

## A case study of innovation management in a private comprehensive school: the promotion of ISO 9002

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**ABSTRACT:** The aim of this research article is to discuss the process of innovative management at a domestic private comprehensive high school in Taiwan. Aspects to be considered include how the school motivates the quality management system to recognise factors that can affect successful implementation of reforms. Important elements relevant to this study that are discussed in the article cover the school team, the ISO quality system (in particular ISO 9002), the organisational culture, the role in the process and an analysis of the fitness in the case study's innovative management method. The research combined interviews and observations, and carefully examines what major and minor information is provided. Undertaking a triangular inspection helps to make sure that the goal in each stage is achieved. The study also compiles a suitable method so as to provide other schools with a reference point.

### INTRODUCTION

Since education has to meet customers' expectations and the requirements of service quality, improving quality then becomes a debatable subject for students, parents and entrepreneurs. It needs to be considered just what innovation is necessary in order to transform thought into an attitude and behaviour, to reflect and select the original fixing mode, and then to make a judgement and put it into practice over a period of time. This process necessitates a good level of management coordination in order to avoid any damage that may lead to an uncontrolled result in the process. However, innovative management emphasises reason, organisation and systemic procedures; this combines the entire consideration in order to achieve staff members' and customers' satisfaction.

Given the above points, the ISO 9000 series for quality management are compatible with educational structures and quality effectiveness in industry. The educational goal can be fulfilled and the educational quality has a certain effect when it is combined with the ISO 9000 series, including the internalised spirit, establishment of a systematic method of quality standards in education, this is especially so when it is combined with the organisation's method for innovation.

The purpose of this research is to understand why a case school faces particular difficulties. This can be undertaken by identifying a private high school that carries out innovative management so as to determine the major method that it utilises, and identify the influence between the ISO 9000 system and innovative management. The research design selected involves interview and observation, combined with the major and minor data that the school provided. It also tackled identification of the goal of each stage in the past, present and future, as well as showing the effect for the purpose of providing a reference point for the other units.

### DEFINITION OF INNOVATIVE MANAGEMENT

Innovation can involve a new concept, new method, new facility or even a new object [1]. This concept comes from economics development theory, which emphasises a new producing ability [2]. Gao and D'Agostino assert that, in order to fulfil the ideals and goals, it must first pass through a reform of the organisational thinking structure, and continue towards competitive advantage so as to achieve this effect [2]. In other words, by implementing an innovative concept, *innovative management* becomes an organisational tool to replace quality control and organisation reproduction. Innovative management becomes an efficient instrument to achieve competitive advantage. Some scholars have put forward that innovation provides originality and creativity, and uses a new method for design and recreation to add value [2].

Kuczarski believes that innovation is a thought, belief, thinking attitude and method in order to perceive clearly now and into the future [3]. Drucker emphasises that innovation is an *organisationalised, systemised* and *rationalised* method, which is a result of logical analysis and collective wisdom [4]. Innovation includes the processes of cognition, invention, development, implementation and propagation; these elements are accented to produce an additional and valuable effect [5]. Kuczarski states that innovative management begins from an innovative blueprint and that developmental strategy has to combine with innovative technology [3].

Furthermore, innovative management also stresses team organisation, the design of a complete process and stimulating method, and the use of education and training in order to instil new values, thereby generating a mode and norm that is overall good for organisational behaviour. Leonard, Rayport and Koter affirm that innovative management places weight on understanding the environment and making data analyses [6].

This helps to establish critical consciousness while innovating. Additionally, it also facilitates planning proper organisational targets and culture by utilising key skills, such as communication, authorisation and training abilities.

## INNOVATIVE MANAGEMENT AND THE EQUALITY OF EDUCATION

The value of innovative management is presented in school culture, education staff, its formal organisation, the diagnosis of education goals, adjustment, re-arrangement, as well as the innovative management strategy [7]. Innovative management can avoid the intoxication of past successes and always reminds the organisation to face various elements in the external environment, to reform and to innovate positively.

In order to provide accuracy in the quality of education, the function of innovative management is to provide a suitable system method. The first step is to ensure that the education quality goal is established and promoted in the school's organisation. Staff must be able to identify the competitive advantage, as well as the organisational structure and culture, and be able to transfer the focus by following the current situation. It is important to design a strategy, determine prospects and the educational targets, and to identify any wide gaps that may exist in the actual running of the school, and base this as an innovative opportunity [8-10].

A successful organisation must understand that the present advantage does not ensure a future victory. Therefore, a leader's major task is to maintain the organisational balance, while still carefully adjusting the organisational strategy, structure, staff and culture. These extra factors should be merged together so as to prevent the difficulties in the company's innovative management reform [10]. That is, the school leader's major task is to strengthen the original strategy, structure, staff and organisation culture, and to make sure that the teaching target is set in this stage, and that it is combined with external environmental variations to innovatively create suitable procedures and carry out innovative management reforms.

## RESEARCH DESIGN

The main point in the case study method is to extract profound meaning from it [11]. Eisenhardt points out that case study should observe repeatedly, this should be according to what target it is they want to understand [12]. However, it should also describe the research design, procedures and results in detailed format, and make general conclusions of the research results in order to verify the theory being studied.

The feature of the case study is to research a few targets – even just one. The complete research design is intended for a deep exploration. This research emphasises carrying out observations and interviews by utilising the natural environment. Since there is no expected position in the procedure, it must seek to correct the question at hand or give opportunities for supposition. Moreover, the scope of the collected data has not been limited, and uses a descriptive content in order to research the background and explain the culture. To avoid any criticism that the reports are being too loose and academically valueless, the entire research design focuses on motives and processes, while also directing the case regarding ISO 9002, in order to produce an innovative result that focuses on a school as a case study.

During October 2002, researchers carried out observations and interviews by utilising a theoretical sampling principle with the agreement of the school in the case study. While visiting the school, researchers met with the principal, vice-principal and director, as well as the relevant staff. The entire observation and interview process was not finished until December 2002. After gaining approval, the researchers came into the classroom to discuss, describe and explain a series of works.

In order to avoid any limitations in the observation situation, and in order to effect objective judgement, the case interview was separated into two parts. The first stage was carried out between 24 October 2002 to 7 November 2002. The interview had two main targets and lasted for three hours.

The period of the second stage was from 11 November to 5 December 2002. There were three targets and the process lasted for five hours. The method involved arranging interview records and resolving any doubtful responses by telephone, with the total time taken being 9.5 hours. Using data analysis and compiling the data while it was being collected allowed for the re-investigation of the strategy effectiveness and motives as a main point for next stage. Furthermore, an inspection was carried out according to the chain of developmental evidence in order to promote discovery and the effectiveness of the conclusion.

Data analysis adopted a triangular correction. The purpose of this was to develop draw conclusions by comparing and contrasting the data from the interviews and the questionnaires [11]. The analysis induction process was undertaken according to the coded data. Analysing, narrating and contrasting data to show the structure and relationship between key elements, as well as to express the relevant factors that may affect the process of innovative management at the case study were the important tools of this process. On the other hand, in order to respect the school's anonymity, the research would utilise an alphabetical code and display the results using the case method.

## DISCUSSION AND CONCLUSION

The experiences of the school in the case study indicate that the top management's confidence and policies have had a decisive influence in the promotion of ISO 9002 activities at the institution. Methodologically, the controller considered the additional business burden for building up a team to take over and promote ISO 9002 activities, doing his best to form common consensus among the staff, controlling and promoting the project and time effectively. An assurance was given to carry out the entire task. Long-term targets were established, with confirmations of the results at each stage, in order to facilitate the smooth promotion of that activity.

The interview content permitted an analysis of how importantly the staff promoted innovative management, as well as how different were the staff's results, method and contents from the administrator. In promoting each stage, differences can also be detected in their cognition levels. On the other hand, the definition of a *customer* is not so clear in the quality handbook; as such, the staff members ultimately do not have a clear focus on the definition of a customer. Given these factors, it is difficult to show the entire function of the administrative system. Since the staff are not completely sure of customer identification, they cannot control customer requirements with a high level of certainty, generating challenges in ensuring education quality.

Furthermore, because customer identification is obscure, it is difficult to make an effective goal when auditing the situation due to a lack of basic criteria. Therefore, examining staff tasks cannot clearly and easily show the entire result.

During the interview, the staff from the case school stated that they were accustomed to the innovation method. So, before introducing ISO 9002, the staff had not understood the main purpose. The management team promoted the organisation to become more innovative and focus on education quality under a natural situation. According to the management team, the purpose of promoting ISO accreditation is to confirm the complete target comprising talent, humanity and personality. The purpose of documentation is to reduce unnecessary processes and reduce the pressures on the staff.

In promoting accreditation, the school was affected by diverse influences that included administrative efficiency and promoting parents' satisfaction; however, the ratio between staff resignation and satisfaction had not yet been promoted. In summarising the results of the interviews and observations, it was discovered that the case school team leader fixed ISO 9002 within the organisation's innovation method; the promotion of accreditation was a minor purpose and a coincidence in these operations.

For the manager, promoting ISO 9002 involves educating staff on how to adjust to innovation, and how to rearrange swift changes in staff attitudes so as to satisfy customer requirements. The case school applied ISO 9002 changes to the school's entire set of task procedure. However, before promoting such activities, the school did not place emphasis on what results the system may induce, but rather considered that they must break through the old method, avoid limitations of the old paradigm, then promote competitive advantage in order to satisfy the customer. Therefore, ISO 9002 is recommended as a management tool for innovation.

Many domestic and overseas scholars have proposed that a school's organisational culture directly affects innovative management. However, before the school in this case study introduced the ISO 9002 quality system, they underwent reform at least twice and built up an organisational culture that was smoothly applied in the school. In this instance, they have an organisational culture that incorporates time verification. In order to introduce ISO 9002 in innovation, there may be conflicts with the old method or culture; this is not contradictory with the motive of innovative management. Moreover, ISO 9002 has been verified, which has a positive effect on the organisation's competitiveness. It can also increase the level of staff satisfaction.

However, in introducing ISO 9002 at the case school, the task procedures were affected positively, but the staff's level of satisfaction has not yet improved. On the contrary, some of the staff members complained about the documents and the high need for revision. Yet this differs with the discoveries and research of scholars in this field.

Therefore, according to the school's present situation, the development of a proper education quality system by itself can create a direct impact upon the effectiveness of innovative management. Perhaps the external system does not match with the school's organisational culture; it is not easy to achieve the expected goals.

It was found in the case study that the main factor influencing the success of innovative management was the school's organisational culture. In other words, the school's atmosphere and the common consensus among the staff members are the prime factors affecting innovation.

While observing the case school, it was discovered that the result of change or education training of the personnel who do not want to innovate was not ideal. Furthermore, many of the staff members did not adjust to the new environment or method, with little flexibility in their attitude, and resulted in some staff members' resignation. These research results vary considerably with those of Ho, who emphasised that shifting or education training reduced the ratio of staff resignation [13]. It was supposed that the reason for this discrepancy could be the teachers' professional autonomy; they are employed easily and because a high level of tradition has led the staff to refuse working in the new environment.

Moreover, there is no evidence to show that introducing the ISO 9002 quality system indirectly affects a school's innovative management structure. However, it was found in the interviews that many of the targets were issued upon the supervisor's insistence to move to an innovative management structure and the school's original organisation method, which are important keys. This point is consistent with Zhou, Brown, and Greenwood and Gaunt [7][10][14].

The authors consider that the result conforms to general cognition. With the introduction of ISO 9002, the motivation is different between a school's leader team and industry, which makes the impact of innovative management not so obvious. It was found in this study that, if there is no proper organisational culture, hastily introducing an external system method may generate some resistance in the innovation process, with some people resigning from their jobs.

Accreditation can be achieved in nine months. This is also proof that staff members have had some experience regarding the ex-principal's innovative method; they also have had sufficient knowledge and there is a common consensus to either *change or die*. That is, the school's organisational culture has changed so that it can innovate quickly and efficiently, no matter what the level of promotion of ISO accreditation and innovative management, which have a positive effect.

Leadership and organisational culture are also worth investigating, which provide obvious and positive values in an innovative management process. This case study indicates that introducing a ISO 9002 system is a method to achieving innovative management, but not a result. That is, the case school expects to train the staff to know innovation well, arouse the organisational culture and atmosphere so that it is recognised that the *only change is the unchangeable truth*.

This discussion has evolved the argument regarding leadership and organisational culture; which is the most important condition in innovative management? Although Kuczarski has emphasised the importance of leadership, organisational culture has proven to be the key in this research [3]. Yet this point does not conform to the ancient instruction, *the new officer is arrogant after taking the post*. However, because of being unable to exclude the importance of the leadership element, further research is suggested in this area.

It was found in this case study from the interviews and observations that the influence of the ISO 9002 quality system has not had as a positive effect as can be found in industry. Industry always considers the ISO 9002 quality system to offer increases in quality, customer satisfaction, simplification of task procedures and a reduction in the rate of resignations [13-16]. However, these effects are just part of the verification of the case.

According to this research, the possible reason for this is that the case school regards ISO 9002 accreditation as a tool for innovation, with accurate quality education as the inevitable result. Another reason is the leadership team have considered the current requirements and perceived the accreditation result as more important than the actual promotion of teaching and quality of administrative processes. Furthermore, the school did not keep the method to audit. The result observed was that the ISO 9002 system was not regarded as being particularly important; hence, it is not easy to develop the proper effect. But one thing of concern is that the leadership team predominantly determines activities, and the staff regard it as a routine procedure to ignore the importance and function. Therefore, although the activity develops smoothly, the school must pay more attention in order to keep the quality system generated.

The evidence indicates that the case school's education quality conforms to the criteria of customer satisfaction. However, the importance of the education quality system to the school is worth noting. Researchers believe that the emphasis on education at a school is a lifetime cultivation. Educational organisations should incorporate current trends, inspect what foundation the organisation requires, and search or construct a proper quality system at some other time.

In order to alter the present structure, task procedures should be established to make sure that it conforms to current customers' satisfaction and expectations in the future. That is, the school expects to establish a system that is suitable for quality expected by the domestic population. By operating the ISO 9002 system, it can match industrial structures and form educational characteristics for the school, thereby also conforming to domestic students' and parents' requirements. The leadership team commented:

*The core value of the quality system should come from customer's expectation, but not the best example introduction, otherwise this system is not so applicable. But ISO is still worth exerting and reviewing; it is important to make sure by getting accreditation now, and by introducing advantage foundation deeply, until confirming the competitive advantage, then to develop the characteristics. At that time, we can lead the customer to know their requirement.*

Although the ISO 9002 system demonstrates effectiveness, it is not a quality system that the school in this case study can easily

develop. It is a good idea to establish the system by operating the original system over a short period of time, but according to the school's developmental needs. This necessitates an understanding of the key characteristics and requirements, and hence developing a customised approach that is suitable for an education quality system as the best method.

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