

A study of the effect of school background on the performance of innovative management at excellent vocational high schools in Taiwan

Jen-Chia Chang & Ming-Shan Wu

National Taipei University of Technology
Taipei, Taiwan

ABSTRACT: The purpose of this study was to explore the effect of school background on the performance of innovative management at excellent vocational high schools in Taiwan. The samples of this study comprised administrators at 50 excellent vocational high schools of innovative performance and yielded 862 respondents. It was found that the overall performance of innovative management at excellent vocational high schools was good and performance for most dimensions was high to medium (except *public relations innovation*). Also, schools located in Kaohsiung with a history under 20 years or over 50 years, and whose directors had over 10 years experience in administration work, had a better perception of the innovative management performance of schools. Three simple methods for schools to build up their features and make their schools noticed included *campus innovation, curriculum and instruction innovation, and students' innovation activities*. It is recommended that excellent vocational high schools should focus on public relations so as to achieve the goal of sharing resources with their communities. To enhance school characteristics, it is also recommended that schools engage in campus beautification, curriculum design and instruction, and increase the variety of student activities.

INTRODUCTION

Recently, the educational environment has undergone unexpected changes so that the management of vocational high schools in Taiwan has become increasingly harder. The management of vocational high schools has been deeply influenced by the failure of the functioning of vocational education, decreasing student numbers, the unpopularity of the current curriculum and licensing system, and changes in the national educational policy. As such, educational staff recognise the challenges for the management of vocational high schools and most of them should be aware of the statement: *no innovation, no schools* [1].

Romer, a Stanford University Professor, pointed out that only knowledge and new ideas that come from knowledge innovation had the potential energy to shift the organisation's management [2]. For this reason, *innovation* is a core concept of modern organisational management. Lin also indicated that schools had to make innovation conform to school development [3].

Wu and Lin indicated that, whether in business or school organisations, all staff had to engage in the following:

- Think about innovation;
- Undertake innovation;
- Manage by means of innovation [4].

Therefore, the management of vocational high schools should follow the certain concepts, namely:

- Adopt new points of view;
- Adopt new management skills;
- Break with tradition;
- Improve the school's efficiency;
- Promote excellence at the school.

In order to achieve high levels of school innovation, vocational high schools should be enhanced by encouraging the following aspects:

- The growth of teachers' professional development;
- Effective integration of new technologies;
- The formation of new images for Taiwanese vocational high schools;
- The promotion of high levels of quality in the school's administration and instruction.

However, there were still a lot of school background variables that affect school innovation, such as the following:

- School property;
- School location;
- School history;
- The number of classes;
- The administrator's position;
- The administrator's tenure.

In this study, the researchers focused on organisational innovation management and explored the effects of a school's background on the performance of innovative management at the excellent vocational high schools in Taiwan.

PURPOSES

According to the statements made above, this study aimed at achieving the following purposes:

- Realise the current situation of the performance of innovative management at excellent vocational high schools in Taiwan;
- Explore the effect of a school's background on the performance of innovative management at excellent vocational high schools in Taiwan.

PERFORMANCE OF INNOVATIVE MANAGEMENT IN THE SCHOOLS

Innovation means that new knowledge and new ideas are being systematically and gradually applied to the process of product design and production. In this study, *innovation* refers to the 50 vocational high schools demonstrating excellent performance and which have such recognition because they applied various new ideas to enhance the school's administration, curriculum and instruction, activities, campus design and public relations.

School management is a kind of concept transformation and involves the remoulding of organisational culture [5]. Performance in this area is demonstrated by means of the elaboration of education, Total Quality Management (TQM), learning organisation concepts, the six sigma standard deviation (6σ SD) method and ISO management.

In this study, the performance of innovative management was measured across five dimensions, specifically:

- Administration innovation;
- Curriculum and instruction innovation;
- Activity innovation;
- Public innovation;
- Campus innovation [6].

Organisational effectiveness relates to the level of goals that an organisation can achieve [7]. In this study, organisational effectiveness is defined as the level that an organisation uses its own source to reach its goals. Some researchers pointed out that the performance of innovative management at vocational schools could be influenced by the administrators' position, administrators' tenure and the scope of the school [8].

