A Comparative Study of Online Self-Regulated Learning and Its Effect on Adult Learners in the Cross-Strait Regions

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ABSTRACT

With the popularity of Internet use and the speed of the network, learning methods are no longer limited to books, classroom activities, television, radio and other traditional methods. The Internet has become the most important medium for distance teaching and learning, lifelong learning, and education in general. This study aims to explore, compare and contrast online self-regulated learning literacy of adult learners in the Cross-Strait area. Through a questionnaire survey and district interviews, this study hopes to collect statistical and descriptive data for analysis to determine and understand the differences of adult online self-regulated learning literacy in the Cross-Strait Region. Similarities and differences were compared and specific recommendations were made in order to promote and enhance adult online self-regulated learning literacy in the Cross-Strait regions.

Keywords: Cross-Strait Regions, Adult learning, Self-regulated learning, On-line education

1. INTRODUCTION

This paper is derived from the research findings of the Macau Foundation-funded research titled, “A Comparative Study of Online Self-regulated Learning and Its Effect on Adult Literacy in the Cross-Strait Regions”. In a lifelong learning society, adult learners recognize their central role in the self-learning process by determining the cognition, motivation and emotion, or behavior level that is considered effective learning. Learning methods have been changed by the popularity of Internet use and the speed of the network that provides learning resources. These resources are no longer limited to books, classroom activities, television, radio and other traditional means. The Internet has become the most important medium for distance teaching and learning, lifelong learning, and education in general.

In an information society and era of lifelong learning, learning how to learn is a prerequisite for knowledge workers. Self-regulated learning is a major literacy of the “know-how” and also a specific strategy of self-learning. Studies on adult self-regulated learning can be described in the ascendant, but most of them take the traditional institutions of higher education students as the main object. On the contrary, studies with adults as research objects are still marginal and need a closer and deeper exploration. From a learner-centered point of view, the analysis of adult individual learning conditions could be the main point of dissemination. Individual learning in different conditions can be divided into two groups of socio-demographic and psychological variables, among which, the socio-demographic variables are the basic learning conditions for the individual learning condition. This study took adults with socio-demographic variables in different regions as a sample population to explore adult online self-regulated learning literacy in the Cross-Strait region and compared the differences among individuals. The comparison seeks to understand adult self-learning conditions prevalent in the Cross-Strait area and instrumental both in theory construction and practice.

2. LITERATURE REVIEW

In recent years, the concept of self-regulated learning deserves recognition of scholars, both locally and from overseas. Self-regulated learning is a complex phenomenon of multiple complex levels may be explored from different angles. Compared with the classification of self-regulated learning theory, Wang (2003) summarized the theoretical basis into five categories: (a) social cognitive theory; (b) theory of cognitive structure; (c) behavior control theory; (d) enhancing theory; (e) self and social development theory. Schunk (1996) pointed out the view of the development from the perspective of self and social development to explore its impact on self-regulated learning. As for the phenomenological point of view summarized by Lin and Cheng (1995), self-system structure and process of self-system were the most discussed topic.

2.1 The status of Online Self-Regulated Learning of Adult Learners in the Cross-Strait Regions

China held the third National Education Conference in June 1999. This meeting brought about new ideas on higher education that led to the development of online education (Leong and Wang, 2007). Mainland China is innovative, not only in the positive development action of online education, but in terms of policy changes in China’s educational system vis-a-vis the overall social system that extends changes in further development. Online education in China is an important branch of the field of educational technology, an important factor in the standard of education technology (Song, 2009). Online-learning in China has been going on for more...
than 10 years. Learning programs on its network motivate students through strong guidance and service-oriented learning. The Ministry of Education would like to expand high-quality network resources to provide fully utilized property. Colleges and universities actively promote network teaching, which has become a huge demand for adult groups in China. However, on behalf of rising demand for online learning, the Higher Education Ministry strictly controls online teaching.

In 1999, Hong Kong proposed, “The 21st century education blueprint of life-long learning and self-improvement”, emphasizing the 21st century education goal of implementing reforms in university continuing education (Zheng, 2008); Hong Kong accepts Britain's traditional education system and relevant online learning facilities are well equipped and common. Unfortunately at present, the government has no special funding to support online learning courses. Presently, the government divides national education into seven levels that leads to adults from all walks of life concerned about their education level and makes getting a diploma a focus that creates negative effects on continuing education.

