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The Role of Capstone Projects in Preparing Students for the Job Market: Learning, Problem-Solving, and Challenges

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Abstract

Capstone projects are introduced in universities for students' smooth transition from academic life to professional careers by providing problem-solving and experiential learning opportunities to develop professional skills through social and cognitive interactions. The case in this investigation is a renowned business school that pioneered in conducting the capstone project. This study aimed to explore how capstone projects prepared students for the job market, their learning, and challenges faced in turning students into better and more skillful human resources. A qualitative, explorative case study research design was selected for this study with a purposive sampling technique. The sample consisted of three senior faculty members from Finance, Marketing, and Human Resource Management departments, who had experience supervising capstone projects. Semi-structured interviews were conducted along with document analysis of a case study on procedures and assessment. The results showed that, despite many challenges, the faculty were committed to equipping students with necessary professional skills. Another implication that emerged was the need for institutions to provide ongoing support and training for faculty to sustain the quality and relevance of the capstone projects so that academia and industry integration can strengthen workforce readiness in universities.

Keywords: Capstone projects, experiential learning, human resource, problem-solving skills

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INTRODUCTION

With an ever-growing recognition in most universities around the world, capstone projects are an approach to offer students experience and application of skills learned at tertiary levels. The application of technology, critical analysis, teamwork, and effective oral and written communication are among the professional skills that students are expected to develop before entering the job market, and capstone projects provide opportunities for students to integrate and demonstrate these competencies through authentic, real-world learning experiences (Gafni et al., 2023). Capstone projects are widespread in developed countries and have increased favor in developing countries. For example, in the United States ABET (Accreditation Board for Engineering and Technology) emphasizes hands-on practical design experiences. In response to ABET requirements and a changing workforce, universities have added a wide variety of learning standards to the college curricula, and a capstone program is one good sample to be in touch with an open-ended, realistic, and creative problem-solving world experience (Ha, 2017).

Dunlap (2005) emphasizes on any project having the potential to teach problem-solving given that workplaces are subject to frequent change and innovation; hence, a professional needs to be highly skilled problem solvers. This is especially true for people working in fields such as business, medicine, law, engineering, and software engineering and computer science. To prepare people for these fields and more, educators need to create such a learning environment that engages students in practical ways to help them develop content expertise and problem-solving skills, collaboration, and lifelong learning skills (Grabinger et al, 1997). A problem-centered approach as in the Experiential Learning Theory, based on and consistent with the constructivist pedagogical assumption that learning is a product of social and cognitive interactions, can be used to best prepare students as workforce members. Dunlap (2005) designed many such capstone courses, which were based on Problem-based Learning or PBL. With all the positive and promising outcomes, capstone projects can be challenging, especially, in developing countries like Pakistan.

Like many other institutions of the world, it has been a standard practice of Pakistani universities to incorporate a project-

based course in the last year of undergraduate study. There are approximately 100 universities in Pakistan, offering undergraduate educational programs in the areas of computer science, software engineering and information technology, business studies, etc. Although HEC has developed a general comprehensive curriculum, there are still variances in the structure and management of the courses in general and project-based courses in particular across universities (Ahmad et al., 2011). Variations in the management and assessment of project-based courses across universities may hinder HEC's efforts to ensure that graduates achieve a consistent level of skills and knowledge (Ahmad et al., 2011). As a project-based learning approach, capstone projects are not immune to these challenges. Hence, the study at hand will add to the discourse of learning and challenges in running capstone projects from the faculty perspective.

Problem Statement

It is noticed that there is a significant gap in scholarly research concerning the challenges encountered by faculty members in this pioneering university during the implementation of capstone projects. In particular, little to no documented literature exists that comprehensively explores the unique struggles faced by the faculty of this institution at the forefront of integrating capstone experiences into undergraduate education—as they navigated the academic, administrative, and pedagogical complexities of this transformation.