THE RESEARCH FRAMEWORK

According to the research purpose and literature review, it was inferred in this study that the school's background (school property, school location, school history, number of classes, administrator's position and administrator's tenure) probably influenced the performance of innovative management (administration innovation, curriculum and instruction innovation, students' activities innovation, campus innovation and public relation innovation). The research framework is shown in Figure 1.

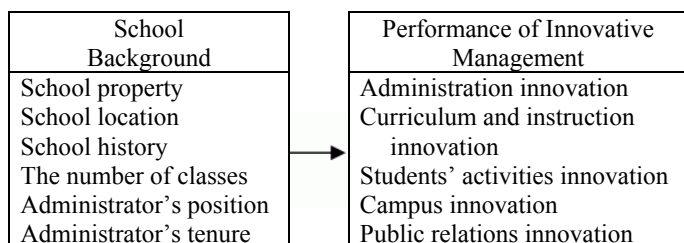


Figure 1: The research framework.

THE RESEARCH METHOD

Questionnaire

After collecting and reviewing the literature, the research framework was developed. The study samples were drawn from administrators at 50 vocational high schools that

displayed excellent performance. The questionnaire was designed mainly to survey the administrators' perceptions of the performance of innovative management at schools. The researchers used the questionnaire developed by Chang and Lin [1].

In this questionnaire, the performance of innovative management at the schools was divided into five parts, namely:

- Administration innovation;
- Curriculum and instruction innovation;
- Students' activities innovation;
- Campus innovation;
- Public relations innovation.

The reliability of Cronbach α in the instrument was 0.9774 and the variance explained was 57.935%, which showed there to be a high level of reliability and validity [9].

This researchers surveyed the administrators' perceptions of organisational performance of innovative management at the 50 vocational high schools rated with excellent performance in Taiwan. The sample size comprised 1,250 people (25 questionnaires per school) with a response rate of 68.96%. In total, 862 eligible completions were collected. Data analysis comprised a reliability analysis, factor analysis, description statistics, single factor t-test and one-way analysis of variance.

RESULTS AND DISCUSSION

The Current Situation of the Performance of Innovative Management at Excellent Vocational High Schools in Taiwan

As shown in Table 1, the performance of innovative management at excellent vocational high schools, listed from highest to lowest, were activity innovation, administration innovation, campus innovation, curriculum and teaching innovation, and public relations innovation. Except for the dimension of *public relations innovation*, each of them was significantly higher than the medium level. The overall performance of innovative management should have been at the high level, which meant that the concept of innovation had been implemented by the school's administration.

It was assumed that many schools were starting to shape their own features and increase their competitiveness. In addition, the researchers also found that a deficiency of funds, fixed means when using funds and a failure to match staff were the common obstacles when schools were innovating. Over half of the schools had been confronted with limited funding and fixed means of their use. Also, over half had encountered a failure to find coordination among teachers, administrators and parents. Fortunately, however, when these problems happened, most schools took a positive attitude to solving the problem.

The Effect of School Background on the Performance of Innovative Management at Excellent Vocational High Schools

As shown in Table 2, different school locations, school histories, administrator positions and administrator tenures all significantly influenced the performance of innovative management as follows:

- The performance of innovative management in the schools in Kaohsiung was significantly better than that of schools in Taipei;

Table 1: The current situation of the performance of innovative management at excellent vocational high schools.

Dimension	Dimension Mean	Item N	Item Mean	Standard Deviation	t-value (3.5)
Students' activities innovation	44.7203	12	3.7267	0.5443	12.199*
Administration innovation	65.4988	18	3.6388	0.5774	7.043*
Campus innovation	28.8112	8	3.6014	0.6501	4.564*
Curriculum & Instruction innovation	39.4592	11	3.5872	0.5879	4.345*
Public relations innovation	34.9860	10	3.4986	0.6214	-0.066
Total performance of innovation management	213.2651	59	3.6147	0.5226	6.434*

Table 2: The effect of school background on the performance of innovative management at excellent vocational high schools.

