Turkish Online Journal of Qualitative Inquiry (TOJQI) Volume 12, Issue 7, July 2021: 8935 - 8944

Research Article

The Effectiveness of Administration which Applies the Sufficiency Economy Philosophy According to the Balanced Scorecard Perspective of St Theresa International College

Vichian Puncreobutr^{1*}, Vipa Pengsaium², Suphak Pibool¹, and Orawan Chanchalor¹

¹Lecturer, Faculty of Education, St. Theresa International College, Nakhon-Nayok, Thailand.

²Lecturer, Faculty of Nursing, St. Theresa International College, Nakhon-Nayok, Thailand.

*Corresponding Author Email: vichian@stic.ac.th

ABSTRACT

This research aims to study the administrative effectiveness of higher education institution administrators, arising from the application of the Sufficiency Economy philosophy according to the Balanced Scorecard perspective of St Theresa International College. This is done by finding the correlation between the application level of the Sufficiency Economy philosophy in higher education institution administration and the administrative effectiveness of higher education institutions according to the balanced scorecard perspective. The sample group consisted of 113 lecturers from St Theresa International College, the instrument was a questionnaire created by the researcher, the statistics used were mean, t-Test, and Pearson's simple correlation moment. The results showed that the application level of the Sufficiency Economy philosophy in the administration of higher education institutions in general and in all aspects, including moderation, rationality, immunity, the use of knowledge conditions and the use of moral conditions, had high-level implementation results. The results of the study on the effectiveness of higher education institution administration according to the Balanced Scorecard perspective showed that in general and at the perspective level, in every perspective, including the learning and development perspective, the internal business perspective, the customer or service recipient perspective, and the financial perspective, the effectiveness was at a high level. The results of the study on the administrative effectiveness level of the higher education institution administrators, arising from the application of the Sufficiency Economy philosophy according to the Balanced Scorecard perspective of St Theresa International College, were at a high level. The correlation between the application level of the Sufficiency Economy philosophy in the administration of higher education institutions and the administrative effectiveness of higher education institutions according to the Balanced Scorecard perspective were discovered to be very highly correlated with a statistical significance level of .01, and a correlation coefficient of .872. Thus, the administrative effectiveness of higher education institution administrators, arising from the application of the Sufficiency Economy philosophy according to the Balanced Scorecard perspective of St Theresa International College, were at a high level.

Keywords: Sufficiency Economy, Balanced Scorecard, Administrative Effectiveness of Higher Education Institutions

The Sufficiency Economy philosophy is a guideline for administration that takes into account the balance of resource consumption in the area to maximize benefits, starting in Thailand and widely applied to various other countries (Calkins, 2009). In Thailand, the Sufficiency Economy philosophy has been applied continuously in administration, both in the economic aspect and in the educational aspect (Massayawanitkul and Yuenyaw, 2018).

The application of the Sufficiency Economy philosophy to educational administration exists in various forms, for instance, the study of Massayawanitkul and Yuenyaw (2018), where it was applied in educational administration strategies for sustainable development. It consists of 5 aspects, namely, educational institutions management, curriculum and learning activities, organizing student development activities, educational institution personnel development, in terms of results/success, and it is applied to educational administration in all levels of education.

Applying the Sufficiency Economy philosophy to basic education administration, for instance, a study by Lamrun (2018) which found that administrators of educational institutions under the Office of Secondary Education Service Areas, Region 8, Thailand, generally had the most application of the Sufficiency Economy philosophy, and when considering each aspect, it was found that every aspect, including educational institutions management, curriculum and learning activities, educational institution personnel development, organizing student development activities, in terms of results/success, are at a very high level, respectively. In addition, it was found that administration of educational institutions according to the Sufficiency Economy philosophy had a moderate correlation to the quality of teachers' work lives, with a correlation coefficient of .570.

The application of the Sufficiency Economy philosophy to vocational education administration, for instance, a study by Umnuayrat (2020) found that administrators of vocational institutions in the northern region have integrated the philosophy of Sufficiency Economy into the administration of educational institutions at a high level, and when considering each aspect, it was found to be integrated into the highest level of academic administration, followed by general administration, personnel management and budget management.

Applying the Sufficiency Economy philosophy to higher education administration, for example, a study by Chamaram. (2018) found that administrators of higher education institutions who used the Sufficiency Economy philosophy in their administration were professional executives that are committed to reinforcing the quality of life of personnel, increasing the capacity of human resource development in the implementation of higher education missions. This generates a good image for higher education institutions, creating credibility to stakeholders, to show that administrations are carried out with social responsibility and growth is balanced, steady and sustainable.

