Identifying Strategies For Effective Virtual Education Delivery In Thailand

Nalinee Thongprasert
Edith Cowan University

Janice Burn
Edith Cowan University

Follow this and additional works at: http://aisel.aisnet.org/pacis2003

Recommended Citation
http://aisel.aisnet.org/pacis2003/23

This material is brought to you by the Pacific Asia Conference on Information Systems (PACIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in PACIS 2003 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.
Identifying Strategies For Effective Virtual Education Delivery In Thailand

Nalinee Thongprasert and Janice Burn
Edith Cowan University, Perth, WA.

j.burn@ecu.edu.au

Abstract

Increasingly, universities in Thailand are shifting towards virtual education delivery (VED) using information and communication technology to facilitate knowledge sharing and to gain competitive advantage. Little however is known about the way in which Thai society will adapt to the use of online instruction both from the teaching and learning communities. This study was designed to examine the critical success factors for implementing VEDs in Thailand, and to identify ways to facilitate such adoption and lead to effective outcomes. The study incorporated an analysis of three specific factors related to Thai culture: high power distance “Bhun Khun”, uncertainty avoidance “Kreng Jai” and, collectivism “Kam Lang Jai”. This paper reviews the development of the research model, describes the conceptual underpinning of the cultural model and presents the preliminary findings of the study.

Introduction

In the competitive environment of the 21st century many organisations have adopted the strategic concept of the ‘virtual organisation’ as an alternative business model to gain competitive advantage (Goldman et al., 1995; Graenier and Metes, 1995; Leimeister et al., 2001; Marshall et al., 1999; Mowshowitz, 1997; Venkatraman and Henderson, 1998). Global competitiveness and advanced Information and Communication Technologies (ICT) not only impact businesses but also educational institutions such as universities. The benefit for ICT enabled universities, lies in economies of scale by sharing intellectual and physical capital to provide virtual courses without time or boundary limitations (Castells, 1996). In this way students and instructors can interact through ICT and learn from the experiences and knowledge of the other group members, enhancing their abilities to solve problems in real situations (McFadzean and McKenzie, 2001).

In 2001, according to the report of the National Electronics and Computer Technology Centre (NECTEC), the population in Thailand was 62.1 million. Among these there are 3.5 million who have accessed the Internet and the estimated number of Internet users in 2003 will grow beyond 5 million (NECTEC, 2002). Although most Thai people have limited access to the Internet, the growing number of Internet users may have an enormous impact on Thai society and, as the Internet becomes more socially significant, on Thai education (Tao, 2001).

There are a number of Thai universities such as Chulalongkorn University, Ramkhamhaeng University etc., which have begun to investigate virtual education systems as a channel for delivery. They have moved to virtual education delivery (VED), an instructional model that allows the instructors, learners, and contents to be located in different non-centralised locations by using the facilities of ICT and a networked collaboration, dynamically linking people, assets and ideas. VEDs involve a collaborative team of partners to provide effective and flexible education delivery. However, there are some major issues related to the
management of the system as an educational tool and these critically influence success in implementing virtual education delivery in Thai universities.

This study aims to determine the factors leading to success in establishing a Thai VED and examines the implementation in four universities. Critical success factors are evaluated and inhibitors identified. The specific questions addressed are:

1. What are the factors influencing effective implementation of VEDs in Thailand?
2. How do these factors facilitate successful implementation?
3. How can these be incorporated into strategies for implementation in the context of Thai culture?

This paper reviews the literature in respect to virtual education delivery models, analyses this in context of the Thai environment and develops a comprehensive research model to guide an empirical study. The results from the first stage of the study – a survey of 160 Thai students utilising VED modes are presented and further implications for research explored.

**Literature Review**

According to Alexander and Mckenzie (1998), the characteristics of successful VED, can be classified into 3 categories: improved quality and productivity of learning, and enhancing student perception in learning.