Purpose

This study intends to elicit major stakeholders' perceptions of capstone projects to bridge the gaps between education and industry. This research further explores the challenges faculty face while designing and executing these projects. In light of the study's purpose, this study aims to answer the following questions:

Research Question

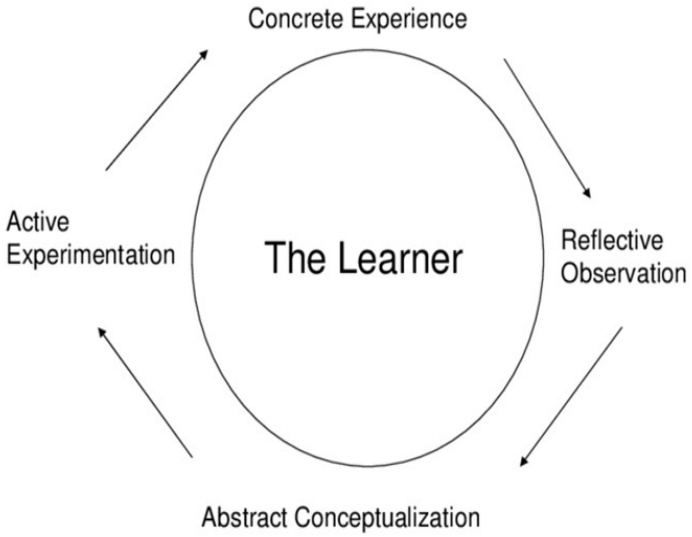
1. How do capstone projects help students prepare for the job market?
2. What challenges do faculty generally face during capstone projects?

Literature Review

Capstone projects are being introduced at the tertiary level for students' smooth transition from student to professional life. Experiencing work life as a student has found its roots in the modern theory of experiential learning, which is a groundbreaking work of Kolb and Fry established in the 1970s. The experiential learning theory heavily focuses on learning by doing and through reflection on doing; and is a philosophy that is different from the traditional pedagogy - prevalent in developing countries - that fosters rote learning, in which the learner plays a comparatively passive role (Kolb & Kolb, 2005). Experiential learning pedagogy can play a noteworthy role in tertiary education since university education is the final stage to prepare students for professional life by providing them with a platform for hands-on, practical and real-life skills. Kolb's Experiential Learning Theory is a well-known model in education, which is a process to create new knowledge via experiencing and giving rise to grasping and innovating knowledge (Kolb & Kolb, 2005). Figure 1 illustrates Kolb's Experiential Learning Model.

Figure 1

Kolb's Experiential Learning Model



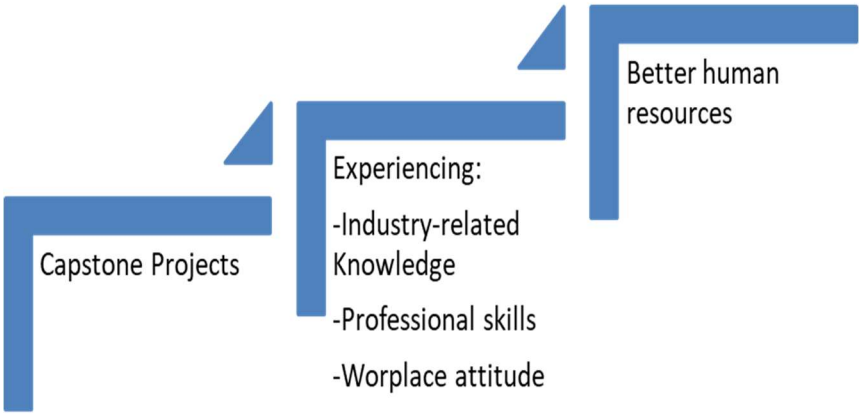
Internships, articleship in chartered accountancy, the capstone, and other such practices at universities are an important part of experiential learning. Capstone projects are based on both experiential and Problem-based learning, involving thinking strategies and domain knowledge (Savery & Duffy, 1995). Lewis and Williams (1994) suggest that experiential learning can be implemented as simulations, case studies and group work projects at both the lower and the higher level of education. At the tertiary level, this should allow students to apply their theoretical and conceptual knowledge into the professional skills that they will need later in their careers as members of a professional workforce (Raja, 2018). Chang, Lee, Ng, and Moon (2003) noted that experiential learning helps develop team building, decision-making, planning, and other managerial skills. Further, Whetten and Cameron (2002) concluded that "exposure to a traditional, cognitive-based curriculum without exposure to management skills development does not correlate with improvements in emotional intelligence, management skills, or career success" (p. 11). Capstone projects are designed to integrate these competencies through the application of disciplinary knowledge to authentic, complex problems, thereby promoting professional and employability skills such as communication, teamwork, critical thinking, and problem-solving (Durel, 1993; Hayward & Blackmer, 2007).

