



Research Journal of  
**Business  
Management**

ISSN 1819-1932



Academic  
Journals Inc.

[www.academicjournals.com](http://www.academicjournals.com)

## **Determinants of Modern Management of Private Vocational Colleges: A Structural Equation Model**

Jongdee Phusalux, Urasa Buatama and Wannoo Fongsuwan

Administration and Management College, King Mongkut's Institute of Technology Ladkrabang, Thailand

*Corresponding Author: Jongdee Phusalux, Administration and Management College, King Mongkut's Institute of Technology Ladkrabang, Chalongkrung Soi 1, Ladkrabang, Bangkok, 10520, Thailand*

### **ABSTRACT**

The study was focused on finding ways to manage Thailand's private vocational colleges so that they might both survive and thrive under a highly competitive environment. Currently, vocational education in Thailand is a highly competitive business enterprise with competition coming from government schools, international schools and other private sector schools which accounts for almost 37% of the total educational system. The researchers therefore undertook the development and validation of the effective management construct using confirmatory factor analysis of strategic management and innovation management on Thai private vocational colleges. A multi-stage random sampling was used to collect the sample from 614 Thai college administrators. The questionnaire was employed as the instrument for data collecting and PLS Graph was used for model verification. Results illustrated from the Structural Equation Modeling that confirmatory factors of innovation management and strategic management had both a direct and indirect effect on administrator effective management. Trained industrial staffs are now in short supply and this will only be exacerbated with the upcoming 2015 integration of 10 Southeast Asia nations. It is therefore, paramount that vocational institutions, both private and public, develop strategic vision, implement technological innovation such as 'flipped classrooms' while simultaneously developing efficient and effective communication channels with industry and state agencies that better serves the nearly 1 million Thai vocational school students.

**Key words:** Strategic management, innovation management, effective management, vocational colleges, Thailand, ASEAN

### **INTRODUCTION**

Thailand's 1997 Constitution marked the beginning of the current development of Thailand's national education. What prompted the change was the economic crisis in the region which highlighted an urgent need to enhance people's ability to keep up with the rapid changes associated with globalization in order to thrive in a very competitive global arena. Thailand had to seriously consider how to promote and deliver lifelong learning educational services. At the same time, there was a need to ensure greater flexibility in service provision. A system which would be more flexible in terms of curricula content, modes of delivery and educational management, was needed (MOE., 2004).

The quality of education is a crucial issue in economic development with continuing education a key element in a population's ability to succeed, whether it is political, economic, social or cultural. These elements must be developed and maintained for a nation to maintain its presence in the

international community on a par with developed countries (Chung and Megginson, 1981; Brown and Moberg, 1980). As the needs of a society change, the educational process must change with it, thereby creating a paradigm shift. According to Drucker (1989), traditional education was rather terminal, ending with the attainment of a diploma or degree. Today however, because of continuing rapid changes in technology, education cannot end at the time of degree completion.

This development requires a "Person" which is an important factor in the processes in the development of the "Educational process". Therefore, the role of knowledge is very important to the people and the nation for a world new age (Drucker, 2007).

The current Thai framework for education is based on the 1997 Constitution and the 1999 National Education Act which provide the basic principles as well as challenging guidelines for the provision and development of the education system. Subsequently, a National Education Plan was drawn up, concentrating on how to address poverty and find ways to improve the quality of life of Thai people by embracing issues of access, equity and quality in education. Education reform aims to prepare people to pursue promising careers but also provides them with the ability to make rational judgments and choices and to live in harmony with other members of society (MOE., 2004).

However, vocational education and occupational training was to be provided in educational institutions belonging to the State or the private sector, enterprises, or those organized through co-operation of educational institutions and enterprises (NEA., 1999). Today, vocational education in Thailand is particularly important for the high percentage of contribution from the private sectors which accounts for almost 37% of the total educational system (StudyLands, 2014).

The present private educational system, however, is hampered by government meddling and policies, rules and regulations which act as barriers to private educational services. The private educational sector also lacks support from administrators, teachers and educators. Academic knowledge and innovation management, including educational administration is limited.

In 2010, from a total population of nearly 66 million there were just over 14 million students enrolled at institutions in Thailand. Of them almost 4.8 million studied at secondary level and around 2.5 million at higher education level. Within the formal system, there are different pathways in to vocational education and training. Some courses are offered as part of the general secondary school curriculum. However, it is at upper secondary level that students can opt to study at one of the country's vocational education and training colleges. On average, the ratio of students studying in the general stream compared to the vocational stream is 60:40 (Sangboonnum, 2010).