<table>
<thead>
<tr>
<th>Characteristics of successful VEDs</th>
<th>Indicators used to determine the success.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of learning</td>
<td>• A variety of learning styles that meet students’ needs (Borthick and Jones, 2000).</td>
</tr>
<tr>
<td></td>
<td>• Ability to move through learning materials that meets students’ needs (Borthick and Jones, 2000).</td>
</tr>
<tr>
<td></td>
<td>• Adequate information and contents that meet students’ needs (Dulworth, 1996).</td>
</tr>
<tr>
<td></td>
<td>• Accessibility to learning</td>
</tr>
<tr>
<td>Productivity of learning</td>
<td>• Creation and sharing of new knowledge (Alexander and Mckenzie, 1998).</td>
</tr>
<tr>
<td></td>
<td>- provide collaborative technologies to share knowledge</td>
</tr>
<tr>
<td></td>
<td>- encourage lecturers and students to share ideas and insights .</td>
</tr>
<tr>
<td>Positive Lecturer and student attitudes to teaching and learning</td>
<td>• Perceptions of lecturers and students in an interactive VED courses (Alexander and Mckenzie, 1998).</td>
</tr>
</tbody>
</table>

*Table 1 Indicators used to determine the success of VEDs.*

These specific characteristics formed the basis for the study and were evaluated against models of diffusion and acceptance of ICT. Hiltz (1994) summarises the four major
approaches involved with the success of VED: technological determinism, social-psychology of users, human relations in organisations and the cultural context.

**Technological determinism**
This approach emphasises the characteristics of hardware-software that universities use to provide VEDs. The efficiency and effectiveness of the system design and implementation will produce efficient and effective user behaviour (Mowshowitz, 1997). The resources including hardware, software and the design and implementation skills of these technologies are posited to be important factors affecting user accessibility and reactions to particular aspects of VEDs.

**The social-psychological approach**
This approach highlights the characteristics of students and instructors vis-à-vis their attitude towards and capabilities to use a new technology. An attitude is a state of mind involved with emotions and expectations or beliefs such as the pre-use expectation about the VED course that could affect the use of and reactions to the VED. It must be noted however that students’ and instructors’ capabilities such as typing skills, previous use of computers also affect success of VEDs. To apply this approach to determine the success of VED, the social-psychology of students and instructors can be classified into two factors. The first is the perceived value of computer-based information, and the second is computer literacy.

**The human relations approach**
This approach focuses on the interactive collaboration of university members to work within group settings. The existing relationships between university members and the interactions among the instructors and students could be a significant facilitator or inhibitor to teaching and learning. Implementing successful VEDs requires task interdependence in which agreement and collaboration of members is necessary within each major unit. It is essential that members of VED communities are comfortable with open discussion and decision making.

**The cultural context**
There are a number of ways in which culture influences the use of information technologies. For instance the cultural background of students influences the way they adopt and use ICT in their learning styles and interactions with their instructors or other students in their groups. The collaborative structure for learning has been accepted as an effective learning style. This structure of learning can enhance students’ and instructors’ ability to create knowledge and develop their understanding (McLoughlin and Oliver, 2001). In the learning process, the cultural context involves the way people think, do and communicate and it can support or inhibit the success of VEDs. The elements of the cultural context that affects the success of VEDs are information culture and national culture. Information culture refers to the characteristics of education administrators, students and instructors in the use of collaborative ICT for knowledge sharing (Davenport, 1997; Jarvenpaa and Staples, 2000). National culture refers to “the collective programming of the mind that distinguishes the members of one group or category of people from another” (Hofstede, 2001 p.9). This collective programming of the mind consists of a patterned way of people thinking, feeling and reacting. It is acquired and transmitted mainly by symbols which are based on their traditional ideas and values (Hofstede, 2001). The national culture characteristics which can be viewed as the major
influencing factors on knowledge sharing in VEDs are power distance, uncertainty avoidance, individualism/collectivism and masculinity/femininity.

The success of VEDs can be measured from both students and faculty members’ perspective by using educational outcomes as the indicators. The outcomes can be categorised in three major groups: improved quality, productivity of learning, and overall perception of success. The quality and productivity of learning will be measured by the degree to which a student accesses, learns, retains, and integrates critical knowledge building (Alexander and Mckenzie, 1998; Borthick and Jones, 2000; Dulworth, 1996; Hiltz, 1994). Whereas the success will be measured through the perception of students and instructors with regard to effectiveness of teaching and learning (Alexander and Mckenzie, 1998; Hiltz, 1994). The four major approaches influencing the success of VEDs outlined are summarised in the model of VED in Figure 1.

![Diagram showing factors influencing VED success]

*Figure 1: Factors influencing VED success*

These factors were adopted as variables to determine the success of VEDs. However, from exploring empirically a wider range of antecedents of VEDs than did Hiltz, other factors that might be significant facilitators or inhibitors to the success of VEDs in the Thai context were considered.