Master of Business Management (MBA) students usually receive more academic knowledge from the business perspective while they should be having more practical experience according to Mintzberg (2004). To be successful, essential skills can only be learned from personal experience and before a student graduates and makes moves to professional life (Mintzberg, 2004). In the context of most developing countries (so in Pakistan), the prevalent teaching style at the tertiary level is conventional teaching and training. This style generally focuses on the knowledge transfer without necessary skills, especially problem-solving skills. Capstone projects can be a powerful tool to address an individual's development of potential, which is commonly a much-neglected approach to teaching (Mollaei & Rahnama, 2012).

The other side of the coin is that the implementation of experiential learning may encounter challenges in higher education

institutions. The term 'experience' means contact with the real world or having a real-world-like interaction. While some forms of experiential learning projects may be real-world-like experience, others may fail to create such a situation. For instance, business internships may involve actual work experience and serve the ideology of experiential learning theory, but even this set-up will fall short of giving students actual decision-making authority. Nonetheless, the chances of internships and other such real-life settings might not be a possibility in many disciplines too. In other cases, this might be very difficult to create simulated environments equivalent to the real situations which students will face in their professional life (Gentry, 1990). Figure 2 depicts students upgrading in terms of knowledge, skills and attitude for the transition from being students to professionals.

Figure 2
Student Transition



Methodology

This research aimed to investigate how the capstone program can help students with their preparation for job market. Hence, it was important to understand the program comprehensively i.e., considering its procedures, eliciting the experience of faculty, and

accounting for learning and challenges of such an undertaking. The following methods were employed for this purpose.

Research Design

To fulfill the above-mentioned purpose, the qualitative case study research design was selected. A qualitative method allows the researcher to have a detailed account of recording not only the written or spoken words of the informant but also their behavior. Hence, the data formed by this inquiry can help researchers explore what meaning people have for the topic at hand (Taylor et al., 2015). The qualitative method is also used to understand people's beliefs, experiences, attitudes, and interactions; in other words, a qualitative approach can help an investigator view the data more extensively, according to Corner (1991).

The case study research design was used as this research required the first-hand inquiry from a real-life context (Gerring, 2004). Another reason for this strategy was that a case study is an in-depth description and analysis of a bounded system. Yin (2014) explains this, "A case study is an empirical inquiry that investigates a contemporary phenomenon (the 'case') within its real-life context." (p. 16). This is a detailed account of a case about one individual, many people, a situation, a happening, or an activity. The case can be single or collective, multi-sited or within-site, focused on a case or an issue with room for purposeful sampling (Cresswell, 2016). Furthermore, this was an exploratory case study as the study meant to obtain data about the capstone from the viewpoints of the faculty directly involved with these projects.

Exploratory paradigm was used because, in Stebbins' (2001) words, social science research should be exploratory in cases where a researcher wishes to understand or clarify an already existing case that might lead to further exploration, as was also the case in the research at hand. Therefore, this study used an exploratory case study in the qualitative paradigm.

