

Relationship between Basic Competencies of Students of Interior Architecture in Thailand and their Effectiveness in Professional Practice

Piya Tansiri¹,
Thanin Ratana-Olarn²,
Krissana Kiddee³,
Pichai Sodbhiban⁴,
and Lertlak Klinhom⁵

Faculty of Industrial Education and Technology,
King Mongkut's Institute of Technology Ladkrabang, Thailand

¹piya.ta@kmitl.ac.th

²research2553@yahoo.com

³kiddee2410@gmail.com

⁴pichai.so@kmitl.ac.th

⁵kkkertla@kmitl.ac.th

Abstract - The objectives of this research were to study the basic competency of students of the interior architecture curriculum, university of Thailand, and the effectiveness of those students in operational occupations, and to find a relationship between them. The group sampling used in this research were of students of the interior architecture curriculum, university of Thailand, totaling 215 people, and the trainers of operational occupations in entrepreneurships, totaling 80 people. The tools used in this research comprised 2 questionnaires; the first was a basic competency questionnaire, and had a reliability of 0.98, and the second concerned the effectiveness of students in operational occupations, and had a reliability of 0.97. The information obtained in this research was analyzed to find percentages, means, standard deviations, and Pearson's Product Moment Correlation Coefficient. It was found that: 1) the overall basic competency of students and effectiveness of students in operational occupations was 3.75, at a high level; 2) the effectiveness of students in operational occupations was 3.56, at a high level; and 3) the overall relationship between

basic competency and effectiveness of students in operational occupations was at a high level, with significance of .000.

Keywords - Relationship, Competency, Effectiveness, Operational Occupations, Interior Architecture

I. INTRODUCTION

The occupational apprenticeship of students of the interior architecture curriculum, university of Thailand, often indicates the achievements and abilities of those students, and informs the department whether their skills meet the needs of the market. The skills that the students have will contribute to their successes when they are apprenticed in the workplace.

Practicing careers can give students the readiness to commence real ones [1]. Practicing a career in this way can identify whether each student has the actual knowledge and capacity to work or not [2]. It can provide essential information that can be used to improve learning management in order to know the student's future [3] it can improve

learning management to be in harmony with the requirements of users, in order to change our society [4].

Accordingly, after graduation, these students should be ready to develop their nation's economics in harmony with its other requirements, especially in response to the changing environment of the ASEAN community. To this end, the researcher has studied the relationships between the basic capacity of the students and the effectiveness of practicing careers of students in the field of architecture and design in faculties in Thailand; from this information, it is hoped that planning for the internal architecture curriculum field in the future can be carried out more effectively.

II. RESEARCH OBJECTIVES

1) To study the basic competency of students of the curriculum of interior architecture, university of Thailand.

2) To study the effectiveness of those students in operational occupations.

3) To study and analyze the relationships between basic competency and the effectiveness of students in operational occupations.

III. RESEARCH FRAMEWORK

The conceptual framework used in this research was that of the regulations set down by the Council of Architects when determining course content and course knowledge testing in order to obtain a license as a professional architect; a level associate architect in the field of Architecture and Decorative Arts [5]:

1) Theory, Arts Design Operation, and Applied Aesthetics.

2) Ergonomics.

3) Thai Architecture, History, Arts, Interior Architecture and Decorative Arts.

4) Presentation, Drawing, and Interior Architecture and Decorative Arts Design.

5) Speech, Using Media and Equipment, and Using Interior Architecture Language and Decorative Arts.

A. Research Hypothesis

We hypothesize that there is a correlation between the basic competency of students of the curriculum of interior architecture, university of Thailand, and the effectiveness of those students in operational occupations.

B. Population

The population used was of students of the interior architecture curriculum, university of Thailand, totaling 215 people, and the trainers of operational occupations in entrepreneurships, totaling 80 people. Therefore, the total group sampling comprised 295 people.

C. Sampling

The sample was divided into two groups:

The first comprised a group of students of the curriculum of interior architecture, totaling 215 people from 8 universities, obtained by stratified random sampling.

The second comprised trainers of operational occupations in entrepreneurships, totaling 80 people, obtained by quota sampling.

D. Research Tools

The tool used in this research comprised 2 questionnaires, as per the following:

1) A questionnaire on basic competency of students of the interior architecture curriculum, university of Thailand, classified into 2 parts:

The first part was a general information questionnaire with a checklist.

