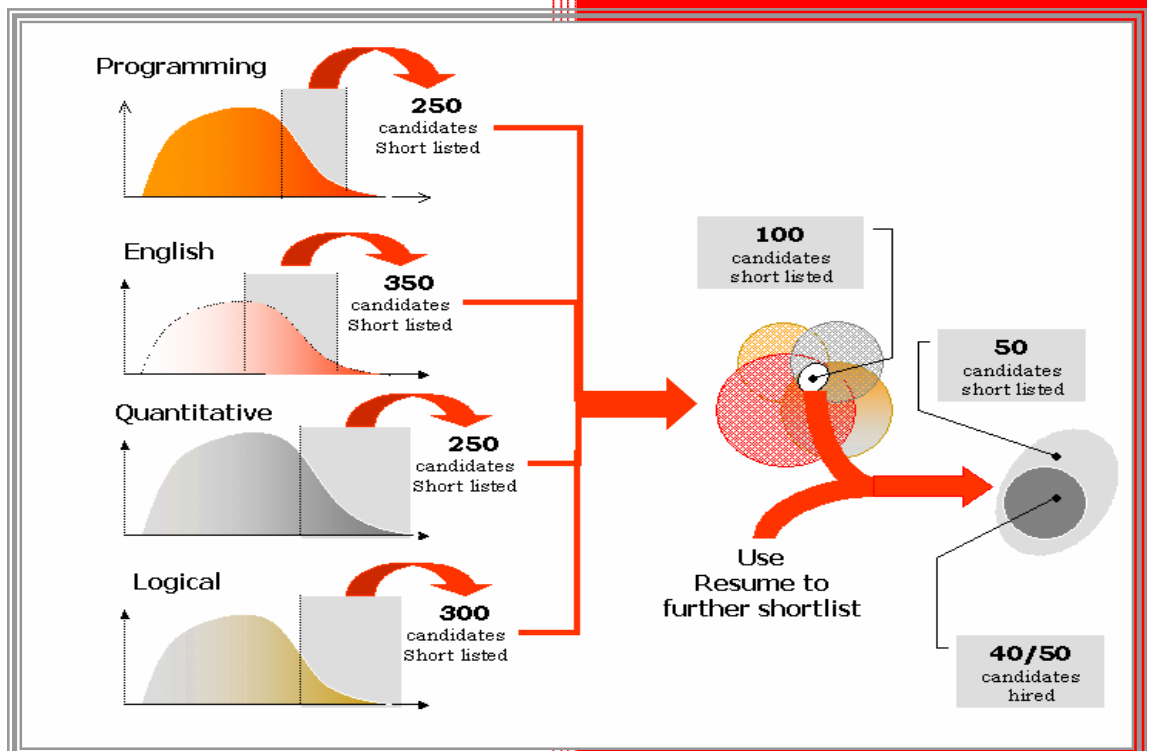


AMCAT results Mimic Interview Decisions



AMCAT Results Mimic Interview Decisions

– The case of using AMCAT for hiring at an
IT Product company

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Introduction

Aspiring Minds is an assessment company which conducts aptitude, skill and personality assessment for judging employability of candidates. It has a battery of Computer Adaptive Tests which are taken by several thousands of fresh graduates every year and whose results are accepted by companies such as HCL, Mphasis, Evalueserve, etc. to make hiring decisions.

During the second quarter of 2008, Aspiring Minds worked with a Bangalore-based Web 2.0 product company (COM) helping them hire candidates from three different campuses across India. The candidate was expected to have very strong computer programming and algorithm skills together with strong analytical skills and communication skills.

The current case is about how Aspiring Minds' superior assessment helped COM hire with minimum interview burden and objective assessment criteria.

Assessment and Interviews

Across the world, most hiring at entry-level use an assessment followed by interview(s). Whereas in some cases, the

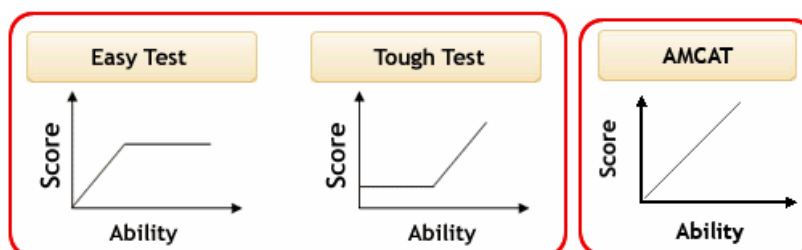
assessment is used just as a **criteria to filter the not so appropriate candidates**, in other cases, it is also used as a hiring **input for the interviewer to make the hiring decision**.

For any organization, a decrease in interview time leads to savings in cost and time, leading to scalability and organizational efficiency. This can happen if an objective assessment can act as an accurate proxy for the interview.