Sample

The setting for this research was a renowned business school in Karachi that was among the first institutions to introduce and implement capstone projects. The institute had a capstone office to

centralize and disseminate the projects to different business departments. This study used a purposive sampling technique to select faculty members because this technique allowed the researcher to make a deliberate choice of participants with similar characteristics (Etikan et al., 2016). The sample consisted of three senior faculty members from the Finance, Marketing, and Human Resource Management departments, who were supervising the capstone projects. All participants had extensive experience supervising capstone projects and were directly involved in project administration and assessment. Participant experience ranged from 8 to 10 years in higher education and 5 to 7 years supervising capstone projects. Figure 3 is the data collection matrix that describes the flow of procedure for the methodology of this study (Cresswell, 2016).

Figure 3

The Matrix of Sampling and Methodology Procedure



Data Collection Instruments

The primary data collection method was a semi-structured interview using an interview protocol consisting of seven open-ended questions designed to explore faculty members' experiences with capstone project supervision (see Appendix A). A semi-structured interview approach was selected because it allowed participants to describe their experiences, feelings, and observations

in depth while also enabling the researcher to use follow-up probes for clarification and elaboration (Fylan, 2005). Participants were recruited purposively, informed about the study, and provided consent prior to participation. Interviews were scheduled at mutually convenient times, audio-recorded with participants' permission, and conducted using the interview protocol. Participant anonymity and confidentiality were maintained throughout the study. In addition, document analysis was conducted on a case study authored by the head of capstone projects to gain a deeper understanding of project procedures and assessment criteria. The Head of Capstone Projects was responsible for initiating and overseeing the capstone project program at the institution.

Data Analysis

Semi-structured interviews were conducted and audio-recorded with participants' permission. The interview data were transcribed verbatim to ensure an accurate representation of participants' responses. The transcripts were then coded and organized into categories. Following Saldana's (2013) coding procedures, related categories were synthesized into themes that addressed the research questions and informed the discussion, recommendations, and conclusions. Thematic analysis was employed because it provides a systematic approach to identifying and interpreting patterns within qualitative data. Given the study's focus on exploring faculty members' experiences and perceptions of capstone project supervision, thematic analysis facilitated the identification of recurring ideas and shared perspectives across participants' accounts.

Five types of coding were used to analyze the data namely: simultaneous coding, descriptive coding, evaluation coding, verbal exchange coding and narrative coding using Saldana coding manual (2013).

Simultaneous coding. Simultaneous coding was used because there were certain overlapped codes for both faculty and students' challenges, for example, time investment. Further, certain data content suggested multiple meanings that necessitated more than

one code to describe a single datum. The interviews were not linear in nature, but had a complex interaction which is characteristic of this type of coding.

Descriptive coding. Descriptive coding assigned basic labels to data to provide an inventory of topics. It is an essential groundwork for a qualitative inquiry and thus was used in the inquiry at hand.
Evaluation coding. Evaluation coding was done especially for document analysis to focus on the merit and worth of programs and policies related to capstone projects.
Narrative coding. Narrative coding was important in interviews. All interviewees shared detailed examples of conducting capstone projects and described participants' experiences and actions. They also explained how and why these challenges occurred.
Verbal exchange coding. Verbal exchange coding was used for analyzing conversation; it focused on reflection on social practices and interpretive meanings. These interviews included a range of traits: ranging from ordinary conversation to highly structured professional discussion, including personal narratives. This was significant in recording mannerisms and non-verbal communication of the interviewees.

Results

The research questions were taken as the guiding principles for the data collection from the faculty of the selected business school. Interviews with three faculty members, one each from the Marketing, Finance, and Human Resource Management departments were conducted to gather the data along with a document analysis of a case study. The data were analyzed using the Coding Manual by Saldana (2013); hence, three themes were generated, namely: (a) Managing Capstone Projects, (b) Learning for Job Market, and (c) Challenges of the Capstone.

