

Recognition Level of the Culinary Practice of Culinary Teachers in Vocational High Schools

This study finds methods to activate culinary education by surveying the level of recognition for culinary practice from the culinary teachers of vocational high schools. The number of individuals surveyed is 103. Data is verified by using SPSS 14.0 (SPSS Inc, Chicago, USA). The results of the survey on recognition for culinary education showed that learning requirements are very high as well as that theoretical education and trial demonstrations are necessary to enhance the effects of culinary practice education. Desired teaching learning materials were cooking materials by a certified technician. Their desired supplementary data for enhancing practical techniques were practical demonstrations, various materials and language instruction to learn other culinary practices. It is reported that there was increasing work other than learning time and complication for preparing practice. In addition, they desire more websites for cooking need to be built. Plans for activating culinary education are as follow: First, how to enhance the professional abilities of culinary teachers. Second, to show the necessity of theoretical education, video-based education, and culinary practice demonstrations. Third, to show the necessity to increase the ratio for culinary practice classes. Fourth, to display various teaching and learning materials. Fifth, to enhance websites for culinary data. Sixth, to provide opportunities to augment a sense of achievement.

Core strategies for preparing for employment in the 21st century is reforming school education and

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training systems that can prepare human resources for a Knowledge and Information Society and enhance career abilities (Lee & Lee, 2010).

Culinary culture and culinary education is going through significant changes due to changes in modern society. The roles of teachers are very important along with improvements in the practicing environment in order for culinary education to advance (Park, 2006). Jobs related to cooking are rapidly changing in their cycle along with the advancement of food service industries and job changes (Jang, 2005). This means that organic relations between industries and culinary education are critical for culinary education (Kim, 2007).

Culinary education has job education characteristics that nourish human resources for home economics and actual careers. This is also important in terms of the educational roles connected to related education such as entering postsecondary institutions and continuous learning after employment due to the higher demands on education and the enhancement of economic levels. In addition, the revised education course in 2009 indicates that curriculums in vocational high schools related to home economics need to acquire knowledge and techniques necessary for related jobs and industries that can achieve self-fulfillment by learning professional education to nourish professional human resources to contribute to the advancement of home economics & business (Ministry of Education, Science and Technology, 2009). Many activation plans for culinary education are studied in terms of various aspects to adapt people to the evolving needs of society; however, the

studies on the willingness of teachers to activate culinary education and law correct environment for education sites are limited.

This study examines the recognition of learning demand, satisfaction of culinary education, and web site utilization from the culinary teachers of vocational high schools in charge of Culinary Departments to search for a utilization plan for culinary education. In addition, the study results will be compared and analyzed with variables of the careers and certificates of the culinary teachers.

THEORETICAL BACKGROUND

Cooking and Culinary Education

Cooking, as a process for making food palatable, it is a method that bakes, boils, fries, parches and seasons food to improve the basic food characteristics and make them easy to eat (Park, 2004). Cooking is a method for improving natural food materials using techniques and knowledge which are a physical and chemical manipulation to meet nutritional requirements and create a satisfactory taste for human survival (Kim, 2007). Culinary education indicates all education related to industries and daily life as well as the content related to teaching cooking (Kim, 2006). This education needs to be suitably harmonized with vocational schools focused on sitology that emphasize food life, food culture, culinary education (in terms of nutrition and food processing), professional technologies, and culinary education in academy (Na *et al.* 1999).

Preceding Studies on Cooking

Studies on learning requirements for culinary education show that the level for practicing cooking by the teacher is comparably high and that teachers demand culinary education support (Park, 2006). In addition, they show that the equipment for satisfying the characteristics of cooking affected learner satisfaction and reported that 20-30 people in a culinary room and 1-3 people on a work bench is most desirable for trainees (Kim, 2001).

From the studies on the satisfaction level for culinary education, Kim (2006) and Noh (2009)

showed a high satisfaction for overall school life and upper middle group of students to higher satisfaction. The interest in cooking was 56.6% and satisfaction level for the major is an important factor for the career development of students (Han, 2008). However, career selection through correct information and search programs for those who selected cooking as their majors is necessary because many students tended to select careers without proper job information (Jeon, 2009). Gang (2009) recommended a mixed class with multimedia as an effective culinary education method. Kim (2007) argued the necessity for education philosophy, development of effective educational curriculums, systematic culinary subjects, development of textbooks, and teaching learning methods for nourishing cooks because studies on culinary education are more focused on quantitative aspects rather than qualitative ones.

