



Assessment of the Job recruitment Disparity between Pharmaceutical Sector and Pharmaceutical Students

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Abstract:

The Indian pharmacy business is often regarded as among of the biggest profitable in the country. It has made significant contributions to India's healthcare goods and monetary sector. Over many years, worldwide expertise and favourable sale scenarios have ensured that India remains among the most professional pharmaceutical market places in the world. India's healthcare and finance systems play an important role. Over a long period of time, international expertise and a positive sales picture have assured that India remains one of the largest and rewarding pharma market places in the world. Employment prospects of new specialist candidates is a more important concern than joblessness in India. Companies have the opinion that academic institutions should update and enhance their teaching strategies. Due to several common problems including unskilled personnel, inappropriate study materials, conventional programmes, and ineffective assessment systems, universities and colleges that now deal with vocational and skilled instruction and lectures are unable to provide value-adding human resources to the business. A more serious issue than unemployment in India is the availability of recent expert graduates. The quality of the students offered by higher education institutions, in the opinion of businesses, requires significant improvement. Entities that offer vocational and skilled education are unable to provide value-adding human resources to the organisation owing to common issues such as insufficiently qualified teaching personnel, inappropriate course content, conventional programmes, and ineffective evaluation methods. The kind of talents and abilities that are now being taught in universities and colleges are incompatible with those that are needed and expected in workplaces. The assessment of the gap in job recruiting between the pharmaceutical industry and pharmaceutical students has been the subject of a number of studies in this study.

Keywords: Employability skill, Pharmaceutical graduates, Factor Analysis, Z Test Proportion, Mann Whitney test, Kruskal Wallis.

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I. Introduction:

The success, wealth, and economic progress of a country are inextricably tied to the calibre of its people resources and their intellectual abilities. The world of employment is undergoing and observing significant changes, practices and experiences are being altered

by technology, and societies are increasingly globalising. Employability is increasingly one of the primary aims for educational institutions as a result of the advent of globalisation. Employability skills are the qualifications that a graduate must possess in order to land and maintain their first job after graduating from college [1]. In this constantly evolving, ever more competitive business climate, manufacturing sectors are expecting personnel with effective upgraded knowledge and competencies, which will allow businesses to expand. Every pharmaceutical university's primary goal is to impart quality skills. Any pharmaceutical institution's primary goal is to teach graduates pharmaceutical ability, which will ultimately aid them in their job and entrepreneurial

endeavours. The current situation calls for graduates of pharmaceutical studies to immediately find employment.

For educational institutions, improving students' skill sets from the standpoint of employment is a critical concern. In order to choose an appropriate approach that offers students additional employability options, it is vital to identify the essential approaches to formulate employability skills. Nowadays, the schools and universities are constrained by a rigid educational system that only emphasises academic learnings and ignores education that is practical knowledge-based.

It is a problem for academic institutions to improve students' employment skills. The problem with pharmaceutical education is that it is unable to show students how to acquire skill sets and how to get out of this situation. It is also difficult to choose a suitable strategy that offers students additional employable options. A conventional teaching system that emphasises expertise education is now being used in institutions. Vocational education and practical training should be implemented by institutions. Any



pharmacy school's main goal is to impart qualities and abilities.

The following paper that we worked on showcases literature review in section II, Section III particularises features related to employability abilities, Section IV features of employment, Section V explains Result Analysis and conclusions are cited in Section VI.

Literature Survey:

It is believed that education has a significant role in the social, cultural, political, and economic change of a country. If education is viewed as a process for developing knowledge and skills, then it may be compared to the process for creating wealth. And it is true that any nation's wealth and progress are fundamentally dependent on its people's resources. As a result, one of a country's most valuable resources and a key factor in determining its financial performance, is its human capital. An increase in the human growth index would result in rapid economic growth for the nation. There is disagreement among analysts throughout the world as to whether the systems needed to supply the nation's demand for highly skilled and knowledgeable human resources will expand with rising educational training demand. Therefore, a country's power depends on how intelligent and skillful its people are. Learning is a crucial instrument for establishing sustainability, as can be shown. As a result, creating such personal assets requires a thoroughly thought out and organised schooling system. In order to assist future graduates acquire knowledge and skills, institutions of higher learning, such as pharmaceutical sciences, play a crucial role in the educating and acquiring knowledge processes [2].

Entry-

level university students lack the necessary people skills and are therefore unprepared for the demands of industrial vocations [3]. Growing unemployment among educated young is extremely concerning and points to three possible causes: a) Requirement imbalance; b) Expectation imbalance; and c) Skill mismatch. The academic community, business community, and student approach must be used to resolve this situation. High attrition rates and a lack of adequate skills have a significant influence on India's capacity to adopt new technologies and solutions. Therefore, it appears that a fundamental change toward a focus on general skills in education is desired [4]. However, the biggest challenge in this growth pathway is the workforce's lack of skill set and the students' resistance to adapt to the system of industrial skill requirements. It also seems that students frequently undervalue the importance of having transferrable talents. Instead, they b

lieve that mastery of the discipline's subject matter is more important to employers than transferrable abilities. However, businesses want students who can think on their own, solve problems, and come up with solutions [5]. As evidenced by the government's "Skill India" initiative, skilled management of intellectual capital has the potential to be a development engine and is essential for the Indian economy. Finding qualified candidates and providing them with the necessary training are the two main concerns of businesses and recruiters nowadays. The discrepancy, which is a real worry for human resource professionals and company owners trying to find qualified, skilled workers, is a disparity between the abilities required on the job and those obtained by candidates. While hiring managers would prefer to have candidates who are skilled and ready to work, they are often prepared to provide the specialised, position-

specific training required for individuals without such abilities. Because there are still many job openings in businesses but few competent applicants, employability has grown to be a far greater concern than unemployment [6]. Nowadays, administrators emphasise the necessity for workers to possess a certain set of basic skills, including collaboration, cognitive skills, professional attitude, and honesty. Although businesses depend on their employees having the same fundamental talents, they

don't necessarily refer to or categorise these skills in the same manner. Because of this, it is challenging for potential employees and educators to understand precisely what is necessary for success in every professional path in a business [7]. As a result of all of this, employability has emerged as the most important qualification for applicants. Employability refers to the talents and personality traits that make a person appealing to potential employers. The term "core competencies" can refer to a wide range of capabilities or competencies that can be developed through education, mentoring, internships, hobbies, and social activities. These skills are also sometimes regarded to as "general purpose skills," "lifetime capabilities," "fundamental qualities," "vital skills," or "adaptable" abilities.

Characteristics that a person may possess that could appeal to potential employers are referred to as skill sets [8]. It also refers to the abilities necessary to land and keep a job. These transferable talents include the capacity to solve a complex interdisciplinary challenge, collaborate effectively, demonstrate effective spoken and written communication skills, and demonstrate positive communication skills [9]. The term



"work experience abilities," which refers to teaching abilities upon which a candidate pupil must develop employment-specific abilities, is commonly used in modern parlance [10]. These capabilities correspond to interaction, personal and communicative interactions, decision making, and strategic planning of business structure. Because they are relevant to a variety of vocations and can help with general preparation for a variety of professions, employability skills are prized. According to [6], employability skills are the foundational abilities required for finding, retaining, and succeeding in a job. Employability skills may be learned and transferred [11,12].

Employability abilities

The term "employability" is popular right now. Employability, according to Hillage and Pollard (1998) [13], is the capacity of a person to find and keep a job as well as find other work when necessary.

Employability generally refers to having a job. Employability is the capacity of an individual to secure their first job, keep their current job, and find new work if necessary [13]. Harvey noted in 2001 [14] that a student's employment is determined by their capacity to identify a fulfilling employment. Job prospects, according to Pool and Sewell in 2007 [15], is the possession of a collection of abilities, knowledge, awareness, and personal traits that increase a candidate who is capable of choosing and securing careers in which they may be happy and prosperous. Talents were characterised by Lankard in 1990 [10] as physical appearance, conversational abilities, and positive attitudes and practices. Hillage defines employability as the capacity to adapt sufficiently within the sector to comprehend potential through long-term work.

IV. Features of Employment:

For all sorts of organisations, keeping individuals who possess the necessary skills for a certain profession is crucial to overall organisational success and staff productivity [16]. According to author Little B., possessing sufficient employable skills may be the key factor in boosting one's trust in a certain occupation and providing a positive influence on organisational productivity as a result. However, simply having employable skills may not be sufficient to allow a competent workforce's capability to effectively advance organisational efficiency and performance [17]. Therefore, the process of identifying and nurturing relevant potential is crucial for firms to achieve both short- and

long-term productivity objectives. The term of employable is, however, far more inclusive than the idea of merit. Yet employees must develop ability in order to be employed. Additionally, companies must design procedures and processes that take into consideration the present amount of skills that exists within the staffs in order to foster the many kinds of skill they need [16]. According to Aamodt et al. [18], the idea of credentials is strongly tied to the more general term of employability. This is due to the fact that graduates' credentials or learned proficiency can have a significant impact on their ability to successfully complete a certain task. The priority that many firms still concentrate on professional skills tendency when selecting rather than education [17] despite the fact that many policy makers are presently giving increasing significance to the linkages between workplace results and the role of further study. As a result, specific HRD programmes should be developed by firms to strategically enhance employable skills in order to better meet future work needs, according to Nilsson et al. [19]. This is because recruiting errors can have major strategic and financial repercussions. Universities and businesses alike need to be aware that developing adequate employability skills entails more than just finding work; it also requires the development of personal abilities, traits, and/or knowledge [20]. Additionally, Baciu et al.

[21] noted that a major problem arises from the fact that universities continue to produce more graduates than can be hired by employers. This is due to the mismatch between the supply of general employability skills and the corresponding requirements for appropriate skills.

Skills Gap for Employability: The school system is at the root of the lack of employable skills. Due to the high frequency of primary and secondary school dropouts and the low acceptance rates for further education, the workforce is only minimally educated.

Low-quality infrastructure is provided by colleges and universities, which creates problems before employment. Indian colleges and universities' criteria have declined when compared to international norms. As a result, applicants have poor employability and eminence, which makes them less employable. There are various factors that might affect employability, including outdated curriculum and a lack of interaction between academics and business leaders.

V. Experimental Results: Management staff and entry



-level graduates were given questionnaires to fill out in order to gather information.

Using a straightforward random sample procedure, data are collected from Maharashtra state's pharmaceutical zones. The survey is given to 1050 management entry-level workers. When the data from the same survey was analysed, it was discovered that 10 workers had given insufficient responses; as a result, the data for these 10 employees was disregarded.

1040 people made up the final reports since it was deemed appropriate and sufficient for the analysis. A review of the literature suggests that power analysis should be used to estimate sample size [22]. The minimal sample size may be determined using power analysis, which takes into account the portion of the model with the greatest number of predictors [23]. According to [24], sample sizes should be considered while analysing structural equation models. Samples of 100 or fewer should be regarded as small, samples of 100 to 200 should be regarded as medium, and samples of 200 or more should be viewed as big.

Data analysis is finished using the Z test, SPSS, and frequency distribution method, among other techniques.

Frequency Distribution Method:

The length of time that something has occurred is measured by frequency. The frequency tracks whether an event repeats itself in the collected data. Tables relate to both theoretical and statistical variations; theoretical variables are also known as categorical variables because they represent categories such as eye colour, brands, etc., whereas statistical variables are mathematical. Class intervals are used by the frequency distribution to provide a broad range of values for the data inspection. The periods are designed with the greater and lower value between certain points in mind. A frequency distribution table and a frequency distribution series differ from one another. The x-variable in frequency distribution series is separate arithmetic, whereas continuous values are utilised in frequency distribution tables. Ungrouped frequency distributions, grouped frequency distributions, cumulative frequency distributions, and relative frequency distributions are the different categories of frequency distributions.

Z test:

The test used is z test for proportion.

Test statistics:

Where \hat{p} = sample proportion, p_0 = hypothetical value decided by researcher (here it is 50% that is 0.50), n = sample size = 520 for Entry Level Graduates & 520 for Management.

Mann Whitney:

This non-parametric test compares two sample means drawn from the same population and determines whether or not they are equal. When the data is ordinal or the t-presumptions tests are broken, the Mann-Whitney U test is typically utilized.

To determine if the criterion variable differs between two different samples, the Mann-Whitney U test is employed. The reliant variable's allocation is compared to see if it is consistent across the two classes and, consequently, the same population.

Kruskal Wallistest:
In contrast to the one-way ANOVA, the Kruskal-Wallis test was developed in 1952. Using the method, three or more groups are compared on a dependent variable that is assessed at least ordinally.

When a difference is assumed to exist but is not there, there is a 5% chance that the difference will be assumed to exist. When the p-value is less than or equal to the significance level, the null hypothesis is rejected and it is determined that not all group medians are equal.

VI. Result Analysis:

Statistical analysis part I for identification of need of the Employability skills required for meeting the entry-level jobs in the pharmaceutical industry.

Q6. Do you feel academic syllabus should have more focus on Systems, Regulatory knowledge updates so that entry level employees can improve work efficiency? &

Q7. Do you agree health, safety and environment course should be introduced in Pharmacy Curriculum so that entry level employees will get an insight for the same?



Questions	Frequency (Agreement)	Proportion	Z Statistics	P value	Significance	MannWhitneytest(N)	Mean Rank	Sum ofRanks	
		Entry Level Graduates				Entry Level Graduates			
Q6.	520	1	22.80	0.0000	Significant	520	473.06	245992.00	
Q7.	520	1	22.80	0.0000	Significant	520 Total1040	567.94	295328.00	
		Management				Management			
Q6.	501	0.96	21.14	0.0000	Significant	520	440.29	228951.00	
Q7.	480	0.92	19.30	0.0000	Significant	520 Total1040	600.71	312369.00	

Since value is less than 0.05 for 4 out of 4 questions; the result is significant for 4 out of 4 questions for Z test. Since value is greater than 0.05 for both categories; the responses for Q6 & Q7 are equivalent in nature for both categories observed in Mann Whitney test.

For the majority of questions the result is significant.

Asevident from above statistical analysis it justifies the need of the Employability skills required for meeting the entry-level jobs in the pharmaceutical industry.

Part 2 analysis to identify development of the capabilities to bridge the employable skill gap

Do you feel industry training should be a mandatory part of academic curriculum shall help pharmacy graduates to gain employment sooner?

Do you feel current curriculum should be revisited to satisfy industry needs at large??

Calculation Table:

Questions	Frequency (Agreement)	Proportion	Z Statistics	P value	Significance	MannWhitneytest(N)	Mean Rank	Sum ofRanks	
		Entry Level Graduates				Entry Level Graduates			
Q9.	520	1	22.80	0.0000	Significant	520	465.10	241850.00	
Q10.	520	1	22.80	0.0000	Significant	520 Total1040	575.90	299470.00	
		Management				Management			



Q9.	501	0.96	21.14	0.0000	Significant	520	375.43	19525.00
Q10.	501	0.96	21.14	0.0000	Significant	Total 1040	665.57	34609.50

Z-test analysis findings are - Since p value is less than 0.05 for 4 out of 4 questions; the result is significant for 4 out of 4 questions.

For the majority of questions the result is significant. Since p value is less than 0.05 for Management but not for Entry Level Graduates; the responses for Q9 & Q10 are not equivalent in nature for Management but for Entry Level Graduates the responses for Q9 & Q10 are equivalent in nature as observed in Mann-Whitney test.

The results of the tests mentioned above make it abundantly evident that the employability skill gap can be closed with the appropriate capability development.

V Conclusions:

Our research indicates that graduates are content with the theoretical education they receive, have no concerns about it, and think it may be enough to find employment. On the other side, organisations believe that there is a dearth of knowledge and exposure among students when it comes to practical, non-theoretical learning areas like systems, self-training regulations, and verbal communication. Creating a gap as a result. This problem may be resolved by including a few crucial modifications in the present syllabus, which will ultimately assist the students become the best prospects for hiring.

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