Management factors that influence the transportation instructor quality development of Universities in Thailand

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Abstract. The purpose of this research was to investigate management factors that influence the transportation Instructor quality development of universities in Thailand. The studied population consisted of 560 administrators and lecturers by their respective positions (i.e. Dean, Head of Department, and full-time lecturers) from universities under the Ministry of Education. Data were analyzed using Stepwise Multiple Regression Analysis with F-statistics and Adjusted R² to find the factors affecting transportation instructor quality development. The results revealed that factors such as organizational culture and learning organization have an influence on universities’ transportation instructor quality in terms of teaching and research at the 0.05 significance level. Therefore, there should be promotion of organizational cultures, including aspects such as participation, harmony, adaptibility, and mission-oriented mindsets, using them as guidelines for organizational management. At the same time, administrators at all levels should create awareness among the lecturers about the importance of developing academic performance and clarify the criteria. Keywords: Management, Transportation Instructor Quality Development, University, Learning Organization, Organizational Culture.

1 Introduction

Over the past decade, universities around the world, including Thai universities, have been driven by waves of change from various factors. This includes capitalism, globalization, technological advancement, as well as the change in demographic structure caused by a sharp drop in birth rate from 1 million births per year in the previous decade to 700,000 with a clear trend indicating continuous decline (Sugandini et al., 2023; Dudukalov et al., 2021).

Furthermore, ever since the introduction of the National Education Act B.E. 2542 (1999), there have been several dramatic changes at all levels of Thai education, especially at the tertiary level with public and private universities being put under the supervision of the Office of the Higher Education Commission. All these changes are challenges in which higher education institutions are required to adapt themselves in order to survive and be competitive. From such information, it is likely that in future academic years, competition

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to get more students among the institutions will become more and more intense.

This does not only affect private universities, and as state budgets become more restricted, public universities will also struggle to get more students amidst projections of population decline from lower fertility rates. Therefore, universities have to find a unique identity that allies with their strength, expertise, and efficiency in order to invest resources effectively in curriculum development, learning management, research, and personnel development, and make themselves stand out from other higher education institutions. For instance, they could find their identity as universities with outstanding English and international programs, technology, tourism, etc.

From the aforementioned issues, personnel management is thus an important mission in both public and private universities with transportation instructor quality development being one of the most significant tasks that the universities should continually focus on. University administrators must have interest and skills in human resource management which takes time and effort for personnel to keep progressing along with the organization. Universities must find a way to acquire human capital, which includes the knowledge, ability, skills, expertise, and experience of each person, and bring these attributes together to contribute to the potential of the organization. Human capital is also an important and valuable resource that can lead the universities to other important goals including sustainability.

This is because in addition to producing quality output and consistent good returns or profits for the university, they can also support society and the environment to develop and prosper together in a balanced way. Therefore, the researcher has been interested in exploring the influence of management on the transportation instructor quality development of universities in Thailand. The results of this research can be used to help formulate policies or strategies for transportation instructor quality development in accordance with each university’s missions.

2 Literature Review

2.1 Learning Organization

Peter Senge, a professor at MIT in the United States and author of Hsu, S. W. & Lamb, P. (2020) has proposed the idea that organizations cannot learn by themselves, that the “learning organization” is created by the learning of people in the organization. The personnel who can create a learning organization must be individuals with certain characteristics that are different from the general public. These personnel qualifications can be nurtured using the 5 fields of knowledge framework known as “the Five Disciplines” which can be used as the main guideline for creating a learning organization. These disciplines which will support and encourage the creation of learning organizations include (1) an environment conducive to learning, (2) tangible learning processes and actions, and (3) leadership behaviors that encourage learning or an environment conducive to learning.

This is consistent with Peter Senge (2019) in his study on management factors that private universities should prioritize. Other factors found in his work include organizational culture factors such as participatory management – with personnel having opportunities to brainstorm to find solutions for problems and participate in decision making, and teamwork or tasks that are harmonious in nature – for instance, all lecturers learning about the values, norms, and traditions of the organization and having the ability to coordinate with other personnel in the best interests of the whole organization. Other factors included personnel having the ability to adapt – for example, being able to understand and adjust themselves to changes, being able to find new approaches to improve work, being creative and
progressive in thinking outside the box.

Another factor mentioned was a focus on missions, for instance, having lecturers participate in the setting of visions, missions, and strategies of the institute. This could help promote their knowledge and understanding, as well as belief in the feasibility of such strategies, eventually resulting in greater motivation to work. This is in line with the research of (Olsen et al., 2022; Ushakov et al., 2017), who proposed a model for human capital development to create sustainable competitive advantages.