The results of a study on private higher education institutions of Skulpunyawat (2017) found that the administrators of the Faculty of Nursing in private higher education institutions have applied the Sufficiency Economy philosophy to administration. It was found that the factors of age, knowledge on Sufficiency Economy, and experience in administration, did not affect the application of the Sufficiency Economy philosophy in administration. The factor associated with experience in applying the Sufficiency Economy philosophy affects administration at a low level (R²=.160).

The most important aspect of administration is the instrument used to measure administrative effectiveness (Kaplan & Norton, 1996). A good instrument used to measure or assess administration should be measured from a variety of perspectives, such as the Balanced Scorecard which measures

results in 4 perspectives, including the Financial Perspective, the Customer Perspective, the Internal Business Perspective, and the Learning and Development Perspective (Kaplan & Norton, 1996; Decharin, 2013).

The use of the Balanced Scorecard as an instrument to measure the administrative effectiveness of an organization is widely used (Kaplan & Norton, 1999). In Thailand, it was discovered that organizations that use the Balanced Scorecard as an instrument to measure effectiveness leads the organizations to achieve success quickly. An example is the application of the Balanced Scorecard in the organization of Thanalaeng Railway Station, which found that organizations were able to increase the organizational administration efficiency and the quality of service from the organization (Somchanmavong, 2018). The use of the Balanced Scorecard in Thai Airways can increase the efficiency of organizational administration and the service quality of Thai Airways employees (Suitprapi, 2017), etc.

With regard to the use of the Balanced Scorecard as an instrument to measure the effectiveness of educational administration, it was found that this was applied to the basic education level, vocational level and higher education level. An example for secondary education is the study of Godsan, and Yurapat. (2018), where the Balanced Scorecard was applied, with 4 perspectives, namely the student perspective, the internal business perspective, the learning and development perspective, and in terms of budget and resources, which found that the administration of educational institutions causes the educational institutions to have desirable conditions at a high level.

The application of the Balanced Scorecard at the vocational level, for instance, the study of Sangkatat et., al. (2013), which applied the Balanced Scorecard involving four perspectives, namely, the student perspective, the internal business perspective, the financial perspective, and the learning and development perspective, with each aspect performing systematic administration, which consists of input factors, processes and output factors. It was discovered that the following operations made the administration of vocational education successful. This formed a new educational institution administration model known as the successful educational institution administration model under the Office of Vocational Education Commission.

The applications of the Balanced Scorecard in higher education, for instance, a study by Binden, Mzyiu, and Suhaimi (2014) that used the Balanced Scorecard to measure the effectiveness of higher education in Malaysia. The results showed that the Balanced Scorecard could be used to measure performance and measure the administrative efficiency of the education sector, especially from the learning and development perspective.

St Theresa International College is a private higher education institution that is confident in the Sufficiency Economy philosophy, which is to be defined as the administration policy that "Aims for the achievement of higher education missions for an elevated quality by adopting results-oriented administration in accordance with the national strategic plan and consistent with the Sufficiency Economy philosophy". Also applying the Sufficiency Economy philosophy in the administration of all 3 principles, namely moderation, rationality, and immunity. Administration is carried out under 2 important conditions, which are the conditions in the use of knowledge and conditions in the use of morals, in all sectors and systems of the college. In addition, it is required that the administrative effectiveness is being monitored by using the Balanced Scorecard from the academic year 2016 onwards.

As a result of applying the Sufficiency Economy philosophy in administration and using the Balanced Scorecard as an administration instrument for a certain period of time, the college has assigned the Planning and Research Department to study the effectiveness of the administration that applied the Sufficiency Economy philosophy according to the Balanced Scorecard perspective. This will benefit the academic administrators of the college at all levels, to acknowledge the level of administrative effectiveness, as well as utilizing the information for the improvement of administration and managing personnel to be prepared to deal with changes, including University Disruption, VUCA, and New Normal Learning onwards.