The research conducted by Okirima (2013) on management as a determinant of effectiveness among public and private secondary schools in Uganda, it was recommended that for the schools to improve their effectiveness, school managers and teachers need to be regularly appraised and trained on an array of pertinent school management issues.

Given these issues, the researchers undertook a study to understand the approaches to the management of private vocational colleges because you can create an effective approach to development. This can also help an organization effectively survive amid political, social and economic changes while providing effective educational services to the public (Barnett, 2005).

From the research and theory on academic performance, it was found that there are three main factors that relate to the management of private vocational colleges.

Strategic management fluctuates over time due to the changing business environment which therefore makes it an important vehicle for the modern executive. This strategy needs to be understood in order to adjust to the new and modern management paradigms. Management needs to know the environment inside and outside of the organization and seize the opportunities that

arise from the unknown creating benefits for the business and creating a competitive advantage. It also entails knowledge about ways of avoiding or minimizing potential dangers and risks. Vocational college management guidelines required for an institution to achieve its targets is to: (1) Raise the quality of education, (2) Development of education information, (3) Promoting education support, (4) Human resource development, (5) Development of management systems and (6) Development of network management (Fazli and Alishahi, 2012; Glickman *et al.*, 1995; Sammons *et al.*, 1999; Wheelen and Hunger, 2000; Pearce and Robinson, 2000; Avolio *et al.*, 1999; Howell and Hall-Merenda, 1999).

Innovation management is one of the most important tools in the development of the organization, both in terms of efficiency and effectiveness. It is also the ability to maintain market share and enhance competitiveness. Innovation is also the use of knowledge and creativity that leads to innovation and improves the products and services that are new and better than ever before. An important factor that encourages organizational innovation is: (1) The ability to always have a clear vision shared by both management and employees in the organization, (2) Having an organizational structure that is conducive to innovation, (3) Development of knowledge management in the organization with the right incentives, (4) Constant knowledge development of organizational personnel in the various departments and fields, (5) Organization needs to be based on technological infrastructure and (6) Organization in its entirety has to support the ability to maintain market share and enhancing competitiveness, including organizational culture, QMS, a focus on market development and resource management (Fazli and Alishahi, 2012; Parmelli *et al.*, 2011; Lee and Tseng, 2005; Furnham and Gunter, 1993; Wright and Snell, 1991; Gronroos, 1994).

Effective management is critical to the management and operation of the organization because this is the final decision for successful management of an organization, not just to survive but to thrive depends on the stability and effectiveness of the organization. It is a measure of the achievement of performance goals and objectives of the organization in areas such as joint customers, internal processes, learning and the ability to solve problems (Glickman *et al.*, 2001; Hanson, 1991; Hoy and Miskel, 1991).

From the above, certain key aspects were drawn as the study's objectives. One determinant focused on finding better ways to manage Thailand's private vocational colleges so that they might both survive and thrive under a highly competitive environment. This led to the creation of the following hypothesis:

- **H1:** Strategic management influences innovation management

In Taiwan it was observed that technological and vocational schools teachers' e-portfolios acceptance significantly and directly influences evaluation effectiveness (Chou, 2012). In other words, innovation has a direct and large influence over vocational school management effectiveness which is consistent with other research. This led to the second hypotheses for this study's objective:

- **H2:** Innovation management influences effective management

The third and final study objective was to investigate management's strategy and how this influenced college administrator's leadership skills and effectiveness. Research conducted by Gerawatanakaset (2008) on Thai vocational school strategic management, it was determined that

there were seven major factors to be considered in the development of the strategic plan for vocational education. These consisted of politics, economy, society, culture, environment, technology and management and administration. This confirmed other scholar's research and led to the formulation of the final research objective for this study:

- **H3:** Management strategy influences effective management

## MATERIALS AND METHODS

The sample group for this study includes 614 Thai vocational school college administrators selected from Stratified Random Sampling from 4 Thai provinces which were given questionnaires using Simple Random Sampling and a 7-point Likert scale (Likert, 1972) with 1 being the lowest and 7 the highest. The research questionnaires which were used to collect data included a check-list with 1 set containing 3 sections with the first section (Table 1) being questions about the background of the respondents, the second section contained questions pertaining to factors that affect the performance of private vocational colleges and the third section containing queries on feedback and the structural relationships of the variables that affect the effectiveness of private vocational colleges.