The model includes 6 factors: Learning Organization, Knowledge Management, Competency-based Development, Leadership Development, Talent Management, and Organization Cultures. This is also consistent with the work of (Muroga et al., 2023; Ushakov et al., 2017a), “Perception of Organizational Culture, Human Resource Management, Work Engagement and Job Performance of Officers at Port Authority Thailand”.

The results showed that perception of organizational culture, human resource management, and work engagement have positive influence on the job performance of the workers. (Ihnatenko et al., 2019; Van Dijk, 2017) conducted research on development of academic leadership competency of transportation instructor quality in public, private, and state universities. The study found that 4 aspects of competency – teaching, research, academic service, and the promotion of Thai arts and culture were found with direct and indirect effects on development of academic leadership competency through academic service competency. The causal relationship of academic leadership competency according to the research hypothesis was found to be consistent with the opinions of the teachers in all 3 groups.

Knowledge management refers to systematic process management of data, information, and ideas, as well as personal experience in order to contribute to knowledge that is stored in an accessible way via convenient channels for users. This is so they are able to use the knowledge, resulting in knowledge being transferred, spread, and circulated throughout the organization. The process of knowledge management helps promote knowledge development and management within the organization (Office of the Public Sector Development Commission (OPDC); and Thailand Productivity Institute, 2016).

2.2 Leadership skills

From the literature review, Simon et al. (2022) conducted research on the New Zealand Institute of Management by studying and grouping competencies of administrators from tertiary education institutions. The grouping was done by task and attribute of competency, with effects of their administrative position on transportation instructor quality development being used as a conceptual framework.

The results of the study indicated that administrators must have key leadership skills as follows; (1) general management skills – including strategic thinking, processed decision making, planning, organization management, personnel management, development process, and project management; (2) personnel management – including communication, confidence building, and time management. This corresponds with Tölli et al. (2021) who found that effective school administrators must have practical skills and the ability to solve complex problems. Without leadership skills, the administrators will not able to solve school problems. These leadership skills must be based on an understanding of tasks and personnel. Educational institution administrators are therefore encouraged to develop skills, knowledge, and practical experience to be prepared for competition in the modern world.

Talent management refers to management of high performance and high potential personnel, which are considered an important human resource that will lead the organization to sustainably achieve its goals. A study was conducted by Wang, J. (2022) on
talent management in educational institutions which found that ability to express their identity, income, work flexibility, security, motivation, technology, and mentoring are all important factors in attracting individuals to work in educational institutions. They were also found with effects on the transportation instructor quality development in terms of teaching, research, and academic text publication, as well as values, morality, and ethics of the personnel.

Wang et al. (2021) studied the causal factors affecting talent management in public and private universities and classified the factors according to the university's data structure. The study found that factors at all 3 levels, (1) individual factors – i.e. commitment to the organization, attitude, and personnel competency; (2) group factors – i.e. co-operation, diversity of team members, and the size of the team; and (3) organizational factors – i.e organizational structure, organizational culture, and executive leadership, all have an influence on the quality of instructors, as well as the success of operations, and organizational management, which are linked to success in the talent management system.

Good governance or good management can be applied to both the public and private sectors. It consists of mechanisms in supervising operations in the organization in order to be transparent and verifiable. This is to ensure fairness for all stakeholders and guidelines for personnel in working towards the highest goals of the organization. This is in line with the (Office of the Public Sector Development Commission (OPDC); and Thailand Productivity Institute, 2016) which described good governance as a sustainable growth which comprises 10 principles – (1) Effectiveness, (2) Efficiency, (3) Responsiveness, (4) Accountability, (5) Transparency, (6) Participation, (7) Decentralization, (8) Rule of Law, (9) Equity, and (10) Consensus-oriented Principles.

Organizational culture refers to the way of life that a particular group of people adheres to and continues to practice. This will eventually become habits, traditions, beliefs, and values, and may include objects or languages which can affect the transportation instructor quality in educational institutions. From the literature review, Purnomo, H. (2022) have studied causal factors influencing the performance of transportation instructor quality in private higher education institutions in Thailand.

Their study found that organizational culture, values, and customs, together with the beliefs of the people in the organization, have the power to influence learning in the organization.

Conceptual framework of the study

![Conceptual framework of the study](image)

**Management**
- Learning Organization
- Knowledge Management
- Leadership skills
- Talent Management
- Good governance
- Organizational culture

**Transportation Instructor quality development**
- Teaching
- Research
- Academic text publication
- Values, morals, and ethics

Fig. 1. The management factors that influence the transportation instructor quality development of universities.
3 Research Methodology

3.1 Population and sample

The population included in this study comprised 12,120 administrators and lecturers by their respective positions (i.e. Dean, Head of Department, and full-time lecturers) of 43 universities under the Ministry of Education. Samples were selected using the Stratified Sampling technique to obtain samples with the specified characteristics, in order to obtain representative samples in accordance with the size of population in each institution.