The following reasons are generally cited for the inadequacy of assessment solutions for this purpose.

Most tests are designed to work as screens: Firstly, most assessment solutions are considered to be good 'screens', but not good for guiding the final hiring decision. Basically, tests are considered good to eliminate the bad candidates, but inadequate to differentiate amongst the better candidates. This is because most check the *minimum stuff the candidate should know for the position, but not test the stuff he/she should know to do well in the job*. Thus they act as 'screens' to eliminate, but not good ranking tools otherwise. The ranking

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happens at the interviewer level.

Testing in generic aptitude and not in skill: The second concern is with the content area of tests. Most corporates use a generic aptitude test at the intake, which is used to filter out candidates who do not have the basis aptitude and communication skills for the job. The test does not assess the specific skills needed for the job, for instance, the Java Programming Skills or the financial knowledge of the person. After the generic aptitude test eliminates candidates, the interviewer tests the skills.

Objective testing considered inadequate: The third objection is with regard to the objectivity of the test. There are abilities of the candidate tested through a subjective discussion which includes his/her approach to solving a problem, creativity, way of answering, etc., which are not well-assessed in the objective right-wrong format of the questions. If the qualities assessed through the subjective process are dominant for the decision-making process, objective assessment shall always remain limited in its role.

Given these reasons, objective assessment has been considered of limited value in the final hiring decision and interview remains the dominant part of the process.

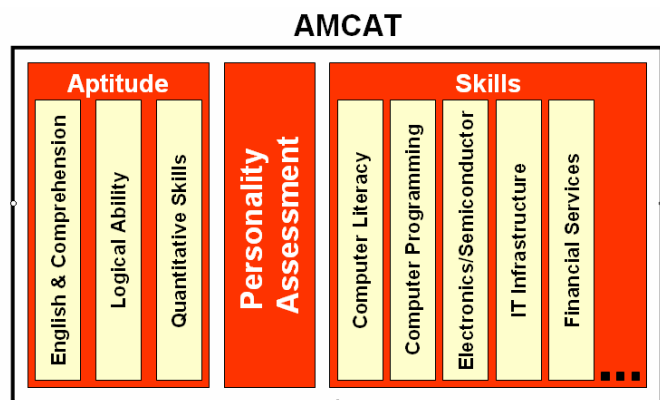
Aspiring Minds Assessment

Aspiring Minds' flagship Computer Adaptive Testing Platform, **AMCAT** combines English Skills, Aptitude, Skill and Personality Assessment to provide wholesome assessment. All the questions in the test are multiple-choice questions and the scoring is based on **Item-Response-Theory (IRT)**.

AMCAT has been designed to act like a hiring input and an enabler to make the final hiring decision rather than just a screen. As discussed below, such assessment could provide great scalability to talent acquisition and management processes.

AMCAT is now discussed with regard to the objections raised against objective testing in the last section.

AMCAT is an adaptive test, a test which adjusts its difficulty level to the



neighbourhood of the inherent ability of the candidate. ***It becomes easy for a not-so-smart candidate and tough for the smart candidate.*** The scoring is based on a Bayesian Inference

The Skill modules tests particular skills needed for job success, while the Personality Assessment measures whether the candidate has the right disposition for the profile.

The convert rate at COM ranged between 1 in 15 to 1 in 20 of those they interview.

framework, which implies that the score of the candidate is judged by how hard a question he/she was able to answer.

The adaptive nature of AMCAT helps **not only screen the inappropriate candidates, but give accurate ranking for the high-ability candidates.** This is depicted in Figure 1. This addresses the first objection against objective testing solutions.

Secondly, AMCAT goes beyond being a general aptitude test to include Skill modules and Personality Assessment. The structure of AMCAT is shown in Figure 2. Whereas the Skill modules tests particular skills needed for job success of entry-level hires, the Personality Assessment measures whether the candidate has the right disposition for the job. Currently, AMCAT contains Skill Modules in **Computer Programming, Electronics Semiconductor, Computer Literacy, Computer Infra and Finance.** The Personality Assessment is based on the scientifically validated five factor model of personality, which has shown high job-performance correlation.

AMCAT thus measures enough dimensions of a person's ability and disposition to be able to predict job success and be a proxy to the interviewer with regard to content coverage. This covers the second objection raised in the last section.

AMCAT is an objective test with multiple choice questions. However it does have a majority of application-based questions rather than knowledge-based questions. This tests the candidate's ability to apply the concepts and knowledge to real-world problems rather than assessing knowledge or rote learning.

We concede that an objective test cannot provide many abilities which are only measurable subjectively, creativity being one. The question remains however how dominant are these skills for the final hiring decision and job-performance. Our view is that this would vary from job-to-job and needs to be substantiated empirically.