**Questionnaire design:** Quality and content was monitored with tools used in the research and as a measurement of quality. Both content validity and reliability was assured by 5 experts in their respective fields with an evaluation index consistent with the content and the purpose of the research. Additionally, the index of Item-Objective Congruence (IOC) developed by Rovinelli and

Table 1: Status and number of samples of vocational college administrators

Variables	Sample size	Percentage
<b>Sex</b>		
Male	272	44.30
Female	342	55.70
Total	614	100.00
<b>Age</b>		
Under 30 years of age	11	1.79
30-40 years old	135	21.99
41-50 years old	235	38.27
51-60 years old	115	18.73
Over 60 years of age	118	19.22
Total	614	100.00
<b>Education level</b>		
High School	8	1.30
Bachelor's degree or equivalent	435	70.85
Masters	148	24.10
Ph.D	23	3.75
Total	614	100.00
<b>Administrative position experience</b>		
Less than 1 year	238	38.76
1-3 years	262	42.67
Over 3 years	114	18.57
Total	614	100.00

Hambleton (1977) was employed to carry out the screening of questions to a group of 30 initially in the pilot study. The IOC is a procedure used in test development for evaluating content validity at the item development stage. This measure is limited to the assessment of unidimensional items or items that measure specified composites of skills. The method prescribed by Rovinelli and Hambleton (1977) resulted in indices of item congruence in which experts rate the match between an item and several constructs assuming that the item taps only one of the constructs which is unbeknownst to the experts. The research then proceeded to select items that with an IOC index higher than 0.8 which were considered acceptable.

Questionnaires were constructed to be a tool to measure concept definition and practice. The instrument or questionnaire used the 7-Point (Likert, 1972) as the measurement scale and the conceptual framework for determining the internal consistency measured by coefficient alpha ( $\alpha$ -coefficient) of Akron BAC (Cronbach) to calculate the average value of the correlation coefficient which ranged from 0.886-0.895 which is considered quite reliable after all values lower than 0.50 were eliminated from the measurement. The 614 individuals were selected using Stratified Random Sampling using simple random sampling which is considered suitable for analysis with PLS.

**Statistical analysis:** Analysis was further performed on the basic statistics such as percentage, mean, standard deviation and studied with SPSS element model of the involvement of the private vocational college. Confirmatory Factor Analysis (CFA) and the Structural Equation Modeling (SEM) was undertaken with PLS Version 8.72 and used a technique for the measurement of attitudes (Likert, 1932) on: (1) Strategic management (2) Innovation management and (3) Effective management.

## RESULTS

The findings are presented in the following 3 sections:

**Section 1:** The analysis of general information about the respondents.

In Table 1, the number of private vocational college administrators had a higher number of females to males (55.70 and 44.30%, respectively). Administrator ages were grouped with the majority being between 41-50 years of age, followed by the 30-40 year old and then 51-60 years of age with those younger than 30 years being the smallest (38.27, 21.99, 19.20, 18.73 and 1.79%, respectively). Under the category of highest obtained education, Bachelor's degree or equivalent had the greatest number followed by Master degrees, PhDs and an even smaller number with high school education (70.85, 24.10, 3.75 and 1.30, respectively). Administrative position experience of those with only 1-3 years were the highest followed by experience of more than 3 years and finally with those less than one year (42.67, 38.76 and 18.57%, respectively).

**Section 2:** Analysis of the factors that affect private vocational college management practices are effectiveness.

From Table 2 and 3, it can be seen that Strategic Management (ST) analysis used as a measurement instrument or questionnaire a 7-Point Likert scale (Likert, 1972) and was constructed with the scales developed enabling measurement of Education Quality (Re), Information (Di), Education Promotion (Pe) Manpower (Ds), Management (Dm) and Connections (Ne). There is a high-reliability factor as the Cronbach's Alpha was 0.810 with the mean at 6.18.