Research Objectives

- 1. To study the application level of the Sufficiency Economy philosophy in the higher education institution administration of St Theresa International College.
- 2. To study the level of administrative effectiveness of higher education institutions according to the Balanced Scorecard perspective of St Theresa International College.
- 3. To compare the application level of the Sufficiency Economy philosophy in the administration of higher education institutions of St Theresa International College, classified by nationality.
- 4. To compare the administrative effectiveness level of higher education institutions according to the Balanced Scorecard perspective of St Theresa International College, classified by nationality.
- To find the correlation between the application level of the Sufficiency Economy philosophy
 in higher education institution administration with the administrative effectiveness level of
 higher education institutions according to the Balanced Scorecard perspective of St Theresa
 International College.
- 6. To study the administrative effectiveness of higher education institution administrators, arising from the application of the Sufficiency Economy philosophy according to the Balanced Scorecard perspective of St Theresa International College.

Research Methodology

This research is a Mixed-Method research.

1. Quantitative Research

The research study population consisted of 160 lecturers from St Theresa International College. The sample group was selected using the simple random sampling method, where the number of samples needed was obtained from the Krejcie & Morgan table, a total of 113 people were sampled.

Variables that were studied

The independent variable is nationality, consisting of Thai nationality and other nationalities. Dependent variables are:

- 1) The application of the Sufficiency Economy philosophy in the administration of higher education institutions, consisting of 5 aspects: the principle of moderation, the principle of rationality, the principle of immunity, conditions of the use of knowledge, and conditions of the use of morals.
- 2) The administrative effectiveness of higher education institutions according to the Balanced Scorecard perspective, consisting of 4 perspectives which are the learning and development perspective, the internal business perspective, the customer or service recipient perspective and the financial perspective.

The instrument used was a questionnaire created by the researcher, with a discriminant index between .39-.81 and the reliability index of .89. The statistics used in the research were mean, t-Test and Pearson's simple correlation moment.

2. Qualitative Research

The researcher conducted this study by executing in-depth interviews with 5 institutional-level and faculty-level administrators, 19 lecturers who are in charge of the program, 38 students involved in organizing activities and from the student union, totaling up to 62 key informants.

Research Results

The results obtained from the study are as follows:

1. A study on the application level of the Sufficiency Economy philosophy in the administration of higher education institutions.

Applying the Sufficiency Economy philosophy in the administration of the higher education institution, St Theresa International College. The results of the study are shown in Table 1.

Table 1. Shows the general view of the application level of the Sufficiency Economy philosophy in the administration of higher education institutions (N=113).

| Aspects | Mean | S.D. | Administration Level |
|---|-------|-------|----------------------|
| The principle of moderation | 4.304 | .5910 | High |
| The principle of rationality | 4.261 | .5141 | High |
| The principle of immunity | 4.143 | .6184 | High |
| Conditions of the use of knowledge | 4.185 | .6373 | High |
| Conditions of the use of morals | 4.141 | .6203 | High |
| Application of the Sufficiency Economy philosophy | 4.207 | .5336 | High |

According to Table 1, it was found that the application level of the Sufficiency Economy philosophy in the administration of the higher education institution, St Theresa International College, is at the high level (mean 4.207). When considering each aspect, it was found that the Sufficiency Economy philosophy was applied at a high level in all aspects, with the principle of moderation having the highest use in administration, followed by the principle of rationality, conditions of the use of knowledge, the principle of immunity and conditions of the use of morals, respectively.

2. A study on the administrative effectiveness level of higher education institutions according to the Balanced Scorecard perspective.

The administrative effectiveness level of higher education institutions according to the Balanced Scorecard perspective of St Theresa International College. The results are shown in Table 2.

Table 2. Shows the general view of the administrative effectiveness level of higher education institutions (N=113).

| Perspectives | Mean | S.D. | Effectiveness Level |
|--------------------------------|-------|-------|---------------------|
| Learning and Development | 4.343 | .5171 | High |
| Internal Business | 4.285 | .5792 | High |
| Customer or Service Recipients | 4.240 | .5079 | High |
| Finance | 4.375 | .5959 | High |
| Overall Effectiveness | 4.311 | .4892 | High |

According to Table 2, it was found that the administrative effectiveness of higher education institutions according to the Balanced Scorecard perspective of St Theresa International College is at a high level (mean 4.311). When considering each aspect, it was found that the administrative effectiveness of higher education institutions according to the Balanced Scorecard perspective was at

a high level in every perspective, with the financial perspective having the highest level of effectiveness, followed by the learning and development perspective, the internal business perspective and the customer or service recipient perspective, respectively.

3. Comparison of the application level of the Sufficiency Economy philosophy in the administration of higher education institutions, classified by nationality.

