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Highlights of the report

- The percent of students employable to work for IT product companies falls by three times in tier 2 colleges vis-a-vis tier 1 colleges
- 70% of all students employable for IT product sector and 80% of all students employable for services/KPO sector are in tier 2 campuses
- Skills of Students in tier 2 campuses fall maximum with respect to Math followed by English Communication, Logical Ability and Computer Programming.
- Females and males are equivalently employable in the skilled industry

Employability as a factor of growth in the economy will gain criticality as the nation progresses. Progress would imply creation of several million jobs and widening of the demand and supply mismatch. The effort to mitigating this gap also lies in helping companies find employable students and accurately identifying the set of candidates that require training and the deficit in skills.

In a previous study by Aspiring Minds indicated employability quotient at an alarming percentage of only 4.22% of all engineering graduates, for the IT product sector. Also, a total of 62% candidates require training to be eligible for any job in the IT/ITeS sector.

The report is an attempt to study the employability skills of students in tier 1 colleges vs tier 2 colleges. Campuses which fall in the top 100 campus list (according to various credible surveys) were segregated and their employability was compared with the rest of the campuses (called tier 2 campuses in this study).
Comparison of Tier 1 and Tier 2 colleges

It is worthy to study whether employable students are equally distributed amongst campuses and if not, how large is the skew in distribution.

The chart below shows the employable talent pool in tier 1 vs tier 2 colleges across five major functional areas within the IT/ITes sector. Given that the ratio of the number of top 100 campuses to the rest is more than 10 times, we can conservatively estimate that more than 70% employable students in IT product sector and more than 80% employable students for the IT services/KPO sector are in tier 2 colleges. According to current trends IT product and KPO companies do not source from tier 2 campuses, which creates a large artificial dip in supply of eligible candidates.

<table>
<thead>
<tr>
<th>All Colleges</th>
<th>Tier 1 colleges</th>
<th>Tier 2 colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Services</td>
<td>17.8%</td>
<td>29.4%</td>
</tr>
<tr>
<td>IT Product</td>
<td>4.2%</td>
<td>10%</td>
</tr>
<tr>
<td>Knowledge Process outsourcing</td>
<td>9.5%</td>
<td>19%</td>
</tr>
<tr>
<td>Business Process Outsourcing</td>
<td>38.2%</td>
<td>44.7%</td>
</tr>
<tr>
<td>Technical Support/Networking</td>
<td>25.9%</td>
<td>36.8%</td>
</tr>
</tbody>
</table>
a. Employable talent for IT Product industry is the lowest while it is the highest in Business Process Outsourcing across tier 1 and tier 2 colleges.

b. The overall employability for IT product companies fall by three times from 10.07% to 3.47%,

c. The employability in IT services sector and KPO fall by almost two times (29.41% to 16.36% and 18.93% to 8.26% respectively).

d. BPO and technical support jobs employability do not change much in tier 2 colleges

**Hiring scope from tier 2 colleges**

The cost and logistics required for hiring from tier 2 colleges is much more as compared to Tier 1 colleges. Companies use the campus name as a proxy to decide whether to give candidates/campus a test/interview chance or not.

a. It is three times harder (in cost and effort) to identify an employable graduate from a tier 2 campus as compared to a tier 1 campus for a product company and twice as hard for IT services companies and KPOs.

b. It is important to understand the skills that are lacking in students of tier 2 campuses. Our study shows a gap of 20 percentile points in English Communication, Logical Ability and Computer Programming, whereas the gap in Quantitative ability is 27 percentile points. This clearly shows that maximum effort is required to hone Math skills of students, whereas consistent effort is needed in other areas as well.

<table>
<thead>
<tr>
<th>Dynamics of hiring in tier 2 colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IT Product</strong></td>
</tr>
<tr>
<td>Three times harder (in cost and effort) as compared to tier 1 colleges</td>
</tr>
<tr>
<td><strong>IT Service hiring</strong></td>
</tr>
<tr>
<td>Two times harder (in cost and effort) as compared to tier 1 colleges</td>
</tr>
<tr>
<td><strong>KPO</strong></td>
</tr>
<tr>
<td>Two times harder (in cost and effort) as compared to tier 1 colleges</td>
</tr>
</tbody>
</table>

c. Interestingly, the gap in computer-programming skills is similar to the gap in English Communication skills and Aptitude. This indicates that the top 100 campuses do not make much difference to the programming skills of a candidate, given he/she had the same
aptitude at the intake as compared to a Tier 2 campus student. The difference in Programming ability is simply a function of the intake quality of students.

d. Innovative models like common tests such as AMCAT and government support is required to help bridge this huge gap hampering equal job opportunity and requisite manpower supply.