Table 2: Results of the Analysis variables

Variables	Cronbach's alpha	Mean	S.D	Suitability level
Strategic management	0.891	6.18	0.81	Maximum
Innovation management	0.890	6.20	0.80	Maximum
Effective management	0.886	6.26	0.80	Maximum

Table 3: Latent variable analysis of Strategic management

Variables	Mean	S.D	Suitability level
Education quality	6.30	0.76	Maximum
Information	6.20	0.80	Maximum
Education promotion	6.30	0.77	Maximum
Manpower	6.10	0.82	Maximum
Management	6.10	0.79	Maximum
Connections	6.10	0.93	Maximum
Average	6.18	0.81	Maximum

S.D: Standard deviation

Table 4: Latent variable analysis of Innovation management

Variables	Mean	S.D	Suitability level
Culture	6.07	0.67	Maximum
Quality marketing	6.20	0.75	Maximum
Marketing resources	6.20	0.90	Maximum
Resources	6.30	0.87	Maximum
Average	6.20	0.80	Maximum

S.D: Standard deviation

Table 5: Latent variable analysis of Effective management

Variables	Mean	S.D	Suitability level
Customers	6.20	0.83	Maximum
Process	6.22	0.73	Maximum
Learning	6.32	0.79	Maximum
Solutions	6.30	0.84	Maximum
Average	6.26	0.80	Maximum

S.D: Standard deviation

From Table 2 and 4, it can be seen that Innovation management (IAD) analysis used as a measurement instrument or questionnaire a 7-Point Likert scale (Likert, 1972) and was constructed with the scales developed enabling measurement of Culture (OC), Quality Marketing (QMS), Marketing Resources (MD) and Resources (RM). There is a high-reliability factor as the Cronbach's Alpha was 0.800 with the mean at 6.20.

From Table 2 and 5, it can be seen that Effective Management (ADE) analysis used as a measurement instrument or questionnaire a 7-Point Likert scale (Likert, 1972) and was constructed with the scales developed enabling measurement of Customers (C), Process (IP), Learning (L) and Solutions (S). There is a high-reliability factor as the Cronbach's Alpha was 0.800 with the mean at 6.26.

**Section 3:** Development of a validated model of for private vocational college effective management by the analysis of the data by use of PLS-Graph 3.0. The results are depicted in Fig. 1 and Table 6.

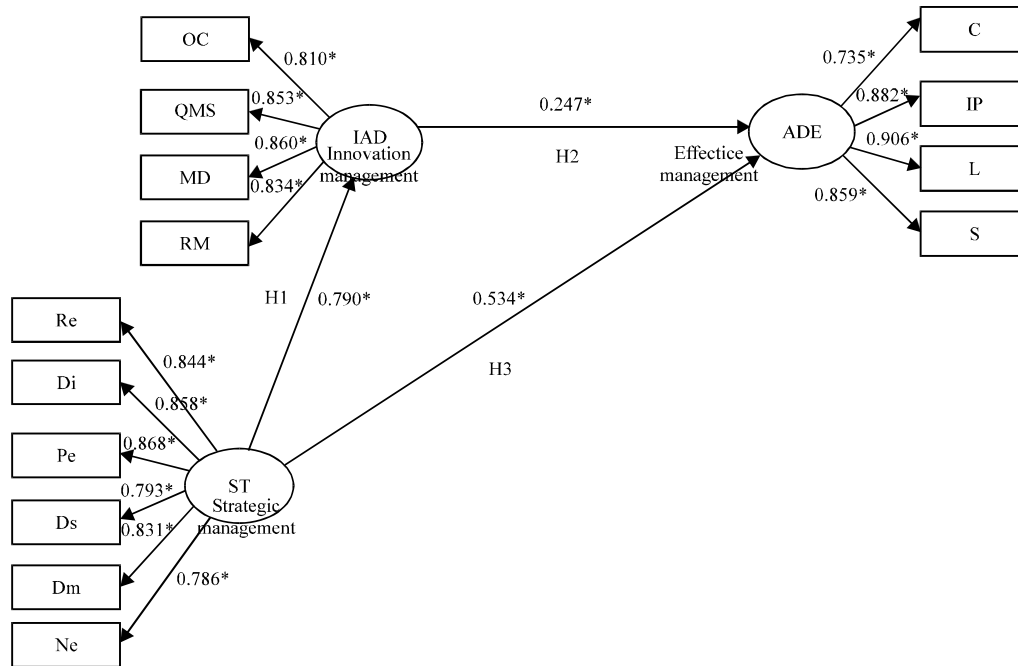


Fig. 1: Final Model of the analysis of the structural equation model of effective management on Thai private vocational colleges

Table 6: Results of hypothesis testing

Path	Path coefficient	p-value	Results
H1: Strategic management → Innovation management	0.790	<0.001	Supported
H2: Innovation management → Effective management	0.247	<0.001	Supported
H3: Strategic management → Effective management	0.534	<0.001	Supported

Figure 1 shows the structural model of factors that influence the effective management of private vocational colleges with three main factors: Strategic Management, Innovation Management Innovation effective Management.