This current study examined the recognition level of the culinary practice from the aspect of learning demand, satisfaction, and cooking related web site utilization of the culinary education to compare and analyze the study results with career variables along with certificates recognized as the most import qualifications for teachers.

METHODS

A questionnaire survey was carried out with a focus on high school teachers in charge of managing culinary divisions in Korean schools. In March, 2010, teachers were instructed by phone on how to complete and submit the questionnaire paper. So that all of the teachers in culinary division would respond to the questionnaires, the questionnaires were sent to them after their cooperation was secured. The retrieved questionnaires were used for data analysis and the total number of questionnaires used for final analysis was 103.

The questionnaires were made and supplemented in a method that consult to questionnaires in preceding studies (Gang, 2003; Gang, 2009; Jeon, 2003; Jeon, 2009; Noh, 2009; Park, 2006; Pyo, 2003; Yun, 2001). The questionnaires were made for this purpose with opinions from special committee

Table 1. General Characteristics of Teachers

Characteristics	Categories	N (%)	Characteristics	Categories	N (%)
School Location	Big City	68 (66.0)	Type of School Foundation	Public	72 (67.9)
	Medium City	16 (15.5)		Private	31 (30.1)
	Local Province	6 (18.4)		Home Economics · Vocational	58 (56.3)
Teacher's Career	Under 5 Years	24 (23.3)	Type of School	Commercial	13 (12.6)
	From 5-10 Years	49 (47.6)		Specialized	16 (15.5)
	More than 10 Years	30 (29.1)		Integrated	7 (6.8)
Culinary Teacher's Career	Less than 5 Years	52 (50.5)	Certification of Culinary Teacher	Owned	78 (75.7)
	More than 5 Years	51 (49.5)		None	25 (24.3)

members that consisted of 4 professors and 6 culinary department students in Master's and PhD programs. To verify the significance between each variable in articles, SPSS 14.0 (SPSS Inc, Chicago, USA) is used for verification. This study used careers and the certification of culinary teacher as variables.

STUDY RESULTS AND REVIEW

General Characteristics of Respondents

The number of teachers that responded to the questionnaire is 103 (Table 1) and many of them work for schools in big cities. Schools responding to the questionnaire consisted of 72 public schools and 31 private schools while most of the teachers work for home economics vocational high schools. The careers of teachers mostly consisted of a work experience of 5 to 10 years and 75.7% of those teachers have culinary teacher certifications.

Recognition Level for Cook Practicing Education

Learning requirements for culinary education

Learning requirement levels for culinary education is shown in Table 2. The curriculum for culinary education needs to be modified so that more practicing classes are added. It was reported that respondents hope to teach students with an increased focus on practice rather than theoretical classes; in addition, most of them taught students on a theoretical basis before culinary practicing. The study by Jeon (2000) also reported that classes with more enhanced specialized practice are regarded as

the superior class for students.

For learning requirements, teachers with more than 5 year careers of cooking experience required more practicing classes than those with less than 5 year careers ($p < .05$). However, a higher percentage of teachers with less than 5 year careers hoped for a theoretical cooking class and presented a cooking video before beginning cook practicing class ($p < .01$). It is reported that those teachers demonstrated cooking before starting culinary practice ($p < .01$).

For learning requirements that depended on the possession of cooking certifications, certified teachers hoped for more practicing classes ($p < .05$) than those without certification. Teachers without certification hoped to do more demonstrated practice before beginning in culinary practice ($p < .01$).

Learning requirements characteristics for culinary education is shown in Table 3. Most teachers indicate that they conduct culinary practicing after theoretical education and demonstration to improve the effects of culinary practice; in addition, they conduct video-based education. They favored actual materials & multi-media, textbooks, and the Internet in order as learning & teaching materials for culinary education. Teachers with cooking certification favored multi-media whereas those without cooking certification hoped cooking training materials most ($p < 0.5$).

The practicing content that they hope for in culinary education was certified technician cooking (42.7%). According to certification of culinary teachers, they favored in order certified technician cooking, hotel cooking, and created cooking while those without certification of culinary teachers

Table 2. Learning Requirements

N (%)

Learning Requirements	Groups	Very High	High	Usual	Less Hope	Least Hope	Total	χ^2 -test
More Practicing Classes	Less than 5 Years	4 (7.7)	9 (17.3)	9 (17.3)	25 (48.1)	5 (9.6)	52 (100.0)	12.649*
	More than 5 Years	10 (19.6)	19 (37.3)	8 (15.7)	13 (25.5)	1 (2.0)	51 (100.0)	
	Certified	13 (16.7)	25 (32.1)	10 (12.8)	25 (32.1)	5 (6.4)	78 (100.0)	9.909*
	Non-certified	1 (4.0)	3 (12.0)	7 (28.0)	13 (52.0)	1 (4.0)	25 (100.0)	
Theoretical-Based Class	Less than 5 Years	7 (13.5)	20 (38.5)	8 (15.4)	7 (13.5)	10 (19.2)	52 (100.0)	16.538**
	More than 5 Years	6 (11.8)	4 (7.8)	14 (27.5)	17 (33.3)	10 (19.6)	51 (100.0)	
	Certified	10 (12.8)	18 (23.1)	12 (15.4)	21 (26.9)	17 (21.8)	78 (100.0)	8.132
	Non-certified	3 (12.0)	6 (24.0)	10 (40.0)	3 (12.0)	3 (12.0)	25 (100.0)	
Practice-Based Class	Less than 5 Years	6 (11.5)	38 (73.1)	6 (11.5)	2 (3.8)	0 (0.0)	52 (100.0)	3.532
	More than 5 Years	6 (11.8)	30 (58.8)	9 (17.6)	6 (11.8)	0 (0.0)	51 (100.0)	
	Certified	11 (14.1)	49 (62.8)	10 (12.8)	8 (10.3)	0 (0.0)	78 (100.0)	5.391
	Non-certified	1 (4.0)	19 (76.0)	5 (20.0)	0 (0.0)	0 (0.0)	25 (100.0)	
Performing Theoretical Class before Practicing	Less than 5 Years	30 (57.7)	18 (34.6)	3 (5.8)	1 (1.9)	0 (0.0)	52 (100.0)	2.331
	More than 5 Years	22 (43.1)	23 (45.1)	5 (9.8)	1 (2.0)	0 (0.0)	51 (100.0)	
	Certified	42 (53.8)	30 (38.5)	5 (6.4)	0 (0.0)	1 (1.3)	78 (100.0)	2.347
	Non-certified	10 (40.0)	11 (44.0)	3 (12.0)	0 (0.0)	1 (4.0)	25 (100.0)	
Performing Practice Demonstration before Practicing	Less than 5 Years	17 (32.7)	4 (7.7)	12 (23.1)	11 (21.2)	8 (15.4)	52 (100.0)	14.902**
	More than 5 Years	24 (47.1)	14 (27.5)	7 (13.7)	3 (5.9)	3 (5.9)	51 (100.0)	
	Certified	37 (47.4)	12 (15.4)	14 (17.9)	11 (14.1)	4 (5.1)	78 (100.0)	14.882**
	Non-certified	4 (16.0)	6 (24.0)	5 (20.0)	3 (12.0)	7 (28.0)	25 (100.0)	
Video Learning before Practicing	Less than 5 Years	6 (11.5)	23 (44.2)	16 (30.8)	7 (13.5)	0 (.0)	52 (100.0)	12.993*
	More than 5 Years	4 (7.8)	8 (15.7)	27 (52.9)	10 (19.6)	2 (3.9)	51 (100.0)	
	Certified	6 (7.7)	24 (30.8)	31 (39.7)	15 (19.2)	2 (2.6)	78 (100.0)	3.791
	Non-certified	4 (16.0)	7 (28.0)	12 (48.0)	2 (8.0)	0 (0.0)	25 (100.0)	

*p<.05, **p<.01

favored certified technician cooking and local cooking and then that shows significant differences ($p<.05$).

The study by Pyo (2003) showed that most desirable specialized experiment and practicing is with this a textbook and a certified technician's cooking (43.3%) and certified technician-oriented practicing and on-site practical base (43.3%) which means it focuses more on teaching by certified culinary technicians. They favored in order certified technician cooking and hotel cooking; this shows significant differences.

Detailed practice demonstrations by teachers are an essential content to be added to improve the

practical abilities of culinary practice. Student's learning content related to culinary practice (other than cooking) are enumerated in order of foreign language (50%), others (42.3%), and vocational (professional) ethics (7.7%). The necessity for vocational (professional) ethics (depending on the certification of the culinary teacher) shows 6.4% for the certified teachers whereas it shows 24.0% for those without certification and shows a significant difference ($p<0.5$).

Satisfaction for culinary education and its facilities
The satisfaction level for culinary education and culinary facilities is shown in Table 4. Most respondents thought that their satisfaction for

Table 3. Learning Requirements Characteristics

N (%)

Characteristics	Groups	Practice	Theory + Practice	Video+ Practice	Practice Demo +Practice	Theory+ Video+ Practice	Theory+ Demo+ Practice	Theory+ Video+ Practice- Demo+ Practice	Total	χ^2 -test
Method of Improve Training Effectiveness	Less than 5 Years	1 (1.9)	2 (3.8)	1 (1.9)	4 (7.7)	2 (3.8)	31 (59.6)	11 (21.2)	52 (100.0)	4.515
	More than 5 Years	0 (.0)	2 (3.9)	0 (.0)	7 (13.7)	3 (5.9)	24 (47.1)	15 (29.4)	51 (100.0)	
	Certified	1 (1.3)	3 (3.8)	1 (1.3)	9 (11.5)	4 (5.1)	40 (51.3)	20 (25.6)	78 (100.0)	1.203
	Non-certified	0 (0.0)	1 (4.0)	0 (0.0)	2 (8.0)	1 (4.0)	15 (60.0)	6 (24.0)	25 (100.0)	
Total		1 (1.0)	4 (3.9)	1 (1.0)	11 (10.7)	5 (4.9)	55 (53.4)	26 (25.2)	103 (100.0)	
Characteristics	Groups	Cooking Training Materials	Internet	Multi-media	Textbook (Cook Book)	Others	Total	χ^2 -test		
Order of Learning & Teaching Materials	Less than 5 Years	21 (40.4)	4 (7.7)	20 (38.5)	5 (9.6)	2 (3.8)	52(100.0)	6.785		
	More than 5 Years	16 (28.2)	4 (7.8)	14 (26.9)	6 (11.5)	11 (21.2)	51(100.0)			
	Certified	23 (29.5)	6 (7.7)	30 (38.5)	8 (10.3)	11 (14.1)	78(100.0)	10.451*		
	Non-certified	14 (56.0)	2 (8.0)	4 (16.0)	3 (12.0)	2 (8.0)	25(100.0)			
Total		37 (35.9)	8 (7.8)	34 (33.0)	11 (10.7)	13 (12.6)	103 (100.0)			
Characteristics	Groups	Tech's Cook	Hotel Cook	Local Cook	Creative Cook	Others	Total	χ^2 -test		
Hope for Culinary Education	Less than 5 Years	29 (55.8)	8 (15.4)	6 (11.5)	5 (9.6)	4 (7.7)	52 (100.0)	8.846		
	More than 5 Years	15 (29.4)	12 (23.5)	6 (11.8)	7 (13.7)	11 (21.6)	51 (100.0)			
	Certified	29 (37.2)	18 (23.1)	7 (9.0)	9 (11.5)	15 (19.2)	78 (100.0)	11.311*		
	Non-certified	15 (60.0)	2 (8.0)	5 (20.0)	3 (12.0)	0 (.0)	25 (100.0)			
Total		44 (42.7)	20 (19.4)	12 (11.7)	12 (11.7)	15 (14.6)	103 (100.0)			
Characteristics	Groups	Detailed Demonstration by Teacher	Various Learning Contents	Additional Practicing Space	Supplementing Theoretical Contents	Textbook for Practicing	Total	χ^2 -test		
Use for Culinary Education	Less than 5 Years	17 (32.7)	12 (23.1)	10 (19.2)	6 (11.5)	7 (13.5)	52 (100.0)	7.528		
	More than 5 Years	20 (39.2)	20 (39.2)	7 (13.7)	2 (3.9)	2 (3.9)	51 (100.0)			
	Certified	29 (37.2)	23 (29.5)	15 (19.2)	4 (5.1)	7 (9.0)	78 (100.0)	2.730		
	Non-certified	8 (32.0)	9 (36.0)	2 (8.0)	4 (16.0)	2 (8.0)	25 (100.0)			
Total		37(35.9)	32 (31.1)	17 (16.5)	8 (7.8)	9 (8.7)	103(100.0)			
Characteristics	Groups	Vocational ethics	Foreign language skills	Others	Total	χ^2 -test				
Hoping to Learning Contents	Less than 5 Years	7 (13.5)	30 (57.7)	15 (28.8)	52(100.0)	2.702				
	More than 5 Years	4 (7.8)	22 (43.1)	25 (49.0)	51(100.0)					
	Certified	5 (6.4)	40 (51.3)	33 (42.3)	78(100.0)	6.193*				
	Non-certified	6 (24.0)	12 (48.0)	7 (28.0)	25(100.0)					
Total		11(10.7)	52 (50.5)	40 (38.8)	103 (100.0)					

*p<.05

culinary education was ordinary and the facility is usual with no significant difference between groups.

The most difficult aspects for teaching culinary practice (Table 5) were increased amount of job experience other than class time. The study by Pyo

(2003) indicated that difficulties for teaching students were insufficient professional ability (21.1%), increased jobs (14.4%), and trouble in practice Corp. (13.3%) that shows a similar result compared to this current study. Pyo (2003) argues

Table 4. Satisfaction for Culinary Education

N (%)

Characteristics	Groups	Very High	High	Usual	Negative	Highly Negative	Total	χ^2 -test
Carrying Out Till Satisfied	Less than 5 Years	6 (7.7)	26 (33.3)	29 (37.2)	17 (21.8)	0 (0.0)	52 (100.0)	1.550
	More than 5 Years	4 (16.0)	7 (28.0)	9 (36.0)	5 (20.0)	0 (0.0)	51 (100.0)	
	Less than 5 Years	4 (7.7)	16 (30.8)	22 (42.3)	10 (19.2)	0 (0.0)	52 (100.0)	1.550
	More than 5 Years	6 (11.8)	17 (33.3)	16 (31.4)	12 (23.5)	0 (0.0)	51 (100.0)	
Satisfaction Level for Culinary Facilities	Certified	10 (12.8)	35 (44.9)	13 (16.7)	15 (19.2)	5 (6.4)	78 (100.0)	6.453
	Non-certified	2 (8.0)	11 (44.0)	7 (28.0)	1 (4.0)	4 (16.0)	25 (100.0)	
	Certified	5 (9.6)	24 (46.2)	11 (21.2)	5 (9.6)	7 (13.5)	52 (100.0)	5.639
	Non-certified	7 (13.7)	22 (43.1)	9 (17.6)	11 (21.6)	2 (3.9)	51 (100.0)	

Table 5. Most Difficult Aspects for Teaching Cooking Practice

N (%)

Characteristics	Groups	Trouble in Preparing Practice	Insufficient Professional Ability	Increased Amount of Job Other Than Class Time	Others	Total	χ^2 -test
Most Difficult Aspects for Teaching Cooking Practice	Less than 5 Years	12 (23.1)	4 (7.7)	26 (50.0)	10 (19.2)	52 (100.0)	296
	More than 5 years	11 (21.5)	3 (5.9)	30 (58.8)	7 (13.7)	51 (100.0)	
	Certified	18 (23.1)	4 (7.8)	44 (86.3)	12 (15.4)	78 (100.0)	2.558
	Non-certified	5 (20.0)	3 (12.0)	12 (48.0)	5 (20.0)	25 (100.0)	
Total		23 (22.3)	7 (7.0)	56 (53.4)	17 (16.5)	103 (100.0)	

Table 6. Recognition of Websites

N (%)

Characteristics	Groups	Very High	High	Usual	Negative	Highly Negative	Total	χ^2 -test
Necessity of Web Site	Less than 5 Years	30 (57.7)	19 (36.5)	3 (5.8)	0 (0.0)	0 (0.0)	52 (100.0)	3.055
	More than 5 Years	32 (62.7)	19 (37.3)	0 (0.0)	0 (0.0)	0 (0.0)	51 (100.0)	
	Certified	50 (64.1)	25 (32.1)	3 (3.8)	0 (0.0)	0 (0.0)	78 (100.0)	3.819
	Non-certified	12 (48.0)	13 (52.0)	0 (0.0)	0 (0.0)	0 (0.0)	25 (100.0)	
Satisfaction of Current Web Site	Less than 5 Years	1 (1.9)	5 (9.6)	28 (53.8)	15 (28.8)	3 (5.8)	52 (100.0)	2.348
	More than 5 Years	0 (0.0)	8 (15.7)	23 (45.1)	16 (31.4)	4 (7.8)	51 (100.0)	
	Certified	0 (0.0)	8 (10.3)	37 (47.4)	28 (35.9)	5 (6.4)	78 (100.0)	8.487
	Non-certified	1 (4.0)	5 (20.0)	14 (56.0)	3 (12.0)	2 (8.0)	25 (100.0)	
Hope to Build A Web Site	Less than 5 Years	25 (48.1)	23 (44.2)	3 (5.8)	1 (1.9)	0 (0.0)	52 (100.0)	1.158
	More than 5 Years	27 (52.9)	21 (41.2)	3 (5.9)	0 (0.0)	0 (0.0)	51 (100.0)	
	Certified	41 (52.6)	32 (41.0)	4 (5.1)	1 (1.3)	0 (0.0)	78 (100.0)	1.079
	Non-certified	11 (44.0)	12 (48.0)	2 (8.0)	0 (0.0)	0 (0.0)	25 (100.0)	

that opportunities for re-training and development of various teaching learning material are needed to

enhance the professional abilities of teachers.

Utilizing cooking-related websites Most teachers

recognized that cooking-related websites are necessary for effective teaching classes (Table 6) and many of the respondents answered that current cooking-related websites are unsatisfactory while most respondents hope for the implementation of additional websites for cooking. This article did not show a significant difference depending on career and culinary teachers certifications.

SUMMARY AND CONCLUSIONS

Summary of Study Results

This study intended to find activation plan for culinary education by surveying the recognition level of culinary education from culinary teachers in vocational high schools. A total of 103 culinary teachers from Korean vocational high schools were selected as the survey participants for this study. The questionnaire for this study was distributed in March 2010 and χ^2 -verification was carried out using SPSS 14.0 (SPSS Inc, Chicago, USA).

The teacher respondents consist of 72 public school teachers and 31 private school teachers with most of them living in urban centers. For school types, the number of teachers in home economics and vocational high school was the highest and a career experience of 5 to 10 years was the highest. The career experience of teachers was mostly 5 to 10 years and represented 75.7%. For learning requirements (depending on the possession of cooking certifications) certified teachers hoped for more practicing classes ($p < .05$) than those without certification. Teachers without certification hoped for more demonstrated practice before beginning culinary practice ($p < .01$).

Learning requirements for culinary education was shown to be very high in this survey. It is believed that the curriculum for culinary education needs to be modified so that more practicing classes are added. Culinary teachers with a career of more than 5 years required more practice. ($p < 0.1$) However, a higher percentage of teachers with a career of less than 5 years hoped for a theoretical cooking class and they presented a culinary video before beginning culinary practice ($p < .01$) as will as a culinary

demonstration before beginning culinary practice.

For learning requirements (depending on culinary certification) certified teachers hoped for more practicing classes ($p < .05$) than those without certification and they did a demonstrated practice before beginning culinary practice ($p < .01$). They favored actual material & multi-media, textbooks, and Internet in their enumerated order as learning & teaching materials for culinary education. Especially certified cooking teachers favored multi-media whereas those without cooking certification hoped for cooking training materials ($p < 0.5$). For learning & teaching materials for culinary education, cooking training materials are most often used. They believe that handling cooking training materials is more effective than theoretical teaching. Contents to be added for improving practical abilities of cooking practice show that detailed practice demonstrations by teachers are necessary. Student's learning contents related to culinary practice other than cooking are enumerated in order of foreign language (50%), others (42.3%), and vocational (professional) ethics (7.7%). The necessity for vocational (professional) ethics depending on certification of culinary teacher shows 6.4% for the certified teachers whereas it shows 24.0% for those without certification and is a significant difference ($p < 0.5$). More than 50% of the respondents are shown to be satisfied with culinary education and its facilities; in addition, the most difficult aspects for teaching cooking practice shows an increased amount of job experience other than class time. But there is no significant difference depending on career and the certification of culinary teachers.

For utilizing cooking-related websites, most of respondents provided positive responses to a large amount of learning, enhanced concentration, enhanced transferring of learning contents, and triggering interests and motivation. However, there was no significant difference depending on career and certification of culinary teachers. From these study results, the following conclusions are derived.

In case of a very high learning demand on the culinary education and most of teacher's career of the culinary department and possession of certificates, more practice was desired and practice demon-

strations prior to the performance of the culinary practice were executed. Furthermore, regarding the demands of the culinary practice learning, teachers without a certificate hope to proceed the class by only student's culinary practice and those with certificates hope to perform the culinary practice after a practice demonstration. This result is the proof that the careers and cooking related certificates give teachers in charge of the practice focused culinary education confidence about the practice class and teachers with a certificate feel difficult practicing a demonstration. Most of the teachers without a certificate hope certified technician cooking but teachers with certificates hope both certified technician cooking and hotel cooking so that higher level culinary practice can be expected by the teachers with certificates. The study results show that the possession of certificates as well as the career experience of the culinary teachers is essential for practice focused culinary education.

Activation Plan for Culinary Education

The activation plans for culinary education based on the survey result from culinary teachers of vocational high school are as follows: First, to find a measurement to enhance the professional ability of culinary teachers, there is a need to perform their detailed cooking demonstrations in order to improve cooking abilities. For this purpose, teachers need to have opportunities to improve their professional abilities based on their beliefs. Second, theoretical classes and video-based learning and cooking demonstrations are all necessary for culinary education. It is necessary to find a measurement to cover difficulties and insufficiencies using various learning content such as websites and video. Third, dedicated teachers for practice are necessary to solve problems such as troubles in preparing food materials and increased job requirements to provide opportunities to students at any time through more activated culinary education. Fourth, to take advantage of various learning & teaching materials, the desired learning & teaching materials are cooking training materials and textbook (cookbooks), as well Internet (websites) are also included. Desired practicing contents include certified technician cooks

and hotel cooks. Therefore, it is recommended that cooking training materials (food) for certified technician cooking and supplementary textbooks and WBI data are prepared and used before cooking practice. Fifth, it is necessary to establish cooking-related websites with teacher's opinions and measurements for improving the effectiveness of learning. Learning methods need to be improved along with theoretical education such as basic knowledge, learning foreign languages, and cooking science data. Sixth, provide various opportunities to improve a sense of achievement. The workloads of teachers need to be reduced using an intern teacher and a compensation system needs to be established for culinary teachers so that the quality of their teaching can be enhanced. This will improve their satisfaction level that will lead to upgrading vocational educations and the quality of students.

The following suggestions are provided based on the study results. First, a specialty for the teachers in charge of the culinary education is required in order to solve the practicing class problems in the conditions of insufficient careers of the culinary teachers. Therefore, a budget for training in each business and certificate acquirement related to training support of the teachers in charge of the culinary education should be invested in and the professional efforts of the culinary teachers of vocational high schools should be consistently promoted. Second, despite of the various data developed for each subject, its use in the school field is inactive and proves that the preparation for the class environment has problems. It seems that the intention of the teachers to utilize the data and the recognition of the development data are insufficient due to the entrance exam focused education system. The search for a positive utilization method of the developed data is required in order to find solutions to the stated problems.

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