Developing teaching quality indicators for the culinary teacher in a university

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ABSTRACT: The purpose of this study was to establish the indicators of the teaching quality for the culinary teacher. The researchers used several methods, including literature review, an expert forum and the modified Delphi technique in study. The results showed that the framework of teacher quality from the point of culinary teachers, hospitality teachers and graduated students incorporate three categories and 17 dimensions, with a total of 96 indicators. The three categories are: 1) education professional competence; 2) culinary professional competence; and 3) education professional attitude and spirits. According to the analytic results, they will provide the clear directions for the culinary instructor in further study and to develop career stabilisation.

INTRODUCTION

The food and beverage industry has become one of the indices affecting the economic development in Taiwan. Culinary art is an integrated study of food science, food preparation, cooking skill, aesthetics and diet culture [1]. Zopiatis showed the most important competencies for the chef including knowledge of flavours, knowledge of food sanitation, ability to distinguish level of quality in food products, general communication skills, and ability to make decisions [2]. The departments of Hotel and Restaurant in universities offer many professional courses and the course in culinary art is just one of the important courses in order to satisfy the growing social demands.

Hospitality education can produce qualified hospitality professionals needed in the market; therefore, it is understandable that hospitality education has become one of the prominent focal points in Taiwan's vocational training [3]. Teacher commitment has been found to be critical predictor of teachers' work performance, absenteeism, retention, burnout and turnover, as well as having am important influence on students' motivation, achievement, attitudes towards leaning and being at school [4]. Determining how to assess quality is a particular problem for culinary program became an important issue in the universities.

Organisations of all types have made *quality* the theme of their operations. Quality is measured best by a satisfied customer [5]. Students are our customers in school. Teachers are managers of learning, so they are responsible for student success and satisfaction on the classroom. Teachers must provide *customer-focused* quality leadership in the classroom. Schools provide the instruction in techniques and theory, and the quality of instruction plays a crucial role in having a successful future career. Instructors with good professional competence and continuing education will be able to improve the teaching quality.

Creemers argues that students' academic outcomes are more heavily dependent on the procedures and activities carried out in the classroom, than on the procedures and activities carried out at the school level [6]. In fact, without effective teacher guidance and instruction in the classroom, learning and progress cannot be achieved [7][8]. Caldwell and Spinks also argue that while organisational aspects of schools provide the necessary preconditions for effective teaching, it is the quality of teacher-student interactions that principally determines student progress [9].

Medley identified five conceptions of the effective teacher: 1) possessor of desirable personal traits; 2) user of effective methods; 3) creator of a good classroom atmosphere; 4) master of a repertoire of competencies; and 5) professional decision maker who has not only mastered needed competencies, but learned when to apply them and how to orchestrate them [10]. As discussed above, very little academic literature exists relating to culinary teaching quality. Thus, this research, touching upon the evaluation of teaching quality, will be greatly based on the professional

competence of culinary art teachers. The purpose of this study was to set up the indicators of the teaching quality for the culinary teacher.

METHODOLOGY

Study Design and Sample

Methods such as a literature review, an expert forum and the modified Delphi technique have been used in this study to try to establish the indicators and their important levels for teaching quality for the culinary teacher in the universities of Taiwan. These methods were described as follows:

1. Literature Review: Starting with a comprehensive understanding of the scope of education aim and culinary professional competence of teaching quality.
2. Expert Forum: Six exports including senior teachers and graduate students were invited to discuss the indicators of teaching quality for culinary teacher after the completion of the literature review. The questionnaires were compiled in a semi-interactive model, where the framework and contents of the culinary teaching quality were investigated with the participants.
3. Modified Delphi Technique: A modified version of Delphi was used for the study. A mixed method was used to develop and evaluate indicators of teaching quality for the culinary teacher.

Delbecq et al stated that ten to fifteen participants might be enough with a homogeneous group [11]. A total of 20 experts (including culinary teachers, hospitality teachers and graduated students) were interviewed.

