Engineering Student's Issues in Internship Training

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Abstract

Nowadays, finding a job is by no means simple. The employer has higher standards for the workers. Today, a large number of graduates, particularly engineers, are jobless due to a lack of work experience. Hence, internships fill the gap and aid in turning graduates into workers by giving them practical work experience. The main goal of this study is to pinpoint the difficulties engineering students from particular engineering colleges in Solan district of Himachal Pradesh encounter throughout their internship training programmes. To determine the students for the current study, the researcher used the convenience sampling approach. All these primary and secondary data have been utilized in the study. Again for study, the researcher utilized a different statistical tools for analyzing the data. The study's main findings were that the majority of respondents had trouble with their internships' short durations and were reluctant to ask concerns.

Keywords: Internship; gap; engineering students; job; issues

Introduction

These days, every business needs a worker who is outstanding across the board. For a person with a degree, especially an engineer, having a degree is insufficient. They also require prior industry experience(Abas & Imam, 2016).

The need for internships arises. Students and recent graduates are highly encouraged to take advantage of the chance to finish an internship training programme in order to give themselves a competitive edge over their contemporaries. An internship is a term of training provided by a

company to students in order to expose them to the working world, frequently within a specific area related to their topic of study. The length of an internship might range from one week to twelve months. They may be compensated or not. A wide range of industries, including sales, advertising, architecture, graphic design, administration, IT, and many more, offer internship opportunities. The role and appeal of apprenticeships have been influenced by the existence of multinational corporations, rapid economic expansion, globalization, help direct, and urbanization.

An intern will be able to build a range of soft skills during their internship, including interpersonal effectiveness, communication skills, concern creativity, and persuading abilities. Experience gained "just on the job" is more beneficial than classroom learning. Only when they have actually worked in that atmosphere will students be able to comprehend what a job entails. The chance to speak with people who have held the position that the students want to directly during an internship is excellent. Their grasp of the position and the workplace will help interns have a greater comprehension of what it entails and what they need to do to advance. An internship can give students an authentic look into the working world while also enabling them to put into practise the theories they acquired in school and enhancing their employability by giving them technical skills. Students get the opportunity to test their abilities in practical settings, explore their future alternatives, and acquire insight into a company or career path through internships. Several employers use interns as a trial period before making a permanent hiring decision. Interns must therefore make a strong first impression by showing up on time, being enthusiastic, and demonstrating their adaptation, flexibility, and devotion(Agarwal, 2012). This study examines the issues faced by engineering students participating in internship programmes.

Review of Literature

Many difficulties were encountered during internships, including inadequate funding, inadequate supervision and assistance for students during their internships, and more. An intern should be organized and carried out as a legitimate education opportunities (Aidah, 2013).It is discovered that certain categories of UIC achievement depend on a scholar's particular type of UIC

motivation according to an investigation of two demographic characteristics, age and gender between many UIC academics, and their impact on scholars' UIC motivation as innovative way to improve UIC achievement (Arlett et al., 2010). According to internship organizers, internships are crucial for students in three areas: they enable career exploration, present chances for skill development, and aid in finding full-time employment (Asonitou, 2015). Due to the speed and diversity of technology progress over the past few decades, universities' roles as centers for knowledge generation, transmission, and collection as well as their connections to society have dramatically changed (Association, 2012). The factors that indicate how women entrepreneurs see their performance in the business world include the business environment, ambition (pull/push), education and ability development, networking and market information, sociocultural factors, and financial factors. The suggested scale's psychometric qualities were examined, and through CFA, model fitness was determined (Awang & Daud, 2015).

The most successful approach was encouraging university students, lecturers, and researchers to visit businesses. In the triple helix model, the involvement of the government in formulating policy and providing funding for research appears to be quite limited (Beard, 1998). A successful learning experience depends on students becoming competent in their capacity to carry out a wonderful opportunity, which is best learned through practical application as opposed to in a classroom environment (Beckton, 2009). Results of four universities' contacts with one another in Santa Catarina, Brazil, indicated non-linearity in the development of these interactions and revealed that the majority of these interactions between universities and businesses are concentrated in traditional and services routes (Blom & Saeki, 2011).

While assessing the current situation, identifying issues, and suggesting proactive steps for Ethiopian university-industry cooperation projects, The survey found that the country's university-industry connections are still in their infancy, with the most frequent forms of interactions being confined to student internships, consultancies, and skills training (Bogdan & Biklen, 2016). Thru the procedure for creating a start-up business, accelerators help entrepreneurs develop and evaluate their entrepreneurial skills.

Accelerators take on aspiring business owners and try to establish startups. The participants' entrepreneurial skills are strengthened through this exercise, which also promotes sincere introspection (Bourne et al., 2005). Although teamwork, communication, and professionalism have been prioritized in research and policy pertaining to technical professions, this study revealed that the internship advertisements heavily prioritized technological expertise at the expense of these other qualities.