It has been nearly 10 years since Macau was returned to China. Macau’s economic environment has undergone enormous changes. Its international image has become intensified and an even higher demand for talents has also been set. In the recent 10 years, adults in Macau have come to understand how to improve themselves through self-regulated learning. In Macau, majority of the people have worked in casinos. In order to enhance relevant knowledge and information of casino employees, the industry and educational institutions formed a strategic partnership and a website was built for learning and self-regulated learning.

Network education has been ignored by higher education institutions in Taiwan and the needs of adult learning are still without environmental impact, in particular, for studying actively at National Open University and the Open University of Kaohsiung. Distance Education in Taiwan gradually received recognition. Practitioners in the field of Distance Education are more concerned currently with how to improve instructional design, learning activities and resource quality, or even how to lead learners to enhance their self-learning literacy. However, due to the geographic environment and transportation system of Taiwan, more than 170 colleges and universities worry about enrollment problems each year and reluctant to run a network education considering the cost. Thus, only National Open University and the Open University of Kaohsiung utilize network teaching in Taiwan.

2.2 Thoughts on Online Self-Regulated Learning of Adult Learners in the Cross-Strait Regions

China has made efforts in network education for ten years and under the concerted efforts of the school and the government, achievements have been made along with some problems, such as network positioning affects the quality and quantity of university education and majority of learners cast doubt on the goal of network education, etc. Correspondingly, the government also adopts a series of measures to solve the above-mentioned problems in the aspects of online education management system, policies and regulations.

Open education of Hong Kong in the higher continuing education institutions is not so perfect especially in the initiative of carrying on online education which caused failure to integrate with traditional education and form regional cooperation institutions thereby advantages of online teaching is not recognized. The accompanying problems of online education deserve careful thinking.

Macau online education has huge potentials for development and higher educational institutions in Macau also have considerable knowledge and vision, but online education needs to be improved in the following areas: expect to build external online learning network together with Mainland China and Hong Kong to share online teaching resources; school organizations should develop online education so as to intensify the educational status and influence the economic development of Macau.

Taiwan’s low birth rate and geographical environment discourage colleges from developing online education because: policy and encouragement of government are inadequate; schools do not want to put out additional investment; teachers and students are used to traditional teaching and are not motivated to drastically change their methods of teaching; etc.

3. RESEARCH METHOLOGY

The author employed questionnaires formed by the six themes drawn from the self-regulated learning literacy literature review and theoretical framework of this study: Improving learning process, Learning data search, Learning to master the content, Learning self-motivation, a positive self-concept and Seeking learning partners. Meanwhile, a sub-region interview method was also adopted to enhance the reliability of the data.

In order to make the important variables more definite, relevant key terms are defined as follows:

(1) Online learning: Online learning is when adult learners in Hong Kong learn under a distance learning environment while different regions use different terms.

(3) Adult distance learning literacy: Adult distance learning literacy is the extent of self-regulated learning in aspects of meta-cognition, cognition, motivation and behavior initiative, focusing on the process of how individuals to be inspired, change, continuous learning and the learning transfer. For this paper, adult self-regulated learning includes the above-mentioned six themes.

3.1 Survey scale and feedback: There were 180 questionnaires distributed in Taiwan which resulted in 180 (100%) feedback with a validity rate of 99%. In Hong Kong, there were 72 (96%) valid results with 100% feedback rate with a total 75 distribution. In China, the 1600 questionnaires were distributed to 10 universities located in the Eastern, Southern, Western, Northern and Central parts as well as the directly governed cities namely Beijing, Tianjin, Shanghai and Chongqing. The total feedback was 1373 with validity of 1064 (77%).

3.2 Interview Implementation: The project team conducted the questionnaire survey from 2008 to 2009, and relevant information and suggestions for the basis of the outline of semi-structured interviews were proposed after examining and analyzing data. Statistical methods were used to objectively tabulate the data gathered. Group focus discussions were held at Kaohsiung, Taiwan Normal University on October 2nd, 2009 and at the "China Continuing Education Seminar" held at the Macau University of Science and Technology from October 19 to 22, 2009. Interviews of experts and scholars from Mainland China, Hong Kong and Macau were conducted to gain qualitative research information. The focus qualitative interview records were analyzed to more concretely comprehend the points of view of respondents. Furthermore, research reliability and validity were strengthened through an integrated analysis of experiences shared by the respondents along with the survey results.

4. RESEARCH ANALYSIS AND DISCUSSION

4.1 Distribution of valid sampling
According to the collected feedback, there were more female respondents, 782 (56.6%) than males, 600 (43.4%). The majority of the respondents (590) were between the ages of 25-34 years, accounting for 42.7% respondents, followed by below 24 years old (499), accounting for 36.1% respondents; 35-44 years old (16.4%). The School of Management had the largest number of feedback with 468, accounting for 33.9%, followed by 309 from other colleges (22.4%), Law School with 145 (10.5%). By occupation, the most respondents were from Labor/public institutions with 451, accounting for 32.6%, followed by Students 273(19.8%), Business 217 (15.7%). By region, the vast majorities were from Mainland China with 1066, accounting for 77.1%, followed by Taiwan 179 (13.08%), Hong Kong72 (5.2%), and Macao 65 (4.7%). By institutes, the majority respondents (1044) were from Internet Education School, accounting for 75.5%, followed by Open school with 261 (25.9%). By number of student, less than 2000 were 358 (25.9%), and 15,001-20,000 were 269 (19.5%).

4.2 The differences in comparison of the six themes of adult self-regulated learning literacy by different background variables

Through the one-way analysis of variance, different background variables in the “adult self-regulated learning literacy” are as follows:

(1) By gender: 1. On the subjects of Improving learning process, Learning to master the content, Learning self-motivation, A positive self-concept, Overall self-regulated learning literacy: Have no significant differences. 2. Learning data search: Female is higher than male.

(2) By age: 1. On the subject of Improving learning process: Below 24 years old group is significantly higher than below 24 years old group; 35-44 years old group is significantly higher than below 24 years old group. 2. On the subjects of Seeking learning partners, Learning data search, Learning to master the content, Learning self-motivation, Positive self-concept, Overall self-regulated learning literacy: No significant differences.

(3) By faculty: 1. On the subject of Improving learning process: Law School group is significantly higher than Faculty of Engineering group, Business School group is significantly higher than Faculty of Engineering group, College of Science group is significantly higher than Faculty of Engineering group, Faculty of Management group is significantly higher than School of Engineering group, Other Faculties group is significantly higher than Faculty of Engineering group; 2. On the subjects of Learning data search, Learning to master the content, Learning self-motivation, Positive self-concept, Seeking learning partners, Overall self-regulated learning literacy: No significant differences.

(4) By occupation: 1. On the subjects of Improving learning process, Learning data search, Learning to master the content, Seeking learning partners, Overall self-regulated learning literacy: No significantly differences. 2. On the subject of Learning self-motivation: Public service/state agency staff group is significantly higher than Military police group, Public service/state agency staff group is significantly higher than School teachers and administrative staff group, Labor/public institutions group is significantly higher than School teachers and administrative staff group, 3. On the subject of Positive self-concept: Public service/state agency staff group is significantly higher than School teachers and administrative staff group, Labor/public institutions group.
is significantly higher than . School teachers and administrative staff group, Freelancer group is significantly higher than School teachers and administrative staff group, Students group is significantly higher than School teachers and administrative staff group.

(5) By organizations: 1. On the subjects of Improving learning process, Learning data search, Learning to master the content, Learning self-motivation, Seeking learning partners, Overall self-regulated learning literacy: No significantly differences. 2. On the subject of Positive self-concept: On-line education schools group is significantly higher than Open schools group.

(6) By number of students: 1. On the subject of Improving learning process, 15001-20000 significantly higher than below 2000 group, 15001-20000 significantly higher than 2001-5000 group, 15001-20000 significantly higher than 20001 or more group; 2. On the subject of Learning to master the content: 15001-20000 significantly higher than below 2000 group, 15001-20000 significantly higher than 2001-5000 group, 15001-20000 significantly higher than 20001 or more group; 3. On the subject of Learning self-motivation: 15001-20000 significantly higher than below 2000 group; 4. On the subject of Seeking learning partners: 15001-20000 significantly higher than below 2000 group, 15001-20000 significantly higher than 2001-5000 group, 15001-20000 significantly higher than 20001 or more group; 5. On the subjects of Learning data search & Positive self-concept: no significantly differences. 6. On the subject of Overall self-regulated learning literacy: 15001-20000 significantly higher than below 2000 group, 15001-20000 significantly higher than 20001 or more group.

4.3 From the In-depth Interview Responses

From the responses of experts and scholars, 1. For Mainland China, (1) Concerning the ‘adult learning process improvement’, Mainland China is superior to Hong Kong and Macao. (2) Concerning the ‘master of adult learning content online’, Mainland China is superior to Hong Kong and Macao. (3) Concerning the ‘motivation and concept of adult online-learing’, Mainland China is superior to Hong Kong and Macao. (4) Adults can utilize information searching and seeking learning partners to enhancing self-regulated learning. (5) Further refine adult self-regulated learning literacy, enhancing the effectiveness of online-learning. 6. Enlightening adult self-regulated learning literacy by enhancing online-learning. 2. For Hong Kong, (1) Adult e-learning courses are complementary, variation with the education reform. (2) The process improvement of adult on-line learning is not significant. (3) To grasp course content of adult on-line learning, self-motivation and self-regulated, yet less desirable satisfaction. (4) Future development of ‘adult self-regulated learning literacy’. 3. For Macau, (1) Adult on-line learning is changing with circumstances that are of benefit to deprived students. (2) There is a significant progress in mastery of content on adult on-line learning. (3) There is a slight growth on adult on-line learning in the concept of self-motivation and self-regulation. (4) Future advancement of ‘adult self-regulated learning literacy’. 4. For Taiwan, (1) Concerning the ‘learning process improvement and content grasp of adult learning content online’, Taiwan is superior to Hong Kong and Macao. (2) Concerning the ‘motivation and concept of adult learning on-line’, Taiwan is superior to Hong Kong and Macao. (3) Self-learning motivated for adults’ on-line learning, and self-learning motivated by external pressure. (4) Enlightening via boosting on-line learning base on adult self-regulated learning literacy.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Through questionnaire survey and in-depth expert interviews, the project team concludes that: (1) All adults in the Cross-Strait Region generally feel good about online self-regulated learning literacy. (2) For online self-regulated learning literacy, the competency of data search and learning partners seeking by female learners is weaker than that of males. (3) Compared to learners of other ages and colleges, Cross-Strait young learners and those from the Faculty of Engineering are relatively poor in the improvement of learning process. Guidance should be provided particularly in methods and skills to enhance their self-learning abilities. (4) The self-motivation in learning and positive self-concept of Cross-strait schoolteachers and administrative staff are weaker compared to other professionals. (5) The improvement of learning processes, command of learning contents, self-motivation of learning and positive self-concept of Mainland and Taiwan learners are better than those of learners in Hong Kong and Macau.

5.2 Recommendations

Synthesizing the literature reviews, research findings and conclusions, the author has made some recommendations to adult online learners, online education teachers/facilitators, higher education institutions and decision makers.

5.2.1 Recommendations to adult online learners

Online learners did not pay much attention to using learning strategies to enhance learning. Learning skills and techniques can be employed in different learning situations and learners should evaluate their performance and results after each learning activity.

In the learning process, the support of others is important. There should be more training and peer interaction to enhance peer relationships. In addition to helping learners understand self-regulation and performance of learning literacy and its relations, a learning community can be created. In online learning situations, learning how to strengthen self-regulation to enhance learning is a pre-requisite for adult learners.

Third, in online learning situations, computer and network
technology, and operations of digital technology can enhance self-learning abilities. Results show that in an online learning environment, self-regulation makes online self-study smooth. To a large extent, it depends on the learners’ computer and network operating techniques. In order to allow adult learners to master correct and effective standardized learning behavior in online self-learning process, learners have to rely on themselves to monitor, control, evaluate, and reflect on the learning objectives.

5.2.2 Recommendations to the Provision of Online Teaching Instructors

For Higher Education institutions in the PRC that engage in online education, the recommendations are:

The adults in Mainland China and Taiwan are better at grasp course content of adult on-line learning. The main targets of adult online education are working professionals who want to update their skills and earn a diploma to upgrade their qualifications for future employment. Therefore, teaching should be based on the learning characteristics of learners, to help them realize self-regulated learning strategies.