In the first round, the participants were asked to rate each teaching quality statement on a 5-point Liker scale. A Likert scale has been the most common tool that is used to quantify views in a Delphi study [12]. A total 20 research exports were invited to participant in the first round. A total of 20 exports competed and returned the instrument. Following participant recommendations from the first instrument, the second instrument was developed. Some statements were rewritten and restated. New statements provided by the participants were added to the second instrument. At the end of two rounds of surveys, the information retrieved was organised and analysed statistically, and three categories, and 17 dimensions, with a total of 96 indicators were established.

Data Analysis

The information retrieved from the Delphi expert panel was interpreted using the statistics software SPSS 14.0. The mean, mode and quartile deviation (QD) were calculated. Generally, if the mean of a item as high as 3.5 or above and the QD is lower than 1.0, the item is can be regarded as having reached a consensus [12]. If the mean of a competence item is as high as 4 or above, the item is considered a demanding and important. An item with model and QD signified that the comments on that item consistent.

RESULTS AND DISCUSSIONS

Three categories including education professional competence, culinary professional competence and education professional attitude and spirits, and 18 dimensions, with a total of 103 indicators were established during expert forum for the teaching quality of the culinary teacher.

Two rounds of the Delphi technique expert panel questionnaire survey participated in by 20 experts had been carried out. Opinions of the expert members had been described, and the important of competencies identified by each member was presented on a five- point scale. The final consensus reached had established the teaching quality of culinary teacher.

Results of statistical analysis on the data collected had revealed, and that the mean and mode of each competence scored higher than 4. The QD was less than 1 in each item. Finally, though data analysis and some modification, the framework of teacher quality from the point of culinary teacher literacy incorporate three categories and 17 dimensions, with a total of 96 indicators. The three categories are: a) education professional competence; b) culinary professional competence; and c) education professional attitude and spirits. Education professional attitude and spirits were the more important category than education professional competences and culinary professional competences (Table 1).

Table 1: The mean scores of teaching quality for culinary teachers.

Categories	First Round			Second Round		
	Mean	Mode	Q.D.	Mean	Mode	Q.D.
A. Education professional competence	4.19	4	0.75	4.29	4	0.5
B. Culinary professional competence	4.43	5	0.68	4.76	5	0
C. Education professional attitude and spirits	4.71	5	0.46	4.76	5	0

More specifically, the first category of education professional competence comprises:

1. Education professional knowledge;
2. Class management;
3. Class practice;
4. Student counselling;
5. Class design;
6. Teaching material;
7. Teaching evaluation, and
8. Professional growth.

There were 39 indicator included. The interview results showed that the teachers have to obtain the basic education abilities including class environments and class consistency. They are also still continuing education to professional growth. During the two rounds, among these constructs in the education professional competences, class design and teaching material were more important; however, class management was less important than others (Table 2).

However, we found the mean of each indicator for class management was higher than 4, we changed class management to teaching activities in order to match the each indicator. We also correlated the teaching evaluation for the teaching performance.

Table 2: The mean scores for the category of education professional competence.

Constructs		First Round			Second Round		
		Mean	Mode	QD	Mean	Mode	QD
A-1	Education professional knowledge	4.24	4	0.5	4.24	4	0.5
A-2	Class management -> Teaching activities	3.81	4	0.5	3.86	4	0
A-3	Class practices	4.38	4	0.5	4.38	4	0.5
A-4	Student counselling	4.05	5	1	4.24	4	0.5
A-5	Class design	4.57	5	0.5	4.67	5	0.5
A-6	Teaching material	4.57	5	0.5	4.76	5	0
A-7	Teaching evaluation -> teaching performance	4.00	4	1	3.90	4	0.5
A-8	Professional growth	4.10	4	0.5	4.38	4	0.5

The second category of culinary professional competence comprises:

1. Culinary basic knowledge;
2. Culinary innovation;
3. Culinary basic skills;
4. Culinary management, and
5. Culinary attitude.

There were 38 indicators in the culinary professional competence. The finding of the interviews demonstrates that these are the basic professional competence for the chef. Most of the culinary teachers from industry could obtain these abilities already. The culinary basic knowledge and skill more the more important than other constructs. Most of them were over 4 (Table 3).

Table 3: The mean scores for the category of culinary professional competence.