Students from better socioeconomic level have an edge in accessing internship while being greatly shielded from their detrimental consequences, as well as the significant salary penalty at 3.5 years following graduation contrasted with those moving directly into paid work and further education (Brewer, 2013).

Relevant academic organizations were motivated to work with industry by the intellectual rewards and learning achievement, but transactional impediments stand in the way of their increased engagement with businesses (Bridgstock, 2009). According to the research scientist, women can be inspired to start their own businesses for a variety of reasons, such as their own interests, family businesses, suggestions from relatives and close friends, prior experience, new businesses, a desire to be independent, challenging circumstances, and the desire for achievement (Thangam 2016).

Young people's enthusiasm, high levels of education, technical and social media expertise, and growing disdain of an employment practice which is abusive and restrictive served as the catalyst for the intern rights era (Yamada 2016). Establishing multidisciplinary research centers with industry and student internship, job placement programmes, and holdings are keyed out as best practices for effective university-industry linkage based on the individual, organizational, and structural factors that were identified as determinants (Abebe 2016). The ability to put policies into action related to university-industry links is very weak at the nationwide and university levels, and neither the institution nor the industry owner provide priority focus on developing links with industry (Aschalew 2016).

In India, there has been a shift in policy favoring private partnerships over indigenous state-led transfer of technology, and two models of university technology transfer were put out. According

to Kuriakose (2016), the type I model was a techno centric process that led to an IPR-based regime, whereas the type II model was a commercial pull model that favored university spin-offs. Electronica that offer chances for business and collegiate collaboration have a lot of inefficiencies and ineffectiveness. A full spectrum education system was also made available in many nations to fulfil industrial requirements, and vocational certification systems were formed to realize the qualification criteria (Demirel 2015). To reduce gaps, the sector could train employees in modern skills and build networks with colleges.

In 2016, Kaushal Urvashi conducted research on how to attract technology undergraduates by demonstrating their employability. The study believes that in addition to having a professional degree, technical students must also exhibit some of the essential competencies that recruiters look for in candidates. The analyst recommended that technical colleges and universities concentrate more on enhancing students' skill sets in accordance with market demands.

Study on the discrimination of technology students and their possible employers was done by Chithra R in 2013. She came to the conclusion that there are significant differences between trainees' and their eventual employers' perspectives. Additionally, it was discovered that students with work experience are better aware of abilities related to employment than other pupils.

Technology works to improve, preserve, and provide new resources for the industrial industry and society at large. Therefore, graduates in the field of information technology should possess a variety of skills to enable them to use their knowledge effectively at work. The abilities are general qualities also referred to as employability skills.

Up until recently, programmes for entrepreneurship and skill development have likewise been dispersed broadly over the country.

Compared to affluent nations, where the proportion of trained workers is between 66 and 92 percent of the overall workforce, India reports an atrocious 4 percent of formally qualified personnel.

In order to satisfy industrial demands and promote good lifestyles for its residents, the homeland's architecture for skill development and entrepreneurship must be quickly realigned.

Research Objectives

1. Researching socioeconomic issues affecting engineering students.

2. To look into issues with the internship training programme among undergrads (ITP).

3. To examine the differences employability skills improvement requirements and the outcome of internship performance evaluation.

Hypothesis

For examining the 3rd objective we will formulate the following hypothesis:

There is no correlation between the engineering graduates' requirement to strengthen their employability skills and the findings of their internship evaluations.

Description of the Problem

Due to a lack of experience and skills necessary, the majority of engineering students are unable to find employment. The most popular activity for the development of institutions and industries alike is internship training programmes. With internships, interns are given opportunity to advance their careers as well as challenges. This study addresses the issues with the engineering graduates' internship training programme from the chosen engineering schools.

Scope of the Research

This study's main focus is on how the best way for engineering pupils to gain knowledge about best practices, the most recent advances in the area of work-related technology, and how to adopt and use them is through internship training. Also, the institution-industry relationship encourages industry professionals to contribute to curriculum development, which is important for getting students ready for the workforce. Students will gain a lot from this connection and be better prepared to tackle the working world even before they finish their degrees.

Result Analysis

The researcher purposefully chose Solan District in Himachal Pradesh for this investigation. To determine which students would be participating in the current study, the researcher used a convenience sampling technique. Both primary and secondary data have been gathered by the researcher for the research. The sample respondents are interviewed in order to get primary data. Students from Solan District engineering colleges have been chosen by the researcher. The association between the need for improvement and the outcome of the internship was tested using Pearson's r. The analysis of variance was performed to examine the variations in the students' requirements for developing their employability skills across.

Sample size

Total 75 students were selected from 5 engineering institutes of Solan District of Himachal Pradesh.