Managing Capstone Projects

Bringing in projects from industries was the first step that the faculty shared. The faculty from all three departments under study consistently described this stage as a very tedious and difficult one, and sole responsibility of the respective departments, faculty, and

coordinators for that matter. The faculty further shared that the institute had a centralized system of the capstone department with coordinators who corresponded with the industry clients. One of the faculty members, nevertheless, told a different story saying finance projects were not easily entrusted to outsiders and difficult to come by. It was found that the faculty frequently used their networking to get the capstone projects.

To overcome the snags of finding a project, the faculty proposed diversity in types of projects; these could be development-based, financial profiling, cost-cutting, and management-based projects. As shared by a faculty member that most of the projects were consultancy –based in the said business school, whereas there could be other types too as happens in other countries, as an interviewee from HRM department noted,

"I have firsthand experience with Australia, where they do in multiple tracks. Student can choose a consultancy track, you can choose a research track capstone, that you can choose a simulation-based track for this is as well and within consultancy; they have multiple models."

It was found that capstone projects from an industry client required a very careful project allocation to students. The faculty very proudly shared the procedure that ensued to allocate projects and likened this procedure to holding an "open house". One of the faculties summarized the project allocation process as,

"We do a competency mapping, a competency profiling, we interview each student and we ask them what backgrounds they are, what areas of the study they're in, what skills, their area of working and based on that we introduce the maps, areas under working in projects, we recommend projects."

The results revealed that the business world could be rewarding if clients were satisfied with the deliverable they received from students after a capstone project. Interviewees described clients' satisfaction to be beneficial for all stakeholders involved in the management of these projects; the Marketing faculty expressed:

"The client chooses which solution they are most happy with when they are happy, then there's some kind of ah job placement, or certificate or cash reward whatsoever for students. As for the organization, the benefit is a lot of networks of satisfied clients and

a good reputation. The Institute also appreciates our (faculties') work. It may not be monetary, but really, appreciation is there."

Moreover, the document analysis highlighted that capstone projects are a test of students' learning and knowledge before, during and after the projects. Faculty members described in detail that this assessment system was ongoing and "holistic" for each student. The document analysis revealed that the system included rubrics for evaluation, peer assessment, presentation, evaluation, and program evaluation from the clients. All these are then turned into grades by a marking system in which grades are given by the faculty (60%), Head of the department (20%) and industry supervisor (20%).

Learning for Job Markets

Enormous learning benefits of capstone projects were found to be in play. First and foremost, students learned several different skill sets, which can be further divided into soft skills and life skills. All these skills were essential for problem-solving and life-long learning as the faculty brought it to the surface. The most emphasized skills of the faculty were communication skills.

The faculty described both oral skills and writing skills to be what students learned in business settings. The faculty confided that email, reports, quantitative report writing, etc., were the skills students learned along with improved oral skills for negotiation and persuasion. Students learned basic communication "etiquettes and interpersonal skills" as they learned how to speak in a professional workplace context with necessary measures when talking to hierarchy and colleagues as a part of office decorum.

Besides communication skills, there was a plethora of other soft skills associated with capstone projects that students gained, as the faculty suggested. Students learned by experiencing throughout the project: team-building skills, leadership skills, teamwork, meeting management, time management skills, analytical skills, planning and managing projects, and presentation skills, etc. The interviewees called it "holistic development" to help in the workplace; the marketing personnel mentioned it as,

"When I say holistic skill development; (it means) we are developing them into professionals".

The marketing faculty reaffirmed,

"Even if they are failing a capstone project, they are, definitely, a better and improved version of whatever they entered as in the capstone projects."

