data of Thai undergraduate students and Chinese undergraduate students, THIM Program, SSRU according to gender, class and examination, orientation participation of online library, service usage and library skills

<table>
<thead>
<tr>
<th>TABLE I</th>
<th>Percentage of respondents according to gender, class &amp; examination, orientation &amp; participation of online library, service usage and library skills</th>
</tr>
</thead>
</table>

Proceedings of 103rd The IRES International Conference, Zurich, Switzerland, 16th-17th February, 2018

110
Information Literacy of Foreign Undergraduate Students

Part 2: Information literacy of Chinese and Thai undergraduate students in TIHM program, SSRU.

<table>
<thead>
<tr>
<th>Type of Information literacy</th>
<th>Full score</th>
<th>Lowest</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Highest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Determines the nature and extent of the information needed</td>
<td>6</td>
<td>0-1.2</td>
<td>1.21</td>
<td>2.41</td>
<td>3.01</td>
<td>4.81</td>
</tr>
<tr>
<td>2. Accesses needed information effectively and efficiently</td>
<td>10</td>
<td>0-2.00</td>
<td>2.01</td>
<td>4.01</td>
<td>6.01</td>
<td>8.01</td>
</tr>
<tr>
<td>3. Evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system</td>
<td>6</td>
<td>0-1.2</td>
<td>1.21</td>
<td>2.41</td>
<td>3.61</td>
<td>4.81</td>
</tr>
<tr>
<td>4. Uses information effectively to accomplish a specific purpose</td>
<td>4</td>
<td>0-0.80</td>
<td>0.81</td>
<td>1.61</td>
<td>2.41</td>
<td>3.21</td>
</tr>
<tr>
<td>5. Understands many of the economic, legal, and social issues surrounding the use of information and access and uses information ethically and legally</td>
<td>4</td>
<td>0-0.80</td>
<td>0.81</td>
<td>1.61</td>
<td>2.41</td>
<td>3.21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>6.00</strong></td>
<td><strong>6.31</strong></td>
<td><strong>12.00</strong></td>
<td><strong>18.00</strong></td>
<td><strong>24.00</strong></td>
</tr>
</tbody>
</table>

**TABLE II** Criteria for interpretation of information literacy scores

<table>
<thead>
<tr>
<th>Type of Information literacy</th>
<th>Full Score</th>
<th>( \bar{x} )</th>
<th>S.D.</th>
<th>Information literacy level</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Determines the nature and extent of the information needed</td>
<td>6</td>
<td>3.19</td>
<td>0.49</td>
<td>Moderate</td>
<td>2</td>
</tr>
<tr>
<td>2. Accesses needed information effectively and efficiently</td>
<td>10</td>
<td>4.36</td>
<td>0.36</td>
<td>Moderate</td>
<td>1</td>
</tr>
<tr>
<td>3. Evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system</td>
<td>6</td>
<td>2.92</td>
<td>0.49</td>
<td>Moderate</td>
<td>3</td>
</tr>
<tr>
<td>4. Uses information effectively to accomplish a specific purpose</td>
<td>4</td>
<td>2.19</td>
<td>0.42</td>
<td>Moderate</td>
<td>4</td>
</tr>
<tr>
<td>5. Understands many of the economic, legal, and social issues surrounding the use of information and access and uses information ethically and legally</td>
<td>4</td>
<td>2.10</td>
<td>0.34</td>
<td>Moderate</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>14.76</strong></td>
<td><strong>2.10</strong></td>
<td><strong>Moderate</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>

From Table II, it was found that in overall, information literacy level of Chinese undergraduate students of TIHM Program, SSRU possessed moderate level (\( \bar{x} = 14.76, \) S.D. =2.10) and all 5 aspects were also in moderate level.
The Program, the examination and access and uses information ethically and legally