Table 1: Demographic Factors of Technical Students

S No	Gender	No of interviewees	%
1	Male	40	53
2	Female	35	47
	Total	75	100
	Year	**No of interviewees**	**%**
1	Ist Year	18	24
2	2nd Year	20	27
3	3rd Year	18	27
4	4th Year	21	28
	Total	75	100
	Department	**No of interviewees**	**%**
1	Civil	12	16

2	CSE	15	20
3	ME	10	13
4	ECE	12	16
5	IT	15	20
6	Mechatronics	11	14
	Total	75	100
	No. of Internships attended	**No of interviewees**	**%**
1	One	20	27
2	Two	25	33
3	More than two	30	40
	Total	75	100
	Internship Arranged by		
1	Self	40	54
2	Institution	35	46
	Total	75	100

Source: Primary Data

40 respondents, or 53% of them, are men, whereas 35 respondents, or 47% of them, are women.

The majority of 21 respondents are fourth-year students, followed by 20 second- and third-year respondents 18 and 18 first-year respondents.

The majority of respondents have completed internship more than 2 times, followed by responded 20 respondents who have completed internship for 2 times, whereas just 20 respondents completed only one internship.

The bulk of the internships for 40 respondents (54%) are organized by the responders themselves, while internships for 35 respondents are organized by the college (46%).

Engineering Students Issues in the Internship Training Program

Throughout the internship training programme, the engineering students are running into various issues. Uncomfortable hours, indifferent officials, work that isn't utilized, too much job, fear of asking questions, a lack of intern time to fully understand practical stuff, and other issues are the challenges.

Table 2: Technology students' actual issue score during the internship training.

Sno	Issues	5	4	3	2	1	Sum
1	Inconvenient times	5	16	40	13	1	75
2	officials who don't respond	4	30	23	9	9	75
3	Work not used	2	16	42	15	0	75
4	Work Pressure	7	27	24	10	7	75
5	Queries	14	25	22	13	11	75
6	Short duration	8	25	40	2	0	75

Source: Author's survey

The exact score obtained for each research problem is shown in Table 2. The investigator gave the actual score in decreasing order, starting with 5-1. (5-Strongly Agree, 4- Agree, 3- Neutral, 2-Disagree, 1- Strongly Disagree).

Table 3: Weight Scores of the Issues faced by Engineering students' during internship program

S.no	**Issues**	**Weights**					
		5	**4**	**3**	**2**	**1**	**Sum**
		Weight Scores					
1	Inconvenient times	28	62	115	32	0	237
2	officials who don't respond	23	118	70	20	9	240
3	Work not used	16	59	122	33	7	237
4	Work Pressure	28	114	73	21	1	237
5	Queries	73	98	62	31		264
6	Short duration	46	95	125	0	0	266

Source: Author's survey

The relevance score of the problem experienced by the chosen engineering college students is shown in Table 3. The researcher has applied weighting according to the real score in decreasing order starting at 5-1. (5 for Strongly Agree, 4 for Agree, 3 for Neutral, 2 for Disagree and 1for strongly Disagree).

The correlation between the demand for developing skills and intern performance is shown in Table 4. Results indicated that, with the exception of leadership and information technology skills, there is a considerable correlation between engineer's students' internship assessments of performance and their development requirements.

As a result, the null hypothesis that there is no meaningful association is disproved.

Table 4: Employment and Employability Requirements for Skill Development and Internships Results

Skills Required	Information (P Value)	Skill (P Value)	Perspective (P Value)	Persona (P Value)
Learning & Computation	-.638 (<0.01)**	-.738 (<0.01)**	-.693(<0.01)**	-.711(<0.01)*
Analytical Skills	0.792(<.001)**	0.683(<.001)**	.752(<0.01)**	.648(<0.01)**
Supervision	.211(>0.05)	.301(>0.05)	.210(>0.05)	.248(>0.05)
Administration	-.482(<0.05)*	-.588(<0.05)*	-603(<0.05)*	-.533(<0.05)*
IT	.228(>0.05)	.302(>0.05)	.349(>0.05)	.287(>0.05)
System' Thinking	.692(<.001)**	.744(<.001)**	.729(<0.01)**	.680(<0.05)**
Diligence	-.592*(>0.05)	-.652*(>0.05)	-.621(<0.05)*	-.710(<0.05)*

**Significant at p-value<0.01, *Significant at p-value<0.05

Conclusion

Engineering students' decisions about their future career paths are greatly influenced by their internship experiences. The internship training programme has benefits and drawbacks. Given that the focus of this study was on issues with the Internship Training Program (ITP), it was discovered that, among five engineering schools, students were most concerned with the issues of short internship durations and being reluctant to ask questions. These issues were ranked 1 and 2, respectively. In addition to these issues, they also deal with awkward timings, unresponsive officials, work that is not utilised, too much work, and other issues. These issues can all be

resolved, in part. It is advised that in the near future, both businesses and educational institutions should take the required steps to address this issue.

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