Table 6 shows the results of hypotheses testing were as follows:

- **Hypothesis 1 (H1):** Strategic Management in private Thai vocational schools has a direct and positive influence on Innovation Management. Hypothesis testing found that the management strategies of private Thai vocational college administrators have a direct and positive influence on the management of the college as witnessed by the coefficient = 0.790, the fact that the hypothesis significance is  $p \leq 0.01$
- **Hypothesis 2 (H2):** Innovation Management in private Thai vocational schools has a direct and positive influence on Effective Management. Hypothesis testing found that the management strategies of private Thai vocational college administrators have a direct and positive influence on the management of the college as witnessed by the coefficient = 0.247, the fact that the hypothesis significance is  $p \leq 0.01$



- **Hypothesis 3 (H3):** Strategic Management in private Thai vocational schools has a direct and positive influence on Effective Management. Hypothesis testing found that the management strategies of private Thai vocational college administrators have a direct and positive influence on the management of the college as witnessed by the coefficient = 0.534, the fact that the hypothesis significance is  $p \leq 0.01$

From the hypotheses mentioned above, research shows that the model incorporates the indicators from 3 main factors, namely Strategic Management, Innovation Management and Effective Management and there is a direct correlation in the administrative structure of effective management of private vocational colleges.

**Convergent validity analysis:** Table 7-9 shows that all indicators have a very high loading value which is between 0.735 and 0.906. The statistical significance level of 0.01 each, each block has a height of between 0.905-0.930  $\rho_c$  and  $\rho_v$  values between 0.690-0.719 which shows that the indicators in each block can only measure the latent variables to their block with each of the variables to reflect a measure of the reliability and validity of high resolution.

Table 10 and 11 show that the column variable cross construct correlation with other variables is lower than the value of the column variable and is found to be very high, in the range of 0.905-0.930 with each AvCommun height ranging from 0.714-0.973 which shows that the indicators in each block can only measure the latent variables to their block with each of the variables to reflect a measure of the reliability and validity of high resolution.

**Results of analysis of model and measurement:** Table 7-11 shows that all the variables  $R^2$  is very high ranging from 0.656-0.821 except Innovation Management and Strategic

Table 7: Statistics show convergent validity

Indicator	Mean	Loading	CR	AVE
<b>Innovation management (IAD)</b>			0.867	0.685
Culture (QC)	0.8339	0.7930		
Quality Marketing (QMS)	0.8547	0.8348		
Marketing Resource (MD)	0.7244	0.8545		
Resource (RM)	0.9058	0.7273		
<b>Strategic management (ST)</b>			0.805	0.676
Education quality (Re)	0.7334	0.9068		
Information (Di)	0.8787	0.7340		
Education promotion (Pe)	0.8656	0.8786		
Manpower (Ds)	0.8794	0.7614		
Management (Dm)	0.8775	0.8163		
Connection (Ne)	0.7559	0.7860		
<b>Effective management (ADE)</b>			0.822	0.606
Customers (C)	0.7557	0.7354		
Process (IP)	0.8161	0.8828		
Learning (L)	0.7543	0.8065		
Solutions (S)	0.8547	0.7594		

Table 8: Reflective statistical values indicating convergent validity of the latent variables

Construct/item	Loading	R <sup>2</sup>	t-stat
<b>Strategic management (ST)</b>			
Education quality	0.844	0.712	58.404
Information	0.858	0.736	59.007
Education promotion	0.868	0.753	44.415
Manpower	0.793	0.629	33.429
Management	0.831	0.691	43.444
Connections	0.786	0.618	32.439
<b>Innovation management (IAD)</b>			
Culture	0.810	0.656	28.028
Quality marketing	0.853	0.728	59.007
Marketing resources	0.860	0.740	44.415
Resources	0.834	0.696	43.444
<b>Effective management (ADE)</b>			
Customers	0.735	0.540	20.463
Process	0.882	0.778	43.303
Learning	0.906	0.821	50.261
Solutions	0.859	0.738	59.017