Background	Item	N	Mean	Std		SS	Df	MS	F/t	Scheffé
School's property	Public	789	127.6907	17.5456					-0.029	
	Private	73	127.7534	17.5628						
School's location	Taipei	185	128.5243	17.7999	SS _t	398.697	2	199.348	0.640	
	Taiwan	625	127.3152	17.3565	SS _w	266881.046	857	311.413		
	Kaohsiung	50	129.6000	20.5058	SS _l	267279.743	859			
School's history	Under 20 years	34	125.3235	20.9498	SS _t	5142.449	3	1714.150	5.597*	(2)>(3)
	20-34 years	98	129.4286	17.1278	SS _w	262137.294	856	306.235		
	35-49 years	120	121.9000	18.2413	SS _l	267279.743	859			
	Over 50 years	608	128.7105	17.2013						
School's scope	Under 30 cls	55	128.7091	15.9242	SS _t	278.256	3	92.752	0.297	
	30-44 cls	243	127.0947	16.4790	SS _w	267001.487	856	311.918		
	45-59 cls	286	128.3217	17.8780	SS _l	267279.743	859			
	Over 60 cls	276	127.4130	18.7325						
Administrator's position	Director	238	133.7101	16.1505	SS _t	12309.778	2	6154.889	20.688*	(1)>(2) (1)>(3)
	Vice-director	385	126.0831	18.1740	SS _w	254969.965	857	295.515		
	Dean of dept	237	124.3207	16.7633	SS _l	267279.743	859			
Administrator's tenure	Under 3 years	272	124.7574	18.3496	SS _t	4942.630	3	1647.543	5.376*	(4)>(1)
	3-6 years	215	127.0279	16.9854	SS _w	262337.113	856	306.469		
	7-9 years	111	129.6306	16.9871	SS _l	267279.743	859			
	Over 10 years	262	130.5153	17.2437						

* p<0.05

- Schools that had been established for 20-34 years, or were over 50 years old, were significantly better than those schools that were established for 35-49 years;
- The administrator's performance was significantly better than that of the vice-directors';
- Finally, administrators who had tenures of over 10 years were significantly better than those with three years' tenure.

The researchers assumed that the results might be related to each city's characteristics, traditional culture at the school and administrators' experiences. Also, the longer the school history was, the more well-trained administrators the school had and the more innovative behaviours are put into practice at that school. These were the reasons why those schools would be more innovative.

CONCLUSIONS

The performance of innovative management at the excellent vocational high schools was good, and the performances of most dimensions rose to the higher to medium levels, except for *public relations innovation*.

Fifty vocational high schools of excellent performance all displayed performance in innovative management. First of all, most of the schools helped their students to improve their performance (eg schooling and competitions) according to their

specialty. Second, some schools tried different methods and new administrative policies in order to accelerate the speed of work. Third, some schools changed their campus design to upgrade instruction. Finally, most schools designed a school-based curriculum for themselves, and combined technology within the curriculum. However, it was a pity that there was still no performance in cooperating with their communities.

Schools located in Kaohsiung that had a history of less than 20 years or over 50 years, and whose directors who had over 10 years of experience in administration work, had better perceptions of the performance of schools' innovative management.

Three simple methods for schools to build up their features and make their schools noticed included the following:

- Campus innovation;
- Curriculum and instruction innovation;
- Students' activities innovation.

As shown in Table 2, there was an easy method to shape the school's features through campus innovation, curriculum and instruction innovation, and students' activities innovation.

RECOMMENDATIONS

According to the conclusions, two recommendations are proposed, as detailed below.

Excellent vocational high schools should focus on sharing resources with their communities so as to achieve the goal of improved public relations. Schools should focus on their communities primarily and look for opportunities to cooperate with businesses and other schools. In this study, the researchers found that only *public relations innovation* did not reach a high level, which meant that the relationship between the school and the community needed to be strengthened.

Three simple methods to build up a school's characteristics were campus beautification, better curriculum design and instruction, and students' activities varieties. Schools should start with these three methods in order to avoid losing staff and student confidence at the beginning of the innovation process. As the researchers mentioned above, campus beautification, curriculum and instruction innovation and the variety of students' activities were three easy ways for schools to enhance their own features.

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