Students were reported to develop lifelong skills of which problem-solving in business & solution providing; work ethic, flexibility and adaptability; learning about the industry; IT skills, the sense of responsibility, professionalism, enhancement in personality and self-grooming were important. Other general benefits too such as students were able to apply their previously learned skills and knowledge in a much practical way, as one document analysis substantiated,

"Capstone projects aim to develop students' skills which include multi-disciplinary teamwork, application of theory, data interpretation, problem-solving, design, communication skills, and ethics."

Faculty members noted that everything cannot be taught in the classroom. And capstone projects help students with industry liaison, self-branding, the opportunity for jobs, chances of entrepreneurship in consultancy, chances of research in industry, networking, to name a few, that can only be learned in the capstone project setting; as the marketing faculty shared,

"Real-world complexities help them enhance their competencies and skills related to strategic thinking, communication, managing information and choosing among alternatives."

In short, all faculties positively described the capstone projects to equip students for the job market with the required skills, as one interviewee's final word on the matter was,

"A *capstone project does prepare them for the job market. There have been instances where the client has given the students on-spot jobs after the (final) presentation."*

Challenges of the Capstone

The study at hand queried the underlying difficulties and challenges of capstone projects too. The faculty narrated these challenges from both their own and students' perspectives. The first and foremost challenge the informant brought forth was that of getting the

capstone projects and then managing those for students, as in many cases clients were reluctant in trusting faculty and students with their business secrets. The Finance faculty member stated that finance capstone projects were the most confidential and difficult to obtain. However, the real challenge as per all three informants was students' poor skills and insufficient previous knowledge; reluctance and slacking (because of poor skills and knowledge) in carrying out their assigned tasks, and poor performance. One of the participants from the HRM department elaborated,

"We need students to know their areas, but a lot of students don't come from HR or marketing background. Students are coming from medicine background, engineering background and this is the only Time they study business; they want a field switch."

The marketing faculty called this problem,

"Quality of students (is a problem)."

Hence, the Finance faculty reverberated the same exclaiming,

"Poor writing skills!"

The participants confided that because of poor skills and lack of knowledge, they had to put in extra efforts and invest more time to bring students to the required level, which "drained" the faculty of their energies. They complained that clients gave them meeting appointments whenever it was convenient for them, which could be late at night too (online), as according to the marketing faculty,

"The problem with a capstone Project is you are living with it 24/ 7."

The faculty also listed students' reluctance and fear of new experiences as a challenge for them. Logistical arrangements were difficulty according to the Finance Department faculty.

The challenges that students faced were communicated too; for instance, students were noticed griping about projects beyond their competencies. Diversities in skills and knowledge within the team were also a hard pill for some students. Both students and faculty sometimes would find some clients' demands to be inappropriate on the ethical ground, and therefore, found it challenging to persuade clients to bend their demands for deliverables accordingly.

The respondents discussed the clients' behavior-related challenges to be very taxing, like: clients unexpectedly demanding for something that was not bargained for in the beginning; pushing around students for a deliverable; backing out from a project causing students left without a project in the middle of a semester; rejecting a deliverable despite students' hard work and time investment; showing reluctance in meetings and delaying promises of their inputs. Despite all the problems, the marketing department faculty optimistically pointed out all the challenges as learning points for students,

"Complaints are usually there and they feel the faculty is being strict but what faculties are trying to do is to get them ready for the very cutthroat corporate environment."

Discussion

This investigation aimed to study the capstone projects at a renowned business school and gain a deeper understanding of the procedures, imparted skills and underlying challenges. The industry-based consultancy capstone projects were offered at this university for MBA students as a steppingstone to link with the industry, equipping them with necessary professional skills to fit in, and networking for future self-branding. This function of the capstone is described by Ward (2013) as a mode that accelerates students in transitioning from the academic stage to professional life. The projects were considered utmost important to help learners experience the ways the industry operates, as well as, develop necessary skills that can come handy in removing bottlenecks and solving problems in tight situations according to the theory of ELT of Kolb (1984), and PBL a method of teaching and learning that was instigated at McMaster University, Medical Program, in the mid-60s.