Current researches carried out for teaching adult online learners self-regulated learning are very few and curriculum planning is limited. To adapt to such a wide range of teaching, instructors should have deeper knowledge and understanding of the scope, content and theory. Issues that need further study include learning anxiety and self-regulation of other learning relationships. Instructors should pay more attention to the psychological reactions of adult learners and their learning characteristics.

Because of the restrictions of the online learning environment, learners should enhance self-knowledge and self-motivation. While mental development, self-concept and feelings towards the learning environment have a close relationship, teachers should discover obstacles that adult learners encounter.

Network design and management services and relevant curriculum encourage learners to take the initiative to master the situation. Practical, in-depth and continuous development of teaching cannot be too rigid as its purpose is to enhance the level of autonomous learning in adults. Effective management services will aid teachers so they fully grasp the learning situation, provide valuable guidance and provide teacher evaluation as reference to assist adult learners to carry out self-regulation of Internet-based learning teaching activities.

5.2.3 Recommendations on Higher Education Institutions

First, strengthen self-regulation of online learning literacy education, provide guidance on the proper use of the Internet, encourage self-learning and create an effectual online learning environment.

In lifelong education, adult learners can consider themselves educated despite not having gone through formal education. The use of the Internet is growing rapidly and its impact on adult learners and online education schools is comprehensive.

Second, institutions should actively and effectively encourage teachers to integrate self-regulated learning strategies in the curriculum and courses that are related to teaching or open learning.

Apart from formal curriculum, self-regulated learning in literacy courses can also be activity-based rather than subject-oriented. To enhance adult literacy in the PRC, schools can encourage teachers to integrate elective topics and subjects into the curriculum.

Third, public awareness of the importance of self-regulated learning literacy should be enhanced and seminars related to teaching (learning) can be organized.

Adult learners evaluate their own learning as literacy and self-regulation are closely related. The factors affecting adult learners’ self-control, learning literacy and the use of the discovery of learning difficulties and problems for diagnosis and counseling has considerable practical value to schools and instructors.

Fourth, protect the quality and maintain the convenience of online learning to empower adult learners during the learning process to enhance learning effectiveness.

A rich network of resources, hyperlink information presentation, various means of communication and other advantages for independent study are good external support, but at the same time, online environment, teachers and students are in a quasi-isolated state. Learning behavior and concealment make it difficult to perceive the characteristic of the learner’s self-monitoring. Therefore, the nature of independent learning and how to effectively help learners to implement self-monitoring, self-learning to improve learning quality and to ensure the smooth progress of online learning is of great concern.

Fifth, set up teaching and learning center, providing online learning by students and teachers to share network resources and service support system.

Learning Resource Centre Teaching operation must be integrated with the entire education system. Teachers need to make good use of resource center for assistance to provide the most appropriate support services. Adult learners need to learn network support distribution of the different stages in the learning process.

5.2.4 Recommendations to Government and Institutional Decision Makers
First, educational institutions and teachers should be required to strengthen advocacy for learners. Adult education institutions have the responsibility and obligation to remind the importance of adult learners to learn self-control. Therefore, authorities in the planning of adult education may consider the inclusion of self-control learning literacy topics, provide online education for teacher-related knowledge and encourage them to assist students reach self-motivated and effective learning.

Second, teaching through online agencies in preparation of course materials should be more evaluation of management, hoping to make the best guide of its self-regulating learners to learn.

Learners’ learning literacy level and academic achievement are closely related. For instance, if there is more focus on enhancing learners’ online learning literacy, units and activities in textbooks will effectively enhance the school system use and implementation.

Third, online learning system should be open regularly and go through training activities and develop networks of teachers and the entire education system.

Adult online learners in Hong Kong and Macau show a lack the motivation for self-improvement. Thus, emphasis should be placed on individual differences in remedial teaching and development. Adult education should be handled at any time relevant to learning, allowing teachers to engage in online education at any time to add new knowledge and information to facilitate teaching.

Fourth, certification obtained or online learning diploma and degree should adopt a wider approach to strengthen job training programs for adult learners interested in online education.

China’s needs for a diploma are urgent for any job, offering job-change (industry) and salary. Thus, for the government and online schools, the most fundamental issue is how to enlighten learners to fully understand the long-term network of education issues, and the significant role of resource development.

6. REFERENCES