The number of institutes chosen in each size tier was determined based on the proportion of full-time lecturers, leading to 3 large, 5 medium and 8 small institutions selected, resulting in 16 institutions included in total. Simple Random Sampling was then used to select institutions from each size tier. The selection of respondents included deans, heads of department, and lecturers from each institution and was done using Purposive Sampling. Consequently, 35 respondents were chosen per institution, obtaining a total of 560 samples.

Table 1. Determining the sample size in proportion to the number of institutions and the number of lecturers.

<table>
<thead>
<tr>
<th>Higher education institution</th>
<th>Number of institutions</th>
<th>Number of personnel</th>
<th>Percentage</th>
<th>Number of sample institutions</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large institutions</td>
<td>7</td>
<td>4.336</td>
<td>36</td>
<td>3</td>
<td>105</td>
</tr>
<tr>
<td>Medium institutions</td>
<td>13</td>
<td>3.636</td>
<td>30</td>
<td>4</td>
<td>175</td>
</tr>
<tr>
<td>Small institutions</td>
<td>23</td>
<td>4.148</td>
<td>34</td>
<td>8</td>
<td>280</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>12.120</td>
<td>100</td>
<td>16</td>
<td>560</td>
</tr>
</tbody>
</table>

3.2 Research instruments

The instrument used for data collection was a questionnaire which could be divided into 3 parts; (1) demographic information of the respondents, (2) opinions on management factors affecting transportation instructor quality of the university, and (3) transportation instructor quality, which is measured based on knowledge, abilities, and skills of lecturers who have undergone development. The content validity of the questionnaire was examined by 5 experts, who assessed completion of its content and whether the content met the objectives of the study.

The questionnaire was then improved and evaluated for the Item-Objective Congruence (IOC) values, and all question items were found with the IOC of greater than 0.50 (the IOC values were between 0.60-1). The questionnaire was then tested with 30 pilot samples to test the reliability of the instrument, and its Cronbach's Alpha value was found > 0.70. at 0.969.

3.3 Data Collection

Secondary data were collected from the results of the prior year’s external assessment of education quality by the Office for National Education Standards and Quality Assessment (ONESQA) and internal assessment of education quality in the same year. The qualities considered included the sample higher education institutions’ systems and mechanisms for development of research and innovations. Furthermore, data were also collected from 560 administrators and lecturers based on their respective positions – i.e. Dean, Head of
Department, and full-time lecturers, using a questionnaire. The respondents were chosen using Purposive Sampling from 16 public and private universities.

3.4 Data analysis

The data were prepared by being verified for their accuracy, organized, and then categorized before being processed to find preliminary statistics. Data were then analyzed using Stepwise Multiple Regression with F-statistics, Adjusted R2, and t-value to find the factors affecting transportation instructor quality development of universities in Thailand.

4 Research Results

The multiple regression analysis results revealed that management factors such as organizational culture, learning organization, leadership skills, and talent management together explained the change in transportation instructor quality in terms of teaching and academic knowledge by 54.1%. Organizational culture was found as the most influential management factor, whereas talent management was found with both the least influence and a negative influence.

Table 2. Analysis results of the relationship between university management factors and transportation instructor quality in terms of teaching and academic knowledge.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.361</td>
<td>0.125</td>
<td>10.863**</td>
<td>0.000</td>
</tr>
<tr>
<td>Organizational culture (TCULTURE)</td>
<td>0.516</td>
<td>0.038</td>
<td>0.598</td>
<td>13.659**</td>
</tr>
<tr>
<td>Learning organization (TLO)</td>
<td>0.148</td>
<td>0.039</td>
<td>0.151</td>
<td>3.794**</td>
</tr>
<tr>
<td>Leadership Skills (TLS)</td>
<td>0.101</td>
<td>0.030</td>
<td>0.134</td>
<td>3.313**</td>
</tr>
<tr>
<td>Talent Management (TTM)</td>
<td>-0.057</td>
<td>0.028</td>
<td>0.088</td>
<td>-2.040*</td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.738</td>
<td>0.545</td>
<td>0.541</td>
<td>0.384</td>
</tr>
</tbody>
</table>

* At a significance level of 0.05 ** At a significance level of 0.01

The multiple regression analysis results showed that management factors such as learning organization, organizational culture, talent management, good governance, and leadership skills together explained the change in transportation instructor quality in terms of research by 34.2%. Learning organization was found as the most influential management factor, whereas leadership skills was found as the least influential factor and good governance was found with a negative influence.