Unlike the USA, where capstone projects are a requirement of different accreditation bodies with well-defined learning outcomes and ubiquitously agreed-on liaison between educators and industry stakeholders (Paretti, 2011); higher studies curriculum is devoid of any such requirement in Pakistan, and the case at hand started the capstone as an intrinsic initiative. Since there was a disconnection between industry and academia at large, provision of projects by the industry was a hard nut to crack, therefore, the said university had to allocate extra funds for this purpose to meet the logistics needs.

Persuading clients to entrust their data in general, and finance-related details, in particular, was experienced as a problem. Another challenge was to find a steady flow of projects that are at the appropriate level for students that could be completed within given the limited time frame as mentioned by Mosher (2014) too.

The project management required team formation and careful allocation of tasks. The literature identifies three basic methods of assigning teams that instructors commonly use: i) Self-selection, ii) Random assignment, iii) Systematic instructor assignment (Zhou, 2014). Given the fact that the Capstone was a comparatively newer idea for all stakeholders, the third method of project assignment was practiced in the said university. The systematic assignment allowed team capstone projects for everyone's convenience and to keep students working for the client-satisfaction to earn a good name for the institute. Clients dictated the terms for deliverables too, that might have limited students' independent decision-making skills unlike Problem-based Learning (PBL) and Experiential Learning (EL) philosophies which emphasize on learning by doing and learning from trial and error. Nevertheless, the capstone still provided sufficient experience to learn how to survive in the 'cut-throat' Pakistani job markets; and such a first-hand experience was deemed better than internships.

The most important aspect of a capstone remained 'students' assessment', which was a very systematic, formative assessment at this business school. The formative assessment for the capstone is favored and considered the most appropriate form of assessment (Sobek & Jain, 2004; Farrell et al., 2012; Herbert, 2018). Herbert (2018) emphasizes peer assessment as a good tool, all the same, strongly suggesting correlating data from a variety of sources to ensure the objectivity and integrity of the assessment. A variety of different approaches were used like rubrics for evaluation, peer assessment, presentation evaluation, and program evaluation, group assessment etc. within the prescribed assessment framework with regular feedback. However, scores from different rubrics were finally culminated in grades to meet the HEC requirements of awarding grade to students.

Students' readiness on the grounds of their previous knowledge and other necessary skill was a stumbling block in

understanding the project and fulfilling requirements. Lack of attitude and behavior on students' part also led to clients' dissatisfaction at times. This was a major concern that cost faculty extra efforts and time. Such a challenge is minimized in universities where teaching capstone courses are in practice as Adams and colleagues (2003) describes it. Capstone course is varying-credit, multi-course programs offered at the undergraduate level. Such courses require students to develop their project ideas and write a proposal for a problem-solving deliverable. This proposal is then carried out on a small scale, and reports are presented as a thesis; all of this is under the guidance of a faculty member (Adams et al., 2003). Such courses help students prepare for external clients and increase the chances of employability.

The capstone project should be teaching the following four skills that prepare students to meet business job demands: theoretical, practical, applied, and reflective. In most of the developed countries like the USA, Capstone Strategy Courses are offered before approaching a client (Inamdar & Roldan, 2013). MBA students in the case at hand gained a variety of skills, knowledge and attitude mostly during the projects, and had a taste of job situations in the context of office culture in Pakistan, some common were: communication skills, teamwork, project management, and leadership development. Many investigators like Schwering (2015), Hagan (2012), and Mosher (2014) have reported similar achievements via capstone projects across disciplines. More can be learned if other types of capstone projects are introduced like research-based and simulation tracks. The requirements and challenges in introducing other tracks of capstone projects

Hence, capstone project management is a semester-long process that involved many stakeholders namely: clients, the institution, faculty, and students. Howe and Wilbarger (2005) documented these elements namely, duration, faculty involvement, organizational structure, funding sources, project sourcing and industry sponsorship to be the elements that can make a capstone project a success.