The application of the Sufficiency Economy philosophy in the administration of the higher education institution, St Theresa International College, compared according to the perceptions of lecturers with different nationalities. Thai nationality viewed that administrators had a higher level of applying the Sufficiency Economy philosophy in their administration compared to foreign lecturers. The results of the study are shown in Table 3.

Table 3. Comparison of the application level of the Sufficiency Economy philosophy in the administration of the higher education institution, classified by nationality.

| Aspects - | Foreign | Foreign (N=62) | | Thai (N=51) | | |
|---------------------------------|---------|----------------|-------|-------------|---------|------|
| | Mean | S.D. | Mean | S.D. | ι | p |
| The principle of moderation | 4.148 | .5550 | 4.494 | .5828 | 3.221** | .002 |
| The principle of rationality | 4.132 | .4789 | 4.419 | .5157 | 3.065** | .003 |
| The principle of immunity | 3.987 | .5208 | 4.333 | .6772 | 2.994** | .004 |
| Conditions of knowledge use | 4.064 | .5560 | 4.333 | .7016 | 2.222* | .029 |
| Conditions of the use of morals | 3.958 | .5311 | 4.364 | .6520 | 3.582** | .001 |
| Application of the Sufficiency | 4.058 | .4481 | 4.389 | .5758 | 3.353** | .001 |
| Economy philosophy | | | | | 3.333 | .001 |

^{*} p< .05 ** p< .01

According to Table 3, the comparison of the application level of the Sufficiency Economy philosophy in the higher education institution administration of St Theresa International College administrators, classified by nationality. In general, it was found that lecturers with Thai nationality viewed that administrators had a higher level of applying the Sufficiency Economy philosophy in their administration compared to foreign lecturers (t = 3.353), with statistical significance at the .01 level. When considering individual aspects, it was found that in every aspect, consisting of 5 aspects: the principle of moderation, the principle of rationality, the principle of immunity, and conditions of the use of morals, lecturers with Thai nationality viewed that administrators had a higher level of applying the Sufficiency Economy philosophy in their administration than foreign lecturers, with Thai nationality viewed that administrators had a higher level of applying the Sufficiency Economy philosophy in their administration compared to foreign lecturers, with statistical significance at the .05 level.

4. Comparison of the administrative effectiveness level of the higher education institution according to Balanced Scorecard perspective, classified by nationality.

The administrative effectiveness of the higher education institution according to the Balanced Scorecard perspective of St Theresa International College, compared to the perceptions of lecturers with different nationalities. The results of the study are shown in Table 4.

Table 4. The comparison of the administrative effectiveness level of the higher education institution according to Balanced Scorecard perspective, classified by nationality.

| Perspectives | Foreign | Foreign (N=62) | | Thai (N=51) | | |
|--------------------------------|---------|----------------|-------|-------------|---------|------|
| | Mean | S.D. | Mean | S.D. | ι | p |
| Learning and Development | 4.187 | .4607 | 4.533 | .5225 | 3.741** | .000 |
| Internal Business | 4.141 | .5087 | 4.458 | .6161 | 2.995** | .003 |
| Customer or Service Recipients | 4.093 | .4371 | 4.419 | .5340 | 3.569** | .001 |
| Finance | 4.200 | .5539 | 4.588 | .5802 | 3.629** | .000 |
| Overall Effectiveness | 4.155 | .4246 | 4.500 | .4997 | 3.960** | .000 |

^{*} p< .05 ** p< .01

According to Table 4, the comparison of the administrative effectiveness level of higher education institutions according to the Balanced Scorecard perspective of St Theresa International College administrators, classified by nationality, in general, it was found that lecturers with Thai nationality viewed that administrators had a higher level of administrative effectiveness according to the Balanced Scorecard perspective compared to foreign lecturers (t = 3.690), with statistical significance at the .01 level. When considering individual perspectives, it was found that all perspectives, consisting of 4 perspectives: the learning and development perspective, the internal business perspective, the customer or service recipient perspective, and the financial perspective, lecturers with Thai nationality viewed that administrators had a higher level of administrative effectiveness of the higher education institution according to the Balanced Scorecard perspective compared to foreign lecturers, with statistical significance at the .01 level.

5. Finding the correlation between the use of the Sufficiency Economy philosophy in administration and the administrative effectiveness of higher education institutions according to the Balanced Scorecard perspective.

The correlation between the application level of the Sufficiency Economy philosophy in the administration of higher education institutions and the administrative effectiveness level of higher education institutions according to the Balanced Scorecard perspective of St Theresa International College. The results are shown in Table 5.

Table 5. The correlation between the application of the Sufficiency Economy philosophy in administration and the administrative effectiveness according to the Balanced Scorecard perspective.

| | Learning & | Internal | Customer | Finance | Overall |
|------------------------------|-------------|----------|----------|---------|---------------|
| | Development | Business | | | Effectiveness |
| The principle of | .618** | .619** | .679** | .763** | .766** |
| moderation | | | | | |
| The principle of rationality | .667** | .598** | .701** | .712** | .762** |
| The principle of immunity | .699** | .630** | .701** | .669** | .768** |
| Conditions of knowledge | .722** | .739** | .711** | .691** | .816** |
| use | | | | | |
| Conditions of use of | .660** | .767** | .661** | .542** | .749** |
| morals | | | | | |
| Overall Application of the | .761** | .761** | .779** | .760** | .872** |
| Sufficiency Economy | | | | | |
| philosophy | | | | | |

^{**} p< .01

According to Table 5, it was found that the application of the Sufficiency Economy philosophy in the administration of the executives was correlated to administrative effectiveness according to the Balanced Scorecard perspective. In general, there was a very high correlation, with statistical significance at the .01 level and a correlation coefficient of .872. When considering individual aspects, it was found that the conditions of knowledge use was correlated with the administrative effectiveness according to the Balanced Scorecard perspective at the highest level, with statistical significance at the .01 level and a correlation coefficient of .816. With regard to the customer or service recipient perspective, there is a correlation to the use of the Sufficiency Economy philosophy at the highest level, with statistical significance at the .01 level and a correlation coefficient of .779. In addition, it was discovered that administration using conditions of morals was correlated to the effectiveness in the internal business perspective at the highest level, with statistical significance at the .01 level and a correlation coefficient of .767.

6. The administrative effectiveness of the higher education institution administrators arising from the application of the Sufficiency Economy philosophy according to the Balanced Scorecard perspective.

The study, on the administrative effectiveness of the higher education institution administrators arising from the application of the Sufficiency Economy philosophy according to the Balanced Scorecard perspective, is a qualitative study drawn from in-depth interviews of administrators, lecturers and students of St Theresa International College. The results of the implementation made the following findings:

- 1) Higher education institution administrators have applied the three principles of the Sufficiency Economy philosophy, namely, the principle of moderation, the principle of rationality and the principle of immunity, and two conditions which are the conditions of knowledge use and the conditions for the use of morals, in the 4 missions of higher education administration. These missions include graduate production, research, providing academic services and preservation of arts and culture. This was done by measuring the results arising from the implementation of all 4 missions, in 4 perspectives, namely, the learning and development perspective, the internal business perspective, the customer or service recipient perspective and the financial perspective.
- 2) Metric implementation results of higher education administration missions and the Balanced Scorecard perspective showed that all metrics, administrators, lecturers, and students, agreed that there was a high level of effectiveness in the implementation. This was an exception for the metrics of graduate production with the learning and development perspective, graduate production with the internal business perspective, and graduate production with the student or service recipient perspective, which were viewed as having a very high level of effectiveness in the implementation.

Conclusion

- 1. St Theresa International College's application of the Sufficiency Economy philosophy in the administration of higher education institutions is at a high level.
- 2. The effectiveness of higher education administration according to the Balanced Scorecard perspective of St Theresa International College is at a high level.
- 3. Lecturers with Thai nationality viewed that the level of applying the Sufficiency Economy philosophy in the higher education institution administration, of St Theresa International College, is higher compared to foreign lecturers.
- 4. That lecturers viewed that the administrative effectiveness level of higher education institutions, according to the Balanced Scorecard perspective of St Theresa International College, is higher compared to foreign lecturers.

- 5. The application level of the Sufficiency Economy philosophy in the administration of higher education institutions is correlated to the administrative effectiveness level of higher education institutions according to the Balanced Scorecard perspective. In general, there was a very high correlation, with statistical significance at the .01 level and a correlation coefficient of .872.
- 6. The administrative effectiveness of the higher education institution administrators from the application of the Sufficiency Economy philosophy, in the 4 missions of higher education administration, namely, graduate production, research, providing academic services, and preserving arts and culture. This is done by measuring the results arising from the implementation of all 4 missions, in 4 perspectives of the Balanced Scorecard, which are the learning and development perspective, the internal business perspective, the customer or service recipient perspective and the financial perspective. Assessment results from the execution of in-depth interviews with administrators, lecturers and students of St Theresa International College found that the administration of higher education institution administrators, in applying the Sufficiency Economy philosophy according to the Balanced Scorecard perspective, predominantly has a high level of effectiveness.

Recommendations

Recommendations for applying the research results: The administration of higher education institution administrators, in applying the Sufficiency Economy philosophy according to Balanced Scorecard perspective, is an administration for private higher education institutions, under the context of the international college, for use in different contexts. This may reduce the limitations associated with foreign lecturers' understanding of the Sufficiency Economy subject, which will allow administrative effectiveness to occur within a short amount of time.

Recommendations for further research: Additional studies should be made on the administration of higher education institution administrators, in applying the Sufficiency Economy philosophy according to the Balanced Scorecard perspective, with other private higher education institutions in order to find a competent administration model.

References

- 1. Binden, W., Mzyiu, H., and Suhaimi, M. A. (2014). Employing the Balanced Scorecard (BSC) to Measure Performance in Higher Education-Malaysia. International Journal of Information and Communication Technology Research. 4(1): 1-7.
- 2. Calkins, Peter. (2009). Sufficiency Economy Matrices: Multi-Period Optimization for Local Development Planners. Journal of Economics and Management. 5(2): 305-332.
- 3. Chamroenrat Chitchirachan. (2559). A Model Development of Application of the Philosophy of Sufficiency Economy for Self-Study Development of Students of The Higher Education Institutions in the Northeastern Region. APHEIT Journals. 22(2): 47-60.
- 4. Jakapong Massayawanitkul, and Pitchayapa Yuenyaw. (2018). Educational Institution's Administrative Strategy According to Sufficiency Economy Philosophy for Sustainable Development. Silpakorn Educational Research Journal. 10(2): 346-362.
- 5. Kaplan, R.S., & Norton, D.P. (1996). Using The Balanced Scorecard as a Strategy Management System. Harvard Business Review. 74(1): 75-85.
- 6. Kaplan, R.S., & Norton, D.P. (1999). The Balanced Scorecard Collaborative. Boston: Harvard Business School Press.
- 7. Kanokros suitprapi. (2017). Service Quality toward Business Operation Effectiveness Model of Thai Airways International Public Company Limited. Mahamakut Graduate School Journal Humanities and Social Sciences. 15(1): 68-82.
- 8. Moukdavone Somchanmavong. (2018). Evaluation of Organizational Performance Using the Balanced Scorecard Case Study of Thanalaeng Railway Station, Lao PDR. Journal of Management Science Nakhon Pathom Rajabhat University. 5(1): 79-90.

- 9. Nattaporn Lamrun. (2018). School Administration by Sufficiency Economic Philosophy and Teacher Quality of Work Life in Secondary School under Secondary Educational Service Area Office 8. Thesis for Master of Education (Educational Administration). Bangkok: Silpakorn University.
- 10. Pasu Decharin. (2013). From Strategy to Action with Balanced Scorecard and Key Performance Indicators. (8th edition). Bangkok: CU Printing House.
- 11. Piya Godsan, Phamornpun Yurapat. (2018). The Development of Management Balanced Scorecard Guidelines in Schools under Secondary Educational Service Area 27. Journal of Education, Mahasarakham University. 12(2): 132-143.
- 12. Sasikarn Skulpunyawat. (2017). The Study of Affected Factors toward the Management by Using the Philosophy of Sufficiency Economy in Nursing Private Higher Education Institutes. Journal of nursing and Education. 10(4): 95-106.
- 13. Sopa Umnuayrat. (2020). Development Guidelines for School Administrator's Roles in The King's Phumibol Science to The Philosophy of Sufficiency Economy in Office of Institute of Vocational Education Northern Region. CMU Journal of Education. 4(1): 75-87.
- 14. Sunanta Sangkatat, Jomphong Mongkhonvanit, Boonleart Pailindra. (2013). Development of The College Management Model under Office of the Vocational Education Commission Based on the Balanced Scorecard (BSC) Concept. Proceeding of the 3rd STOU Graduate Research Conference. 3-4 September, 2013. Nonthaburi: Sukhothai Thammathirat Open University.
- 15. Surasak Chamaram. (2018). The Management of University Social Responsibility Based on Sufficiency Economy Philosophy. Journal of Humanities and Social Sciences Surin Rajabhat University. 19(1): 169-186.