Table 9: Convergent validity analysis

Model abbreviations	Construct/indicators	$\lambda$	R <sup>2</sup>	$\rho_c$	$\rho_v$
IAD	Innovation management			0.905	0.705
OC	Culture	0.810*	0.656		
QMS	Quality marketing	0.853*	0.728		
MD	Marketing resources	0.860*	0.740		
RM	Resources	0.834*	0.696		
ST	Strategic management			0.930*	0.690
Re	Education quality	0.844*	0.712		
Di	Information	0.858*	0.736		
Pe	Education promotion	0.868*	0.753		
Ds	Manpower	0.793*	0.629		
Dm	Management	0.831*	0.691		
Ne	Connections	0.786*	0.618		
ADE	Effective management			0.911*	0.719
C	Customers	0.735*	0.540		
IP	Process	0.882*	0.778		
L	Learning	0.906*	0.821		
S	Solutions	0.859*	0.738		

\*p<0.05,  $\lambda$ : Factor loading, R<sup>2</sup>: Square multiple correlation,  $\rho_c$ : CR,  $\rho_v$ : AVE

Table 10: Statistics show the discriminant validity and reliability of the measurement

Construct	CR	R <sup>2</sup>	AVE
Innovation management	0.905	0.624	0.705
Strategic management	0.930	0.000	0.690
Effective management	0.911	0.623	0.719

Management with only a R<sup>2</sup> of 0.656-0.753, all paths are statistically significant. Each block has a reliability of between 0.919-0.986 and the value AvRedund between 0.735-0.906.

Table 11: Analysis of discriminant validity

Construct	Cross construct correlation				
	$\rho_c$	$\rho_v$	IAD	ST	ADE
IAD	0.905	0.705	0.840		
ST	0.930	0.690	0.786	0.831	
ADE	0.911	0.719	0.662	0.723	0.848

Analysis of classification accuracy

## DISCUSSION

In Taiwan it was observed that technological and vocational schools teachers' e-portfolios acceptance (innovation) significantly and directly influences evaluation effectiveness (Chou, 2012). In other words, innovation has a direct and large influence over vocational school management effectiveness which supports the results from this study. This is also consistent with this study in that it was determined that effective management of private vocational colleges is affected by strategic management indirectly thought innovation management.

It appears that as long as public school teachers maintain their present major mode of instruction which relies heavily upon recitation and memorization (Jackson, 1983; Atkin, 1983), many students will not be served well. To move from this situation to one that calls for a major change in vocational education objectives, to simultaneously require teachers to upgrade their subject matter expertise and to expand their classroom styles to incorporate coaching and Socratic questioning approaches interchangeably according to the situation, calls for a near revolution in the education system (Gilli, 2001).

Recent technological developments have given rise to blended learning classrooms. An inverted (or flipped) classroom is a specific type of blended learning design that uses technology to move lectures outside the classroom and uses learning activities to move practice with concepts inside the classroom (Strayer, 2012). This classroom technique is allowing students to become more open to cooperative learning and innovative teaching methods and could potentially be a source used by educators and administrators to introduce new ways to quickly adapt to the changing needs of industry.

It is therefore, necessary for colleges to develop the capacity and skills used in the performance of operational personnel that meets the strategic management needs of the institution. As part of the human resources strategy it is necessary to prepare them to learn the skills necessary to manage an organization, both for the present and future (Werner and Desiimon, 2006).

In another earlier investigation into Thai vocational college management's strategy and how this influenced the administrator's leadership skills and effectiveness, research conducted by Gerawatanakaset (2008) determined that there were seven major factors to be considered in the development of the strategic plan for vocational education. These consisted of politics, economy, society, culture, environment, technology and management and administration. This study however, took made some variations to Gerawatanakaset (2008) study and explored the issues of education quality, information, education promotion, manpower, management and connections.

Both studies therefore, determined that strategic management of the organization has a direct relationship influencing the learning environment. Additionally, this study indicated that secondary roles having positive influences on strategic management as well. Additionally, private vocational college management with strategic vision had a direct relationship on effective management and productivity of private vocational colleges.

Schofield (1991) stated that it is difficult to be precise about trends in institutional decision-making due to the wide range of differences between higher education systems. Traditional collegial methods of decision-making through bodies consisting largely of academic members have been subject to considerable criticism for a number of reasons which include slowness, a lack of decisiveness and a focus that is inward and on the institution rather than being externally oriented (Lockwood, 1985). Institutions have responded to such criticisms in different ways but in some countries attempts have been made to streamline decision-making, for example by reducing the number of decision-making committees and their powers, replacing academic control with management action on some non-academic matters, placing greater emphasis on the accountability of decision makers and so on.

Private vocational schools need to build a reputation aimed at improving the quality of continuing educational services such as enhancing the image and reputation of the organization through various means such as advertising and the participation in social activities. These factors influence the critical events that persuade customers (the students) which results in clients (the students) to build confidence and a decision to use the educational enterprise.