Limitation and Future Research

Although this case study was able to explore the capstone project execution, this investigation did not include focus group

interviews of the students. The initial plan could not come to pass and had to be altered because of the closure of the University for the Coronavirus threat at that time. The focus group interviews would have provided students' perspective on the procedure, learning and challenges; therefore, the results in this query heavily depended on only the faculty perspective and document analysis. This study was limited to the business school of the case selected and the findings cannot be extrapolated to other disciplines. In addition, future studies could investigate the effectiveness of capstone projects in developing employability skills, examine institutional and supervisory challenges in implementing capstone requirements, and explore the impact of different capstone formats on student learning outcomes and workforce preparedness.

Recommendations

In the light of results and discussion from this study following recommendations can be put forward.

- The study found that the faculty considers the capstone to be a better approach than an internship, which is HEC requirement at the undergrad level. It is the high time that HEC should deliberate the capstone as a requirement for students in all universities. HEC recognition and accreditation will help universities bring out unified learning outcomes in terms of knowledge and skills.
- Universities should also offer capstone courses at the undergraduate level for students to bridge gaps in knowledge and skills that are required to carry out projects for external clients. There can be Service-learning Capstone Projects that have emerged as a form of pedagogy, which engages students with communities to address pressing societal issues (Chatman, 2008). Service-learning capstone projects will not only help students attain necessary practice, but its spill-over benefits will solve common problems in society.
- HEC policies should be such that industry and academia work hand in hand to play their roles in human capital development for the country.
- The universities can as well introduce multiple tracks of the capstone to facilitate students and industry in a better way.

Conclusion

The capstone is a project-based, semester-long program to let students experience placement in the industry and further development of necessary skills before entering the professional life. The inquiry at hand was to investigate the procedure of the capstone management, learning, and challenges faced during the due course from getting an industry-based project to presenting the deliverable to the client. Though aligned with the pattern of the capstone in more developed countries, only one track of the capstone projects- consultancy track- was practiced at the chosen university; and why other tracks were not there can be a way forward for more research. During the projects, there were many challenges. First and foremost, the faculty and supervisors brought in the projects with personal connections and efforts since there was a limited connection between industry clients and academia. Similarly, managing these projects required more time and efforts than regular classroom management because students were from diverse backgrounds with poor knowledge and communication skills, therefore, faculty sometimes had to arrange for skills development support classes. The chosen business school has developed a roadmap of procedure that follows an intense assessment method to evaluate students' performance from many angles and then convert those marks into a grading system to meet the HEC requirements. Meanwhile, students learned several useful professional skills during the projects that helped them be a part of the better human resource as these students experienced solving problems and communicating to the industry by producing quality deliverance during the due course of two capstone projects, they undertook to fulfill the requirements of MBA degree.

Other professional skills and work attitude included team-building skills and teamwork, leadership skills, meeting management, time management skills, analytical skill, planning and managing projects, and presentation skills, attitude for office decorum, etc., which were a part of students' holistic development. On one hand, these projects were rewarding for all the stakeholders (like job placement for students, appreciation for faculty, free consultancy for the client and a good name for the university), on the other clients at times were difficult to please as they had their

reservations as well as an upper hand in decision making. However, difficult situations were considered a part of learning and problem-solving procedures. Consequently, any situation, exposure, and problems were considered an opportunity for learning and were dealt with positively. In short, the capstone projects, in general, meet the requirements of today's competitive job markets and are especially helpful for students at the institute, as students after these projects are a better version of themselves, equipped with skills for self-branding in business consultancy.

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Appendix A

Interview Questions:

1. What is a capstone project?
2. How do students get these projects?
3. What skills do they learn before or after?
4. What challenges do they generally experience?
5. How is this procedure similar to abroad?
6. How does this help them in job markets?
7. How are students assessed?