**Determinants of Thai VEDs**
Resources
VED needs both asynchronous (e.g., e-mail, discussion list, sites with sound and video) and synchronous communication technologies (e.g., chat, IP [Internet Protocol], videoconference). The choice of technologies, in each university, depends on several factors: the availability of the supporting infrastructure, the scope of the project, the nature of information and its transformational capabilities, the extent of budget and the need to be the winner among competitors (Bodain and Robert, 2001). To provide a successful VED requires advanced technologies including a broad bandwidth network, sophisticated hardware and software, technical skills to develop and deliver the attractive virtual courses. Nevertheless, inadequate infrastructures are still the biggest barriers to support VED, as these are a costly investment.

However, not only is the technology the critical factor for successful management in VED but there is also a need for sufficient skill to create and manage it (Wheeler et al., 2001). Skill refers to the abilities to contribute directly to the value chain of product and service to respond to the market demand.

Computer Literacy
Computer literacy refers to knowledge of computers and how they work in our daily lives. A student or an instructor who has a good understanding of computers should be able to use their computer systems effectively to achieve their task. Success in conveying knowledge via the Internet is directly related to how the user interacts with the full facilities of the computer. Research shows that learners must have both concrete and abstract knowledge of computers and are able to apply their knowledge to new systems and new situations with minimum retraining (Winter et al., 1997).

Size of market
There is ongoing competition between institutions that provide on-line education for developing Web sites and courses in order to maintain or augment their share of the market, at a local and international level (Bodain and Robert, 2001). Web courses are getting more and more sophisticated and require the use of high cost integrated technologies. However, this has an impact on the cost of the projects and drives the provider to look for additional students to gain sustainable profit. Significant size is needed to provide sufficient financial return to maintain and upgrade the coursework to a level of high quality and relevancy. They are therefore in a position to commit limited resources to continuous improvement to provide course content changes and new approaches to learning on-line. Currently, most education providers are under increasing competitive pressure from the growth of new on-line providers. There is increasing demand particularly from working professionals rather than full time students. Providers who do not maintain a viable competitive on-line program are left behind (Green, 2000).

Perceived value of computer-based information
The perceived value of computer-based information has long been recognised as an important influence on knowledge creation. The key to success of VEDs is positive student’s perception. Students should realise that IT provides them with more accurate, new and up-to-date information, convenient data access and the ability to assimilate and use information more effectively (Jarvenpaa and Staples, 2000). Students who have more positive perceptions of computer-based information are more effective in learning on the Web (Larson and Bruning, 1996; McCollum, 1997).
Another factor relates to the ability of software packages to facilitate the design and delivery of VEDs requiring much less technical sophistication. Learners will perceive usefulness of VEDs when they can minimise the time spent on the technological issues and maximise the time spent on course content and structure (Arbaugh, 2000).

These four factors: resources, computer literacy, size of market, and perceived value of computer-based information appear to be important factors affecting development of Thai VEDs, there are also some other major elements specifically related to the Thai environment. These are knowledge and competence of actors, information culture and task interdependence as described below.

**Shared knowledge and competence of administrators, students and lecturers**

There are three human factors that affect the success of VED: characteristic of education administrators, students and instructors. The first are the characteristics of educational administrators who have a vital role in providing virtual education delivery. In some situations, there may be a misunderstanding over the concept of how to adopt and implement VED between education administers and the people responsible for the technical infrastructure. The person in authority who controls the resources may be reluctant to take part directly, have no realisation of its value added features, or inadequate knowledge and competence in providing on-line education (Simons, 1998). Thus, an administrative team is the most significant factor that influences success in running VED.

The second is student characteristics as VED provides accessible and flexible courses which students can access through the WWW from anywhere at any time. However, it is a double-edged sword: it facilitates their participation but indirect interaction with the instructors and the other students, which may result in loss of motivation and immediate feedback (Bodain and Robert, 2001). From the intrinsic delays in two-way communication, some students find it difficult to develop dynamic and interactive on-line discussion. It leaves them feeling remote and isolated having failed to receive the information on-line (Bullen, 1998).

The instructors use the computer interface to deliver a “lecture” which supplements text-based document on-line, to provide the instructor’s interpretations; and to conduct seminar discussion on key course issues. There might be some inhibitors disadvantaging the congruence between the instructor’s need and the technology they use (Zhao, 1998). As the VED in itself is a two-way communication among teachers and students in remote locations, the success or failure in providing on-line education will depend on how well information is transferred to meet the learner’s need.