Constructs		First Round			Second Round		
		Mean	Mode	QD	Mean	Mode	QD
B-1	Culinary basic knowledge	4.86	5	0	4.76	5	0
B-2	Culinary innovation	4.29	4	0.5	4.24	4	0
B-3	Culinary basic skills	4.81	5	0	4.86	5	0
B-4	Culinary management	4.24	4	0.5	4.38	4	0.5
B-5	Culinary attitude	4.62	5	0.5	4.76	5	0

The third category of education professional attitude and spirits incorporates:

1. Education faith;
2. Personal character;
3. Professional dedication;
4. School service, and
5. Communication.

Nineteen indicators were provided in this category. The professional dedication was more important than other constructs. However, school service was deleted in the final round (Table 4).

Table 4: The mean scores for the category of education professional attitude and spirits.

Constructs		First Round Mean			Second Round Mean		
		Mean	Mode	QD	Mean	Mode	QD
C-1	Education faith	4.62	5	0.5	4.43	5	0.5
C-2	Personal character	4.71	5	0	4.71	5	0.5
C-3	Professional dedication	4.81	5	0	4.90	5	0
C-4	School service -> deleted	3.76	4	0	3.67	4	0.5
C-5	Communication	4.29	4	0.5	4.29	4	0.5

The researchers have turned to teacher behaviours as predictors of student achievement in order to build up a knowledge base on effective teaching [13-15]. Therefore, the culinary professional competence of the culinary teachers would be important constructs for the culinary teachers. Amount learnt is related to opportunity to learn and achievement is maximised when teachers prioritise academic instruction, expect their students to achieve the curriculum aims and allocate available time to curriculum-related activities [16].

Effective teachers are expected to manage the classroom environment as an efficient learning environment and thereby to maximise engagement rates [17]. Muijs and Reynolds point out that classroom management is a factor that teacher effectiveness research has found to be significant [15]. To learn efficiently, student must be engaged in activities that are appropriate in difficulty level and suited to their current achievement levels and needs [18].

However, we could not to see the same important results in our researches; we changed the class management to teaching activities. Rosenshine and Stevens [19] pointed out that achievement is maximised when teachers not only actively present materials but also structure it by: a) beginning with overviews; b) outlining the content and transitions between lesson parts; c) calling attention to main ideas; and d) reviewing main ideas at the end. Effective teachers are able to communicate clearly and directly to their students without digression [20]. Muijs and Reynolds [15] indicated that the focus on teachers actively presenting materials should not be seen as an indication that traditional lecturing.

To identify the psychological characteristics of an effective teacher were personality characteristics, attitude, experience and aptitude/ achievement. Clarity of presentation is also a consistent correlate of student achievement [21]. Muijs and Reynold [15] indicated that the focus on teachers actively presenting materials should not be seen as an indication that traditional; lecturing and drill approach is an effective teaching approach. Furthermore, the study revealed that teachers' personality traits played a significant role in their teaching styles beyond their gender, educational level, and their perceptions of the quality of their students [22].

CONCLUSIONS AND SUGGESTIONS

Established in this study was the teaching quality for the culinary in the universities. The three categories are: 1) education professional competence; 2) culinary professional competence; and 3) education professional attitude and spirits. We developed 17 dimensions and with a total of 96 indicators for the teaching quality for the culinary teachers. In the 21st Century, teachers are expected to adopt expanded roles and responsibilities for the self development and student performance. All these roles suggest that the traditional conception of teacher effectiveness focused exclusively or mainly on the teaching performance of individual teachers in the classrooms, has its limitations and cannot meet the needs of good quality as a whole.

There is a need to develop a multi-model conception of teacher quality. According to the analytic results, they will provide the clear directions for the culinary instructor in further study and to develop the teacher career stabilisation. We will expect success in good teaching quality for culinary art programs in higher education. Brown and McIntyre [23] argue that students' perceptions of good teaching quality are very important in enriching the existing domain of research into teacher effectiveness. A further study could focus on students' perceptions of teaching quality, and the relationship between general quality assessment theories and quality evaluation for culinary art program for hospitality department in university.

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