The key issues that influence the performance of private vocational colleges has been outlined in this study and if implemented can be effective tools towards an organization's strategic management and innovation management leading to better and more effective management. Collaboration and communications between management, state and provincial agencies and staff is an important factor in every step which helps determine the overall strategy and operational efficiency along with sustainable growth.

## **CONCLUSION**

Thailand's office of the Vocational Education Commission is working out two major measures that will help Thai vocational students prepare for the arrival of the soon-to-be ASEAN Community. The first consisting of a survey on the labor demand in ASEAN member countries, with the second part consisting working with entrepreneurs in the industrial sector so that vocational students can be trained in various workplaces, so that they will have knowledge and work experience in line with the needs of the manufacturing sector. Cooperation with entrepreneurs also involves educational management to improve the quality of the workforce as well as placing a greater emphasis on vocational education in order to produce more trained personnel, who are now in short supply.

The arrival of the ASEAN Community will open up greater opportunities for Thai and ASEAN professionals and skilled workers to work in various countries in this region with young Thais becoming more interested in working in other ASEAN countries as they gain a better understanding about ASEAN through the vocational education system. Strategic vision and innovation are therefore viewed as keys to how well management can effectively implement the educational and technical training requirements for.

Administrative and technical college organizational polices should therefore foster the participation of personnel in all stages of policy development and practice that meet the nation and ASEAN's needs. Benefits to each party should be clearly defined and stated with goals at every step clearly transparent from the private to the public sector which will contribute to the efficient and sustainable management of the nearly 1 million Thai private and public school vocational students.

## REFERENCES

- Atkin, J.M., 1983. The improvement of science teaching. *Daedalus*, 112: 167-188.
- Avolio, B.J., B.M. Bass and D.I. Jung, 1999. Re-examining the components of transformational and transactional leadership using the Multifactor Leadership. *J. Occup. Organiz. Psychol.*, 72: 441-462.
- Barnett, A.M., 2005. The impact of transformational leadership style of the school principal on school learning environments and selected teacher outcomes. Ph.D. Thesis, University of Western Sydney.
- Brown, W.B. and D.J. Moberg, 1980. *Organization Theory and Management: A Macro Approach*. John Wiley and Sons, New York, ISBN: 0471020230, pp: 16-17.
- Chou, C.M., 2012. Influence of teachers' perceived e-portfolio acceptance on teacher evaluation effectiveness in Taiwan. *Aust. J. Educ. Technol.*, 28: 719-739.
- Chung, K.H. and L.C. Megginson, 1981. *Organization Behavior: Developing Managerial Skill*. Harpers and Row, New York.
- Drucker, P.F., 1989. *The New Realities*. Harper and Row, New York.
- Drucker, P.F., 2007. *Innovation and Entrepreneurship*. 2nd Edn., Harper Collins, New York.
- Fazli, S. and A. Alishahi, 2012. Investigating the relationships between organizational factors (culture, structure, strategy) and performance through knowledge management. *Am. J. Scient. Res.*, 44: 116-130.
- Furnham, A. and B. Gunter, 1993. *Corporate Assessment: Auditing a Company's Personality*. Routledge, London.
- Gerawatanakaset, M., 2008. A strategic planning of thailand vocational education. Proceedings of the EDU-COM 2008 International Conference Sustainability in Higher Education: Directions for Change, November 19-21, 2008, Edith Cowan University, Perth Western Australia.
- Gilli, A.C., 2001. The role of vocational studies and training in general-liberal schooling. *J. Ind. Teach. Educ.*, Vol. 39, No. 1.
- Glickman, C.D., S.P. Gordon and J.M. Ross-Gordon, 1995. *Supervision of Instruction*. 3rd Edn., Simon and Schuster, Needham Heights, MA., US.
- Glickman, C.D., S.P. Gordon and J.M. Ross-Gordon, 2001. *Super Vision and Instructional Leadership*. 5th Edn., Allyn and Bacon, Needhan Heights, MA.
- Gronroos, C., 1994. From marketing mix to relationship marketing: Towards a paradigm shift in marketing. *Manage. Decis.*, 32: 4-20.
- Hanson, E.M., 1991. *Educational Administration and Organizational Behavior*. 3rd Edn., Allyn and Bacon, Boston, Mass, ISBN-13: 978-0205126514, Pages: 797.
- Howell, J.M. and K.E. Hall-Merenda, 1999. The ties that bind: The impact of leader-member exchange, transformational and transactional leadership and distance on predicting follower performance. *J. Applied Psychol.*, 84: 680-694.
- Hoy, W.K. and C.G. Miskel, 1991. *Educational Administration: Theory Research and Practice*. 4th Edn., McGraw Hill, New York.
- Jackson, P.W., 1983. The reform of science education: A cautionary tale. *Daedalus*, 112: 143-166.
- Lee, T.Z. and Y.F. Tseng, 2005. A study of the relationship between organizational culture and organizational effectiveness of the electronic industries in Taiwan. *Chin. Named J. Taiwan*, 1461: 161-178.
- Likert, R., 1932. A technique for the measurement of attitudes. *Arch. Psychol.*, 140: 1-55.

- Likert, R., 1972. Likert Technique for Attitude Measurement. In: *Social Psychology: Experimentation, Theory, Research*, Sahakian, W.S. (Ed.). Intext Educational Publishers, Scranton, USA., ISBN-13: 9780700223879, pp: 101-119.
- Lockwood, G., 1985. Universities as Organizations. In: *Universities: The Management Challenge*, Lockwood, G. and J. Davies (Eds.). Chapter 2, NFER-Nelson Publishing, Windsor, Ontario, Canada, ISBN-13: 9780700506095, pp: 24.
- MOE., 2004. Ministry of education Thailand national report 2004. Proceedings of the 47th Session of the International Conference on Education, September 8-11, 2004, Geneva, pp: 1-81.
- NEA., 1999. National education act B.E. 2542 (1999) and amendments (second national education act B.E. 2545 (2002)). Office of the National Education Commission, Office of the Prime Minister, Kingdom of Thailand.
- Okirima, E.M., 2013. Management as a determinant of effectiveness among selected public and private secondary schools in Eastern Region of Uganda. *Asian J. Manage. Sci. Educ.*, 2: 89-99.
- Parmelli, E., G. Flodgren, F. Beyer, N. Baillie, M.E. Schaafsma and M.P. Eccles, 2011. The effectiveness of strategies to change organisational culture to improve healthcare performance: A systematic review. *Implementation Sci.*, Vol. 6.
- Pearce, II, J.A. and R.B. Robinson, 2000. *Strategic Management: Formulation, Implementation and Control*. 7th Edn., McGraw-Hill, Inc., Boston.
- Rovinelli, R.J. and R.K. Hambleton, 1977. On the use of content specialists in the assessment of criterion-referenced test item validity. *Dutch J. Educ. Res.*, 2: 49-60.
- Sammons, P., J. Hillman and P. Mortimore, 1999. Key characteristics of effective schools: A review of school effectiveness research. A Report Office for Standards in Education, London (England), OFSTED.
- Sangboonnum, C., 2010. Vocational education development: Lessons from Thailand. Deputy Permanent Secretary, Ministry of Education, Thailand. [http://yangon.sites.unicnetwork.org/files/2013/05/Voc-Edu\\_thailand\\_Ms\\_-Churairat-Sangboonnum-.pdf](http://yangon.sites.unicnetwork.org/files/2013/05/Voc-Edu_thailand_Ms_-Churairat-Sangboonnum-.pdf)
- Schofield, A., 1991. Improving the effectiveness of the management of innovation and change in higher education. International Institute for Educational Planning, UNESCO, May 1991. <http://unesdoc.unesco.org/images/0008/000886/088658eo.pdf>.
- Strayer, J.F., 2012. How learning in an inverted classroom influences cooperation, innovation and task orientation. *Learn. Environ. Res.*, 15: 171-193.
- StudyLands, 2014. Career colleges and vocational schools in Thailand. SAE Institute Bangkok Thailand, Wattana, Thailand. [http://www.studylands.com/study-abroad/career\\_vocational2-TH-en-oc.htm](http://www.studylands.com/study-abroad/career_vocational2-TH-en-oc.htm)
- Werner, J.M. and R.L. Desiimon, 2006. *Human Resource Management*. McGraw-Hill, USA.
- Wheelen, T.L. and J.D. Hunger, 2000. Quality of Work Life and Human Diversity. In: *Strategic Management Business Policy*, Wheelen, T.L. and J.D. Hunger (Eds.). 7th Edn., Prentice-Hall, Upper Saddle River, New Jersey.
- Wright, P.M. and S.A. Snell, 1991. Toward an integrative view of strategic human resource management. *Hum. Resour. Manage. Rev.*, 1: 203-225.