**Information culture**

Information culture refers to values and attitudes about information processing, publishing, and communication. Student characteristics and environments influence information values and attitudes in many ways such as a student preference to be an introvert or extrovert, rational or intuition-based, adopting an intrinsic or extrinsic view and with a preference towards governing or authorising (Davenport, 1997). Even though a VED can provide various types of information media via telephone, face-to-face, bulletin boards and chat room session, electronic mail, video conference and web-based learning, students’ preferences in accepting information are different (Jarvenpaa and Staples, 2000).

A further information culture factor relates to the administrative environments, in the institutional context. The institutional context represents rules, goals, regulations which
influence administrative leadership thinking and behaviour. Both student and administrative environments influence VED implementation.

Task Interdependence

In order to increase access for students and to improve the quality of education, advanced technology such as a comprehensive e-mail software program or a software program to transform learning contexts into a dynamic web-based teaching and learning are required. This technology must be designed and developed to utilise and fit with the task of on-line education (Jarvenpaa and Staples, 2000). For example, a web-based design is available in two-way communication, the lecturer is only a facilitator of knowledge who supports the students collaboration and problem-solving processes (McFadzean and McKenzie, 2001). This requires agreement of members including academics in each college and each major unit. They must be comfortable with discussion and open decision making to provide education on the Internet (Rada, 1997). All of these factors interact within a specific ‘culture’ and the Thai cultural issues are discussed below.

Thai culture

Knowledge sharing is accepted as a key to success in the process of knowledge creation. Knowledge sharing is an interpersonal interaction involving two actions: representation and subordination. Representation is the transmitting function, which refers to the ability of an individual to introduce their ideas (knowledge) to others or students. Subordination is the receiving function, which refers to the ability to accept or absorb another’s knowledge (Davenport and Pruzak, 1998; Erich and Williams, 1998).

Representation and subordination in VEDs, can affect lecturers or students who use ICT to facilitate their knowledge sharing (Shore and Venkatachalam, 1996). This is true that the condition to obligate the direction and control of superiors or lecturers has been accepted by Thai subordinates or students. To overcome this issue the implementation should match the form of knowledge sharing and should overcome the cultural barriers in Thai universities. Some Thai cultural issues which can be viewed as barriers to knowledge sharing are power distance, uncertainty avoidance and individualism/collectivism (Hofstede, 2001).

High power distance “Bhun Khun”

High power distance is the first cultural barrier to knowledge sharing for Thai people (Komin, 1990; Mckenna, 1995; Rohitratana, 1998a). Thais accept a hierarchical authority system with an emphasis on status differentiation and unequal power distribution. They tend to preserve good relationships at every interaction level by working on norms of friendliness and politeness (Rohitratana, 1998a). This kind of relationship between those who are in higher positions and their subordinates is called “Bhun Khun” well known to all Thai people. The Bhun khun in Thai society can be defined as “the psychological bond between two persons: one who renders the needy help and favours out of kindness and other’s remembering of the goodness done and his ever-readiness to reciprocate the kindness, not bound by time and nor distance” (Komin, 1990, p.691). Thai subordinates usually give respect and feel obligations to their superiors as a father figure in their families (Mckenna, 1995). The Bhun khun concept is broadly accepted by the majority of Thai students and lecturers. This might obstruct the process of transferring knowledge through university networks, such as e-mail, chat room or bulletin board whilst students are not encouraged to express their ideas to solve problems or lecturers are afraid to tell administrators what they think. Moreover, lecturers or administrators with high status usually make any decisions as they have a role as controller.
rather than as a colleague (Thanasankit, 1999). Therefore, without direction and guidance, the ability to create knowledge and use it as a force to develop best practice in academic areas will be limited.

Uncertainty Avoidance “Kreng Jai”
Some researchers characterise Thai people as having a high uncertainty avoidance, which may impede the successful implementation of knowledge sharing (Trompenaars and Hampden-Turner, 1998). This culture can be expressed by the Thai word “Kreng jai.” This concept is defined as the need to avoid uncertainty which is associated with a reluctance to be the cause of discomfort to the feelings of others (Rohitratana, 1998b). In Thai culture subordinates should be polite and accepting. Not surprisingly, they always keep their suspicions to themselves to maintain a peaceful situation. They are afraid to make their superiors lose face in front of the others. “Kreng jai” is an aspect of Thai culture that exists in general society. Due to this concept, there is a tendency in Thai culture for differences in opinions between individuals to be “met” rather than confronted. These emotions are regarded as an impediment to knowledge sharing because participants are uncomfortable telling others about what they think or feel.