The multiple regression analysis results also found that management factors such as learning organization and organizational culture together explained the 47.5% change in transportation instructor quality in all 4 aspects – (1) teaching and academic knowledge, (2) research, (3) academic text or article publication, and (4) values, attitudes, and ethics. In this case, learning organization was found to be a more influential factor than
organizational culture.

**Table 3.** Analysis results of the relationship between university management factors and transportation instructor quality in terms of research.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
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</tr>
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<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.237</td>
<td>0.171</td>
<td></td>
<td>7.241**</td>
</tr>
<tr>
<td>Learning organization (TLO)</td>
<td>0.354</td>
<td>0.054</td>
<td>0.318</td>
<td>6.583**</td>
</tr>
<tr>
<td>Organizational culture (TCULTURE)</td>
<td>0.312</td>
<td>0.061</td>
<td>0.315</td>
<td>5.097**</td>
</tr>
<tr>
<td>Talent management (TTM)</td>
<td>0.090</td>
<td>0.039</td>
<td>0.121</td>
<td>2.308**</td>
</tr>
<tr>
<td>Good governance (TGG)</td>
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<td>0.056</td>
<td>-0.214</td>
<td>-3.360**</td>
</tr>
<tr>
<td>Leadership skills (TLS)</td>
<td>0.093</td>
<td>0.045</td>
<td>0.109</td>
<td>2.060*</td>
</tr>
</tbody>
</table>

R  R^2  Adjusted R^2  SE  F  Sig.  
0.585 0.342 0.342 0.536 57.636** 0.000

* At a significance level of .05**

At a significance level of .01

**Table 4.** Analysis results of the relationship between university management factors and transportation instructor quality in terms of research.

<table>
<thead>
<tr>
<th>Variable</th>
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<td></td>
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R  R^2  Adjusted R^2  SE  F  Sig.  

5 Conclusion and Discussion

Transportation instructor quality development at universities in Thailand in terms of teaching quality was found to be influenced by the following management factors, listed from the highest to the lowest influence – (1) organizational culture, (2) learning organization, (3) leadership skills, and (4) talent management.

This is consistent with the research of Hsu et al. (2020) in his study on management factors that higher education universities should prioritize. Other factors found with influence in his work, albeit to a lesser degree, include organizational culture factors such as participatory management – with personnel having opportunities to brainstorm to find solutions for problems and participate in decision making, as well as teamwork or tasks that are harmonious in nature – for instance, all lecturers learning about the values, norms, and traditions of the organization and having the ability to coordinate with other personnel in the best interests of the whole organization.

Other factors included personnel having the ability to adapt – for example, being able to understand and adjust themselves to changes, being able to find new approaches to improve work, being creative and progressive in thinking outside the box. Another factor mentioned was a focus on missions, for instance, having lecturers participate in the setting of visions, missions, and strategies of the institute. This could help promote their knowledge and understanding, as well as belief in the feasibility of such strategies, eventually resulting in greater motivation to work. This is also consistent with the work of (Muroga et al., 2023).

The results showed that perception of organizational culture, human resource management, and work engagement have positive effects on the job performance of the workers. Simon et al. (2022) conducted research on development of academic leadership competency of transportation instructor quality in public, private, and state universities. The study found that 4 aspects of competency – teaching, research, academic service, and the promotion of Thai arts and culture were found with direct and indirect effects on development of academic leadership competency through academic service competency.

The causal relationship of academic leadership competency according to the research hypothesis was found to be consistent with the lecturers' opinion. transportation instructor quality development at universities in Thailand in terms of research was found to be influenced by the following management factors, listed from the highest to the lowest influence – (1) learning organization, (2) organizational culture, (3) good governance, (4) talent management, and (5) leadership skills. This is in line with the research of Office of the Public Sector Development Commission (OPDC); and Thailand Productivity Institute, 2016), who proposed a model for human capital development to create sustainable competitive advantages. The model includes 6 factors: Learning Organization, Knowledge Management, Competency-based Development, Leadership Development, Talent Management, and Organization Cultures.

6 Suggestions

As management factors such as organizational culture and learning organization were found
with influence on transportation instructor quality development in both teaching and research, the university administrators should adopt the concept of learning organization as a guideline for organization management. There should be promotion of organizational cultures, including aspects such as participation, harmony, adaptibility, and mission-oriented mindsets, using them as guidelines for organizational management.

At the same time, administrators at all levels should create awareness among the lecturers about the importance of developing academic performance and clarify the criteria and procedures for submitting work to enter academic positions. They should supervise and encourage lecturers to develop themselves in creating academic works continuously. There should be a system of mentors and advisors in applying for academic positions, as well as research support agencies. The management should also seek and publicize research funding sources both internally and externally and provide knowledge of future research trends, as well as seeking funding and developing research cooperation with other institutions or other agencies both domestically and internationally.

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