<table>
<thead>
<tr>
<th>Access and uses information ethically and legally</th>
<th>N</th>
<th>X</th>
<th>S.D.</th>
<th>S.E.</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thai</td>
<td>280</td>
<td>14.76</td>
<td>2.11</td>
<td>0.13</td>
<td>0.72</td>
<td>0.29</td>
</tr>
<tr>
<td>Chinese</td>
<td>49</td>
<td>14.75</td>
<td>2.06</td>
<td>0.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>329</td>
<td>29.51</td>
<td>4.17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE IV** Information literacy level of Thai undergraduate students, TIHM Program, SSRU in overall and in each aspect

From Table IV, it was found that in overall, information literacy level of Thai undergraduate students, TIHM Program, SSRU, possessed moderate level (X̄ = 15.41, S.D. = 0.90) and all 5 aspects were also in moderate level.

**Part 3: A comparison of information literacy between Chinese undergraduate students and Thai undergraduate students, TIHM Program, SSRU.**

**CONCLUSION**

According to this research on the information literacy of Foreign undergraduate students, TIHM program, SSRU, it can be concluded that

A. **Background of Respondents**

All respondents were 329 persons consisted of 49 Chinese and 280 Thai undergraduate students, TIHM Program, SSRU. The 49 Chinese undergraduate students consisted of 34 females (69.4%) and 15 males (30.6%) while 26 respondents taking classes and passing the examination (53.1%) and 23 respondents taking classes but not passing the examination (46.9%). The 280 Thai undergraduate students consisted of 230 females (82.2%) and 50 males (17.8%); 280 respondent taking classes and passing the examination and 280 respondents taking classes but not passing the examination (100%) and no respondents have never taken any class. In regard to online library orientation, 280 respondents have participated in the event (100%). As for library usage, 14 respondents used the service daily (40.7%), 91 of them used the service 2-3 times/week (32.5%), 46 of them used the service 1 time/week (16.1%), 29 of them used the service 1-2 times/month (10.7%) and no respondents have never used the service.

B. **Information literacy level of Chinese undergraduate students in TIHM Program, SSRU.**

According to the study, the results in Information literacy of Chinese undergraduate students, TIHM Program, SSRU possessed moderate level (X̄ = 14.76, S.D. = 2.10) and all 5 aspects were also in moderate level, i.e. accesses needed information effectively and efficiently (X̄ = 4.36, S.D. = 0.36), evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system (X̄ = 3.19, S.D. = 0.49), determines the nature and extent of the information needed (X̄ = 2.92, S.D. = 0.47), uses information effectively to accomplish a specific purpose (X̄ = 2.19, S.D. = 0.42), and understands many of the economic, legal, and social issues surrounding the use of information and access and uses information ethically and legally (X̄ = 2.10, S.D. = 0.34), respectively.

C. **Information literacy level of Thai undergraduate students in TIHM Program, SSRU.**

The results in Information literacy of Thai undergraduate students in TIHM Program, SSRU, possessed moderate level (X̄ = 15.41, S.D. = 0.90) and all 5 aspects were also in moderate level, i.e. accesses needed information effectively and efficiently (X̄ = 4.54, S.D. = 0.89) respectively.

D. **The Comparison of information literacy between Chinese and Thai undergraduate students.**

The result of the comparison of information literacy between Chinese and Thai regular undergraduate students in TIHM Program, SSRU, concluded that information literacy between Chinese and Thai undergraduate students were no statistically significant different at 0.05.
DISCUSSION

The comparison of information literacy between Chinese and Thai undergraduate students, THIM Program, SSRU, revealed that no statistically significant difference at 0.05 level owing to equal information literacy experience and usage in both groups resulting in same information literacy level, which was in conformity with the research of P. Sujitra [13]

FUTURE WORK

The findings could be used as data for primary information resource management, to improve information literacy instruction and library services in order to align library teaching and services more closely with the library user, and to promote information literacy skill for SSRU students.

ACKNOWLEDGMENT

This study was successful by financial support from Suan Sunandha Rajabhat University and many helps from my colleagues.

REFERENCES