Collectivism/Individualism - Lack of “Kam Lang Jai”
Thai culture is characterised by collectivism rather than individualism (Hofstede, 2001). The sense of collectivism in Thai people is strong as a consequence of their living in extended families. In this situation children learn to think of themselves as part of in-groups rather than out-groups. The dependent relationship between the person and the in-group is further developed and reinforced at school (Hofstede, 2001). For example, students in a collectivist society are more likely to form their subgroups based on clan backgrounds than joint tasks. This characteristic can be an impediment to knowledge sharing as they lack self-monitoring and are reluctant to participate in out-groups. To encourage them to express ideas or participate in out-groups requires moral support from their social groups.

This concept can be expressed in terms of the Thai words “Kam lang jai” (spirit or moral support) which refers to the participants showing strong loyalty to and gaining strong support from their social group (Hallinger and Kantamara, 2001). The highly collectivist nature of the Thai culture shapes the context for the improvement of Thai VEDs by locating change in the social group rather than within individuals. In knowledge sharing environments, not surprisingly, students are more likely to “move in the direction of change” as a group rather than as individuals (Hallinger and Kantamara, 2001). Thai students usually hold views and opinions respecting the group and this plays a vital role in their learning styles. This spirit or moral support encourages self-confidence in students, and affects Thai VEDs. Hence, without a sense of community spirit or moral support, Thais may lack courage to present their new ideas and skills, which is fundamental to knowledge creation.

<table>
<thead>
<tr>
<th>Hofstede’s dimensions of national culture</th>
<th>Thai culture barriers</th>
<th>Inhibitor to Knowledge Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power distance</td>
<td>Bhun khun</td>
<td>Unwilling to share ideas or knowledge contents</td>
</tr>
<tr>
<td>Uncertainty avoidance</td>
<td>Kreng jai</td>
<td>Reluctant to be the cause of discomfort</td>
</tr>
<tr>
<td>Collectivism</td>
<td>Lack of Kam lang jai</td>
<td>Unwilling to act as individuals</td>
</tr>
</tbody>
</table>

Table 3 Summary of Thai culture barriers in term of Hofstede’s dimensions
Theoretical Framework
A theoretical research model, which incorporates the factors that facilitate the success of establishing and implementing of Thai VEDs, is shown in figure 2.

**Independent Variables**

Factors affecting Thai VED establishment
- Resources
- Computer literacy
- Perception in the value of IT-based information
- Market size

Factors affecting Thai VED implementation
- Characteristics of administrators, Students and Instructors
- Information Culture
- Task interdependence

**Dependent Variables**

**THAI**

- U1
- U2
- U3
- U4
- U5

**CULTURE**

- Virtual Education Delivery
  - Collaborative Partnerships
  - Share resources
  - Share knowledge and skills

Success of VED (to be measured by)
- improved quality of learning
- improved productivity of learning
- improved lecturer and student attitudes to teaching and learning

Establishment of a strategic framework for Thai VEDs

*Figure 2 The Research Model*
Research Methodology

A survey questionnaire was developed to gather data from students studying through VED courses in four Rajabhat Institutes. This incorporated well-validated and reliable measures for the five independent variables: resources, computer literacy, perceived value of computer-based information, characteristics of their national culture and information culture and the dependent variables: student’s perception of VED courses, effectiveness of instruction, course content and outcome. The survey was translated into Thai. Other independent variables such as characteristic of administrators and lecturers, market size and task interdependence were investigated through face-to-face interviews. The research hypotheses were as follows:

Hypothesis A: The five factors: resources, computer literacy, perceived value of computer-based information, characteristics of students' culture and information culture will significantly influence the perception of Thai VEDs

Hypothesis B: The five factors: resources, computer literacy, perceived value of computer-based information, characteristics of students' culture and information culture will significantly influence the effectiveness of instruction of Thai VEDs

Hypothesis C: The five factors: resources, computer literacy, perceived value of computer-based information, characteristics of students' culture and information culture will significantly influence the effectiveness of course content of Thai VEDs

Hypothesis D: The five factors: resources, computer literacy, perceived value of computer-based information, characteristics of students' culture and information culture will significantly influence the effectiveness of outcome of Thai VEDs

Sixty questionnaires were administered in each Rajabhat Institute. 167 questionnaires were returned representing a response rate of 69.5 percent. Among the returns received, 16 questionnaires were inadequately completed, thus 62.9% of the questionnaires were useable for data analysis. In addition, structured interviews were held in each Rajabhat Institute with, the president, IT/IS director and lecturers. This paper summarises only the results from the survey.