**Gender Debate**

Females and males are equivalently employable for the skilled industry.

a. Gender studies with regard to employability are a topic of much interest and debate. Interestingly, the current study shows that the difference in employability for female vs. male technical graduates is not more than 2 percentage points in any IT/ITeS sector!

b. On the other hand, the ratio of males to females in technical studies is 2:1. With unbiased hiring and similar aspiration level amongst both genders, the same ratio should be maintained in the IT/ITeS industry. The data presented in (Rajalakshmi, 2003 [3]), shows that female percentage in IT industry is 21%. This is much lower than the expected 33%. It may however be noted that the male-female ratio in technical studies was much lower earlier (2003) than it is today. To draw any further conclusion, the current ratio of males to females in the IT/ITeS sector needs to be studied.

**Skill comparison of Tier 1 cities vs Tier 2 cities**

- Tier 2 colleges show a gap of 20 percentile points in English Communication, Logical Ability and Computer Programming,
- While the gap in Quantitative ability is 27 percentile points. [a chart might be better for this detail]

**Gender stats**

- The percentage of females in IT industry is 21%.
- The study shows that the difference in employability for female vs. male technical graduates is not more than 2 percentage points in any IT/ITeS sector!
Skill comparison of male vs female

A study was also conducted to find how males compare to females with regard to specific skills.

a. Our study showed that females performed better than males in English (by 2 percentile points, but significant) and Computer Programming (by 4 percentile points),

b. Males did better in Logical Ability (by 2 percentile points) and Quantitative Ability (by 11 percentile points).

c. Though these results show the same trends as observed globally, they need to be interpreted from a nuanced perspective given the debate on the bias of standardized testing scores with regard to gender.

How has employability quotient been defined?

Several companies hire on merit based on AMCAT scores – the standardized employability testing pattern is indicative of hiring benchmarks for the particular industry. A study on these hiring patterns not only projects employability quotient but also identifies skills that are deficient in particular group of candidates with regard to different sectors.

Methodology

Aspiring Minds has conducted India’s first employability study of technical graduates based on the results of a standardized computer-based test called AMCAT conducted for more than 40,000 engineering and MCA students (in final year) across the country. AMCAT was conducted in more than 12 states under proctored environment. AMCAT [1] covers all objective parameters for adjudging employability in the IT/ITeS sector including English Communication, Quantitative skills, problem-solving skills and Computer Science and Programming skills. Employability figures are based on actual hiring benchmarks on AMCAT scores set by multiple companies in IT/ITeS related sectors. Since the study is based on a standardized aptitude and skill test, not only does it find the employability quotient, but also helps investigate skills that are deficient in particular group of candidates with regard to different sectors.
About Aspiring Minds

Aspiring Minds is a pioneer in scientific assessments, headquartered in Gurgaon. A venture of IIT and MIT alumnus, the company is pioneering efforts in creating employability standards, Human Capital Assessment and labour inclusion.

Aspiring Minds’ intelligent adaptive assessments enable benchmarking of talent, recruitment of appropriate candidates for a job and to assess workforce health. Aspiring Minds has assessments in Language, cognitive skills, Domain skills (programming, tech, accounting, finance, etc) and Personality.

Aspiring Minds has proprietary technology in Computer Adaptive Assessment with superior statistical benchmarking and job-matching algorithms. Over 55 Companies have already used the recruitment solutions offered by Aspiring Minds. Their clientele include HCL Technologies, Genpact, Mphasis HP and many others. Their work in recruitment and hiring benchmarking has attracted attention from Business Week to classify Aspiring Minds among the most intriguing start-ups in the world. The advisory board of the company includes faculty and professionals from the Harvard Business School, MIT and Indian universities.

References

1. AMCAT: Aspiring Minds Computer Adaptive Test

2. AMCAT Results Mimic Interview Decision: The case of using AMCAT for hiring at an IT Product