The second part was a basic competency questionnaire, with a rating scale as per Likert with 5 level standards as follows:

Level 5 means the highest competency.

Level 4 means high competency.

Level 3 means moderate competency.

Level 2 means little competency.

Level 1 means the least competency.

2) A questionnaire on the effectiveness in operational occupations of students of the interior architecture curriculum, university of Thailand, completed by trainers of operational occupations in entrepreneurships, classified into 2 parts:

The first part was a general information questionnaire about the respondents and their establishments, with a checklist.

The second part was a questionnaire on students' effectiveness in operational occupations, with a rating scale as per Likert [6] with 5 standard levels as follows:

- Level 5 means the highest effectiveness.
- Level 4 means high effectiveness.
- Level 3 means moderate effectiveness.
- Level 2 means little effectiveness.
- Level 1 means the least effectiveness.

E. Data Collecting

The researcher collected data from August to September 2017, using the group sampled, and received a total of 295 returned questionnaires, a return of 100 %.

F. Data Analysis

The data found through this research was analyzed to find percentages, means, and standard deviations; the relationship between basic competency and effectiveness of students in operational occupations was analyzed with correlation analysis.

The standard used to find the, means, basic competency, and effectiveness of students in operational occupations was as per the following [1]:

Means of 4.21–5.00 were of the highest competency or/and effectiveness.

Means of 3.41–4.20 were of high competency or/and effectiveness.

Means of 2.61–3.40 were of moderate competency or/and effectiveness.

Means of 1.81–2.60 had little competency or/and effectiveness.

Means of 1.00–1.80 had the least competency or/and effectiveness.

IV. RESULTS

**TABLE I
NUMBERS AND PERCENTAGES
OF BASIC INFORMATION OF FIFTH YEAR
SENIOR STUDENTS IN FIRST SEMESTER
OF INTERIOR ARCHITECTURE CURRICULUM,
FACULTY OF ARCHITECTURE, UNIVERSITY
OF THAILAND (N = 215).**

| Items | n | % |
|---|-----|------|
| 1. Gender | | |
| - Male | 85 | 39.5 |
| - Female | 130 | 60.5 |
| 2. Age | | |
| - 21 years old | 20 | 9.0 |
| - 22 years old | 60 | 28.0 |
| - 23 years old | 125 | 58.0 |
| - More than 23 years old | 10 | 5.0 |
| 3. Education background | | |
| - Vocational Degree | 45 | 21.0 |
| - High School Degree | 170 | 79.0 |
| 4. Position | | |
| - Designer Event | 5 | 2.0 |
| - Interior Design | 60 | 28.0 |
| - Manager | 15 | 7.0 |
| - 3D Event Designer | 35 | 16.0 |
| - Executive Assistant and Administration | 10 | 5.0 |
| - Quantity Surveyor | 10 | 5.0 |
| - 3D Illustrator & Animation/ Perspective | 40 | 19.0 |
| - Visual Merchandiser | 20 | 9.0 |
| - Exhibitor | 20 | 9.0 |

According to Table I, most of the fifth year senior students in the first semester of the interior architecture curriculum, faculty of architecture, university of Thailand, were females, at 60.5 %, and on average 23 years old, at 58.0 %. Moreover, most of them were high school graduates, most were in a position of interior design, at 28.0 %.

TABLE II
NUMBERS AND PERCENTAGES OF BASIC
INFORMATION OF THE TRAINERS
OF OPERATIONAL OCCUPATIONS
IN ENTREPRENEURSHIPS (N=80).

| Items | n | % |
|---|----|------|
| 1. Gender | | |
| - Male | 60 | 75.0 |
| - Female | 20 | 25.0 |
| 2. Age | | |
| - 20-25 years old | 5 | 6.0 |
| - 26-30 years old | 15 | 19.0 |
| - 31-35 years old | 15 | 19.0 |
| - 36-40 years old | 30 | 38.0 |
| - 41-45 years old | 10 | 12.0 |
| - More than 46 years old | 5 | 6.0 |
| 3. Educational background | | |
| - Below Bachelor Degree | 10 | 12.0 |
| - Bachelor Degree | 50 | 63.0 |
| - Master Degree | 15 | 19.0 |
| - Doctoral Degree | 5 | 6.0 |
| 4. Age of Establishment | | |
| - 1-5 years | 10 | 12.0 |
| - 6-10 years | 15 | 19.0 |
| - 11-15 years | 30 | 38.0 |
| - 16-20 years | 20 | 25.0 |
| - More than 20 years | 5 | 6.0 |
| 5. Size of Establishment | | |
| - Large Size | 15 | 19.0 |
| - Medium Size | 35 | 44.0 |
| - Small Size | 30 | 38.0 |
| 6. Type of Establishment | | |
| - Architecture | 10 | 12.0 |
| - Senior Interior Designer | 10 | 12.0 |
| - Interior Design | 55 | 69.0 |
| - 3D Illustrator & Animation/ Perspective | 10 | 12.0 |
| - Executive Assistant and Administration | 5 | 6.0 |
| 7. Nationality of the owner entrepreneur | | |
| - Thai Nationality | 65 | 81.0 |
| - Foreign Nationality | 5 | 6.0 |
| - Thai and Foreign Nationality | 10 | 12.0 |
| 8. Position | | |
| - Director Manager | 10 | 12.0 |
| - Interior Design | 40 | 50.0 |
| - Senior Project Architect | 5 | 6.0 |
| - Project Manager – Property Fund Tesco Lotus | 5 | 6.0 |
| - Design Director | 20 | 25.0 |

According to Table II, most of the trainers of operational occupations in the establishments surveyed were males, at 75.0 % and on average 36-40 years old, at 38.0 %. Moreover, most of them were bachelor degree graduates, with an average experience of between 11-15 years, and most of the establishments were of a medium size, at 44.0 %. Most owners of the establishments were Thai, at 81.0 %, and the

position of most trainers of operational occupations was of interior design, at 5 %.

TABLE III
MEANS, STANDARD DEVIATIONS,
AND BASIC COMPETENCY LEVELS
OF STUDENTS OF INTERIOR ARCHITECTURE
CURRICULUM, FACULTY OF ARCHITECTURE,
UNIVERSITY OF THAILAND, IN
OPERATIONAL OCCUPATIONS.

| Assessment Lists | Students (n=215) | | Level |
|---|---------------------|------------|-------------|
| | \bar{x} | S.D. | |
| 1. Theory, Arts Design Operation and Applied of Aesthetic | 3.82 | .98 | High |
| 2. Ergonomics | 3.87 | .77 | High |
| 3. Thai Architecture, History, Arts, Interior Architecture, and Decorative Arts | 3.73 | .91 | High |
| 4. Presentation, Drawing and Interior Architecture and Decorative Arts Design | 3.77 | 1.00 | High |
| 5. Speech, Using Medias and Equipment and Using Interior Architecture Language and Decorative Arts | 3.56 | 1.02 | High |
| Totals Average | 3.75 | .79 | High |

According to Table III, the overall basic competency of the fifth year senior students in the first semester of the interior architecture curriculum, university of Thailand, in operational occupations was at a high level, with an average score of 3.75. When each part was considered respectively, it was found that the field of Ergonomics was at a high level, with an average of 3.87; the field of Theory, Arts Design Operation, and Applied Aesthetics was at a high level, with an average of 3.82; the field of Presentation, Drawing, and Interior Architecture and Decorative Arts Design was at a high level, with an average of 3.77; the field of Thai Architecture, History, Arts, Interior Architecture, and Decorative Arts was at a high level, with an average of 3.73, and the field of Speech, Using Media and Equipment, and Using Interior Architecture Language and Decorative Arts was at a high level, with an average of 3.56.

TABLE IV
MEANS, STANDARD DEVIATIONS,
AND EFFECTIVENESS LEVELS OF STUDENTS
OF INTERNAL ARCHITECTURE
CURRICULUM, FACULTY OF
ARCHITECTURE, UNIVERSITY OF THAIL
AND, IN OPERATIONAL OCCUPATIONS.

| Assessment Lists | Students (n =30) | | Level |
|--|---------------------|------------|-------------|
| | \bar{x} | S.D. | |
| 1. Theory, Arts Design Operation and Applied of Aesthetic | 3.63 | 1.07 | High |
| 2. Ergonomics | 3.45 | 1.96 | High |
| 3. Thai Architecture, History, Arts, Interior Architecture, and Decorative Arts | 3.53 | 1.11 | High |
| 4. Presentation, Drawing and Interior Architecture and Decorative Arts Design | 3.78 | .98 | High |
| 5. Speech, Using Medias and Equipment and Using Interior Architecture Language and Decorative Arts | 3.40 | 1.13 | High |
| Totals Average | 3.56 | .90 | High |