Table 4 summarises the results based on a four point likert scale. Descriptive statistics such as maximum, minimum, means, standard deviations and variance were obtained for the four-point scale independent and dependent variables. Overall, the means on all the independent variables and dependent variables are higher than the average of a four-point scale at 2.15. Very generally one might assume that the students’ perceptions of successful outcomes are more favourable than negative.
Table 4 Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>151</td>
<td>1.43</td>
<td>4.00</td>
<td>2.7833</td>
<td>.4775</td>
<td>.228</td>
</tr>
<tr>
<td>Computer literacy</td>
<td>151</td>
<td>1.00</td>
<td>4.00</td>
<td>3.2252</td>
<td>.5806</td>
<td>.337</td>
</tr>
<tr>
<td>Perceived value of</td>
<td>151</td>
<td>1.00</td>
<td>4.00</td>
<td>3.1325</td>
<td>.4190</td>
<td>.176</td>
</tr>
<tr>
<td>computer-based information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culture</td>
<td>151</td>
<td>1.40</td>
<td>4.00</td>
<td>2.6477</td>
<td>.4051</td>
<td>.164</td>
</tr>
<tr>
<td>Information culture</td>
<td>151</td>
<td>1.33</td>
<td>4.00</td>
<td>2.6556</td>
<td>.5025</td>
<td>.252</td>
</tr>
<tr>
<td>Effectiveness of</td>
<td>151</td>
<td>1.00</td>
<td>4.00</td>
<td>2.7748</td>
<td>.5048</td>
<td>.255</td>
</tr>
<tr>
<td>instruction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effectiveness of content</td>
<td>151</td>
<td>1.00</td>
<td>4.00</td>
<td>2.9912</td>
<td>.4504</td>
<td>.203</td>
</tr>
<tr>
<td>Effectiveness of outcome</td>
<td>151</td>
<td>1.17</td>
<td>4.00</td>
<td>2.8753</td>
<td>.4469</td>
<td>.200</td>
</tr>
<tr>
<td>Perception in VED course</td>
<td>151</td>
<td>1.00</td>
<td>4.00</td>
<td>2.9179</td>
<td>.4895</td>
<td>.240</td>
</tr>
</tbody>
</table>

Model Results for the success of Thai VEDs

In order to test the hypotheses multiple regression was applied to each in turn and the results used to generate the model shown in Figure 3.

In this study, resources, perceived value of computer-based information, information culture and culture were found to have impacts on the success of Thai VEDs. Specifically, Thai cultural impacts on knowledge sharing had significant negative influence on student perception of VEDs. This result supported the expectation that Thai culture including high power distance, high uncertainty avoidance and collectivism tend to act as barriers to success in VED implementation. Students in a high power distance society accept a formal status differentiation between themselves and their teachers and feel obligated to accept the opinion of their lecturers. Therefore, they were discouraged from using communication tools such as e-mail or discussion boards to express ideas that contrasted with what lecturers said. They respect their lecturers as a father so they could not contradict anyone who had “Bun Khun” or god like status associated with them (Holmes and Tangtongtavy, 1995).

Most Thai students were threatened by ambiguous situations so they were reluctant to contradict someone else if the others have more seniority. They were “Kreng jai” (keep their own desire with them) in order to maintain a pleasant relationship (Holmes and Tangtongtavy, 1995). Moreover, they held views and opinion respecting social in-group rather than out-group as their sense of collectivism was strong. Not surprisingly, e-mail or discussion boards
were normally used within their own in-group more than out group. Thai students prefer to share knowledge based on their relationship rather than group work because they need Kum lang jai (moral support) for expressing any ideas (Thanasankit and Corbit, 2000) and this could represent a serious barrier to knowledge sharing.

The results of the multiple regressions revealed that a factor: computer literacy was found not to have a significant impact on the success of Thai VEDs and this conflicts with the findings from the review literature. However, all participants were second-year students or beyond. They had obtained computer literacy to perform basic tasks from secondary school and were strengthened with training courses provided by their Rajabhat Institutes for the first year. Therefore, they had no problem with using computers to facilitate their learning in VEDs.

**Conclusion and further research**

The findings in this study provide some suggestions in relation to facilitators and inhibitors for VED success in Thailand based on student perceptions and experience. A significant finding was the strong impact of Thai culture on the learning model. However, there are other factors that could impact on that success and these will be explored in the analysis of interview results. In VED environments not only students but also administrators and lecturers who are involved with VED courses are the important keys to success. The results of the second stage of study will be used to provide a comparison of views and also to compare the experiences from the four distinct institutions to identify whether different coping strategies are successful.
References:


