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RESEARCH ARTICLE

Best practices in managing, supervising, and assessing architectural graduation projects: A quantitative study

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Abstract
Graduation project courses refer to the culmination of the learning experiences of higher education. These courses consolidate the disciplinary knowledge gained during architectural education while they integrate most of the learning outcomes of a program, which are intended to prepare students for their transition to the profession of architecture. The educational methods of these courses require constant attention, regular review, and continuous development to remain consistent with the changing standards of the profession given the significance of these courses. The problem lies in the diversity and controversy of these methods, thereby implying inconsistency in the best practices. In this study, several questions are raised in terms of the nature of these courses, enrollment criteria, topic selection, learning experience, and assessment methods. This study aims to investigate the best practices of managing, supervising, and assessing architectural graduation projects to provide guidelines for establishing and/or developing these courses. An analytical deductive methodology is adopted. This methodology is supported by a survey of a sample of 105 worldwide academic architects and is structured into four sections, namely, the analysis of the components of graduation projects, the survey and its procedures, the quantitative findings of the survey, and a discussion of the issues and results. This study draws conclusions to its research questions, thereby extending its influence on the quality of architectural programs and the benefits for individuals who are concerned with their development.

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1. Introduction

Architectural education is a special type of education whose importance lies in its role in enhancing extensive knowledge, skills, and abilities to enable students to achieve an appropriate competency level. Graduation projects are vital courses that represent the culmination of architectural education and are the final qualification of graduates to merge into professional practice. The importance of this study lies in its broad impact on developing design courses in general and graduation projects in particular in addition to its helpfulness for program coordinators and course instructors in directing these courses.

A research related to the present study is part of a research project to improve the practices of graduation projects in the architectural education. The first part is analytical and induces the common practices of graduation projects by reviewing a number of graduation courses worldwide (Ghonim and Eweda, 2017). This work includes the second part of this research project; it aims to investigate the best practices for managing, supervising, and assessing graduation projects to provide guidelines for establishing and/or developing these courses and adopts a quantitative research by conducting a survey among a group of academic architects worldwide. The third part is qualitative and intends to explore the perspectives of instructors on the pedagogy of graduation projects to highlight and draw attention to related uncommon and emergent practices.

The problems of this study are the diversity and controversy of the common practices of these courses, which generally imply disagreement, as confirmed by a previous study (Ghonim and Eweda, 2017). The remainder of this paper is organized as follows. Section 2 analyzes the components of graduation projects. Section 3 presents the survey and its procedures. Section 4 discusses the quantitative findings of the survey. Section 5 explains the findings and proposes guidelines. Section 6 provides the conclusions that were drawn from this study.

2. Perspective of graduation projects in architectural education

This section presents an overview of graduation projects of architectural education, clarifies their notion, analyzes their domains, and reviews commonly reported practices for managing, supervising, and assessing these graduation projects.

2.1. Notion of graduation projects

Graduation projects are multifaceted assignments that serve as culminating academic and intellectual experiences for students, typically at the end of an academic program (Jung et al., 2016). These projects might represent the final stage of an undergraduate or a graduate program. In architectural education, these projects are vital components that govern the completion of many programs because they demonstrate the abilities of students to design and prepare realistic comprehensive architectural projects.

Moreover, graduation projects involve applying and integrating most of the learning outcomes of the educational programs; consequently, they provide settings for measuring and judging the successful achievement of the goals and learning outcomes of these programs (Wagenaar, 1993). A review of the literature included in this study determined numerous synonyms for the term “graduation projects,” such as “culminating projects,” “capstone projects,” “senior projects,” and “terminal projects.” This study failed to find a unified basis for using these terms because they are used interchangeably at times, and their variations are based on the common term in a region, discipline, or university.

2.2. Domains of graduation projects

A clear analysis must be conducted to study the topic of graduation projects. A recent study has investigated the components of graduation projects and the system of managing, teaching, and assessing the graduation projects in architectural education and has categorized this system into six domains that will be used to handle the problem of this study (Ghonim and Eweda, 2017).

The first domain includes the identity, nature, and structure of graduation project courses, which indicate the number of courses, their credits, and their nature, that is, research-based and/or project-based. The second domain presents the criteria of enrollment, which restrict studying these courses on the basis of a set of qualifications or requirements, such as obtaining an approved proposal and/or completing prerequisites. The third domain is the topic determination, which focuses on the methods, standards, and responsibilities of selecting the topics of graduation projects. The fourth domain is supervision, which investigates the methods of assigning supervisors as single supervisors, groups of supervisors, or interdisciplinary committees. The fifth domain is the issue of learning and teaching strategies, which include the learning strategies and deliverables of the courses and identify whether students work individually or in teams. The sixth domain focuses on the assessment methods and criteria of evaluation.

2.3. Managing graduation projects

The process of managing graduation projects starts with formulating programs and curricula. An issue is raised during this process; that is, the work of students in graduation projects must be classified as either a full-time or a part-time job. Academic experience and investigation have implied that many programs are keen on maintaining an adequate space for their graduation courses. However, the limited time available for architectural curricula compared with the scope of required courses typically demands that the students enroll other courses that adjoin graduation courses; in this case, these students work on graduation projects as their part-time job. Therefore, considerable attention is required to weigh the credits of graduation courses and accommodate them in architectural curricula to reflect their importance. Dutson et al. (1997) reported that the workload required in graduation courses is frequently not represented by the credits assigned to these courses; this condition is a reason for many faculty members to be disinterested in them.

The majority of architectural programs offer two courses for a graduation project; one course focuses on researching the project problem, and the other course focuses on designing the project; however, few programs still offer such a project as a continuous course throughout the year (Ghonim and Eweda, 2017). Therefore, further investigation on this issue is still required to identify the best practice.

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