According to Table IV, the overall basic competency of the fifth year senior students in the first semester of the interior architecture curriculum, university of Thailand, in operational occupations was at a high level, with an average score of 3.56. When each part was considered respectively, it was found that the field of Presentation, Drawing, and Interior Architecture and Decorative Arts Design was at a high level, with an average of 3.78; the field of Theory, Arts Design Operation, and Applied Aesthetics was at a high level, with an average of 3.63; the field of Thai Architecture, History, Arts, Interior Architecture, and Decorative Arts was at a high level, with an average of 3.53; the field of Ergonomics was at a high level, with an average of 3.45, and the field of Speech, Using Media and Equipment, and Using Interior Architecture Language and Decorative Arts was at a high level, with an average of 3.40.

TABLE V
RESULTS OF ANALYZING RELATIONSHIPS
BETWEEN BASIC COMPETENCY
AND EFFECTIVENESS OF STUDENTS
IN INTERNAL ARCHITECTURE CURRICULUM,
ARCHITECTURE AND DESIGN FIELD,
FACULTY OF ARCHITECTURE, UNIVERSITY
OF THAILAND, IN OPERATIONAL
OCCUPATIONS.

| Relationship between Basic Competency and Effectiveness of Operational Occupation | Correlation Coefficient |
|--|-------------------------|
| 1. Theory, Arts Design Operation and Applied of Aesthetic | .641** |
| 2. Ergonomics | .455** |
| 3. Thai Architecture, History, Arts, Interior Architecture, and Decorative Arts | .584** |
| 4. Presentation, Drawing and Interior Architecture and Decorative Arts Design | .334** |
| 5. Speech, Using Medias and Equipment and Using Interior Architecture Language and Decorative Arts | .653** |
| Totals Average | .798** |

** Sig.<.01

According to the analysis of the relationships between basic competency and the effectiveness of students of the interior architecture curriculum, architecture and design field, faculty of architecture, university of Thailand, in operational occupations, there was a high level of overall relationship, with significance of .00. When each part was considered, it was found that there was a high level relationship in all fields, with significance of 0.0: the ordered correlation coefficients (r_{xy}) were .798, .653, .641, .584, .455, and .334 for Speech, Using Media and Equipment, and Using Interior Architecture Language and Decorative Arts; Theory, Arts Design Operation, and Applied Aesthetics; Thai Architecture, History, Arts, Interior Architecture, and Decorative Arts; Ergonomics, and Presentation, Drawing, and Interior Architecture and Decorative Arts Design, respectively.

V. CONCLUSION

1) The fifth year senior students in the first semester of the interior architecture curriculum, university of Thailand, had high operational occupation competency. When each part was considered, it was found that the

highest competency was for Ergonomics; followed by Theory, Arts Design Operation, and Applied Aesthetics; Presentation, Drawing, and Interior Architecture and Decorative Arts Design, and Thai Architecture, History, Arts, Interior Architecture, and Decorative Arts, respectively. The lowest competency was for Speech, Using Media and Equipment, and Using Interior Architecture Language and Decorative Arts.

2) The fifth year senior students in the first semester of the interior architecture curriculum university of Thailand, had high operational occupation effectiveness. When each part was considered, it was found that the most effective was for Presentation, Drawing, and Interior Architecture and Decorative Arts Design; followed by Theory, Arts Design Operation, and Applied Aesthetics; Thai Architecture, History, Arts, Interior Architecture, and Decorative Arts, and Ergonomics. The lowest competency was for Presentation, Drawing, and Interior Architecture, and Decorative Arts Design.

3) There was a high positive relationship between the basic competency and the effectiveness in operational occupations for the fifth year senior students in the first semester of the interior architecture curriculum, faculty of architecture, university of Thailand, with significance of .01. When each part was considered, it was found that every field of competency had a positive relationship with effectiveness in operational occupation, with significance of .01.

VI. DISCUSSION

The results of this research show the following conclusions:

1) The study of the relationships between the basic competency and the effectiveness of students of the interior architecture curriculum, faculty of architecture, university of Thailand, in operational occupations showed an overall high level. Any deficits may be due to students' lack of skill in operational occupations. The curriculum may not be in

accordance with the competencies required for operational occupations in organizations, and the time given for the duration of the apprenticeship might not be enough, to be effective for the adaptation of students to work in real organizations, according to Chuaratanaphong, C.T. [2] the operations of professional practice require real knowledge and ability from students for information operation, and learning and teaching should be modified.

Thus, the competencies needed for operational occupations should be studied, in order to develop a conceptual framework to modify the curriculum for interior architecture design according to the needs of organizations in the future.

2) The effectiveness of the professional practice of the students of interior architecture design, faculty of architecture, university of Thailand, was at an overall high level. The researchers are of the view that there should be the establishment of a focus on practical skills and punctuality. There should be a variety in terms of content. The students lack experience in the actual work and the expertise to focus on the cognitive aspects of learning. Proficiency cannot be achieved with a focus on only one side; there should be a study of the needs of enterprises, so that students can be provided with the skills to work. Expertise for students interested in a career should be promoted in the future.

3) The results of the relationships between basic competency and effectiveness in operational occupations of the Interior Architecture curriculum, faculty of architecture, university of Thailand, showed an overall positive relationship at a high level. This indicates that students and the apprenticing organizations focus on the same categories. This is consistent with the research conducted by Guerin, D., & Martin, C., [7], which explained how interior architecture professional competencies should include: (1) Theory Arts Design and Applied Aesthetics, (2) Ergonomics, (3) Thai Architecture, History, Arts, Interior Architecture and Decorative Arts, (4) Presentation in Interior Design and Architecture, and (5)

Speech, Using Medias and Equipment. When each aspect is considered, the highest level of interdependence is in Speech, Using Medias and Equipment and Using Interior Architecture Language and Decorative Arts, and Theory, Arts Design and Applied Aesthetics. This is because of communication, critical listening perception, presentation design sketching, writing and speaking methods, and techniques of communication design use a universal language. These are at the heart of conceptual design; using a variety of holistic and universal techniques by applying the theory of design in order to apply beauty to that design. This research is also in accordance with what was suggested by both Guerin, D., & Martin, C., [7], Watson, S.A., & Thompson, C. [8] and Jason Meneely, M.S. [9]. The results of these two studies showed that a relatively low correlation was found between design and interior design, because technology is used more and more.

VII. RECOMMENDATION

1) The performance and effectiveness of professional practice within the field of Interior Architecture and Decorative Arts should be studied, covering all institutions in order to obtain comprehensive information.

2) Future trends should be studied in order to use them as guidelines to improve the curriculum, to allow involvement in the ASEAN community.

REFERENCES

(Arranged in the order of citation in the same fashion as the case of Footnotes.)

- [1] Suwanchot, C.S. (1999). "Curriculum and Development". Auksornthai.
- [2] Chuaratanaphong, J.T. (1996). "Development of Curriculum: Concept and Operational". Aleanpress.
- [3] Krudthong, K.D. (1978). "Future Research, Research for Development". Vol. 3, pp. 12-15.
- [4] Glenn, J.C. (1994). "Futures research Methodology, Participatory Methods". AC/UNU Millennium Project.

- [5] Architect Council of Thailand. (2011). "Rule of Committee Architect Council of Specify of Subject and Curriculum Content for Testing to Certificate the Professional Architectural Control Architecture Level Associate Architect Interior Design and Decorative Arts". 2010: Architect Council of Thailand.
- [6] Likert, R.A. (1932). "Technique for the Measurement of Attitudes". Archives of Psychology, Vol. 22(1932-33), pp. 5-55.
- [7] Guerin, D. and Martin, C. (2010). "The interior design profession's body of knowledge and its relationship to people's health, safety, and welfare". College of Design University of Minnesota.
- [8] Watson, S.A. and Thompson, C. (2001). "Learning Styles of Interior Design Students as Assessed by the Gregor Style Delineator". Journal of Interior Design, Vol. 27(1), pp. 12-19.
- [9] Jason Meneely, M.S. (2010). "Educating Adaptable Minds: How Diversified Are the Thinking Preferences of Interior Design Students?". Journal of Interior Design, Vol. 35(3), pp. 21-32.