Thus, there is enough reason to believe that AMCAT could be a good proxy to interviews once calibrated. The same needs to be verified empirically.

COM's Job Requirement

COM is a Bangalore based companies which hires entry-level software engineers for Web 2.0 product development. Their salary range is 4.0L to 5.0L per annum.

COM is very selective in their hiring. Each candidate goes through three rounds of interview and the convert rate range **between 1 in 15 to 1 in 20 of those they interview.**

They require candidates with very strong computer programming skills and ability to apply data structure and algorithm concepts in solving complex problems. They also want the candidates to have

very good communication and analytical skills.

The interview at COM comprises of making students write programs for particular complicated problems. If the candidate is unable to solve the problem, they provide hints and help the candidate progressively solve the problem. They desire to check the approach and thought process of the candidate towards solving computer programming problems. On the other hand, they test analytical skills by asking subjective puzzles to candidates.

Till now, COM was making decisions of interviewing or not interviewing candidates basis the resume of the candidate. They were not using any assessment tests. As cited before their convert rate ranged between one-in-fifteen to one-in-twenty.

AMCAT for COM Hiring

COM decided to use AMCAT for entry-level hiring in March 2008. Experts at Aspiring Minds decided to use the following modules for assessing applicants to COM:

- ⇒ English Comprehension
- ⇒ Quantitative Ability
- ⇒ Logical Ability
- ⇒ Computer Programming.

The Computer Programming test has a mix of basic programming questions, application questions on data structures and algorithms, and object oriented programming.

After detailed examination of the job function with the COM team, Aspiring Minds team hypothesized that **English Comprehension and Logical Ability were screening criteria for COM, whereas Computer Programming and Quantitative Ability were differentiating criteria within the good candidates.**

The cut-offs used for different modules are present in Table 1. After applying the cut-offs for screening candidates, the eligible candidates were sorted basis the sum of their standardized Computer Programming and Quantitative Ability Score. **COM was provided with the list of eligible candidates in order of priority** and also the list of ineligible candidates.

Event 1: The first event for COM was conducted at a reputed engineering campus in Bangalore, India. A total of 53 candidates took AMCAT. These consisted students with B.tech., M.Sc. and MCA degrees.

Module	Cut-off (Absolute Score)	Cutoff (Nationwide Percentile)
English	550	60
Logical Ability	500	50
Quantitative Ability	500	50
Computer Programming	600	75

Table 1

Out of these 53 candidates, 15 candidates were eligible after applying the first filter.

AM provided a list with ranking of the same to COM. The COM team distributed the 15 candidates to be interviewed by their technical team for the first round of interview. The technical team was blind to the AMCAT scores.

As a result of the first round of interview, 7 candidates were shortlisted. All candidates below AMCAT rank 11 were rejected by the interviewers. The marginal selects were rank 8 and 11. Thus the result of the first round of interview closely matched the ranking done by AMCAT scores.

After the final round of interview, COM made offers to candidates with Rank 1, 2 and 7. This clearly showed that the selection done through AMCAT was valid and mimicked the interview results.

Event 2: The second event for COM was at a reputed campus in Gujarat, India. The candidates tested had degrees of B.tech., M.Tech. and M.Sc. A total of 118 candidates were tested.

On basis of AMCAT, 29 candidates were shortlisted. A candidate list with ranking was provided to COM.

Given the confidence COM had developed on AMCAT after the first event, they interviewed only the first 8 candidates as recommended on basis of AMCAT. They finally hired candidates with Rank 1 and Rank 4.

Event 3: The third event for COM was conducted in Maharashtra, India. A total of

30 MCA students took the AMCAT. Using the filtering criteria, 6 students were shortlisted and provided to COM with rankings. **After the interview process, COM hired candidates with rank 1 & 2.**

Observations

The following observations were made in the hiring done for COM.

In all events, **the candidate ranked first on basis of AMCAT was selected by interviewers.** This clearly showed that AMCAT scores could effectively discriminate and provide ranking amongst the better candidates. The purpose of AMCAT did not limit to eliminating the not-so-good candidates, but it could be used to select hireable candidates amongst the shortlisted candidates.

Secondly, 2 out of the top 4 candidates were consistently selected by COM's interviewers. This shows a **very strong convert rate of one selection in every two interviews.** This is a phenomenal improvement over the earlier convert rates of one in fifteen or twenty.

In one case the seventh ranked candidate was selected together with the candidate ranked first and second. It may be further investigated why the seventh candidate was selected over-and-above the four candidates with higher rank. This may be considered an outlier result.

AMCAT was able to provide consistency across 3 distinct regions in India and

The interview convert rate jumped from 1 in 15 or 1 in 20 to around 1 in 2.

distinct educational qualifications – B.E., MCA, MSc and M. Tech. candidates.

Conclusion

AMCAT, the objective aptitude and skill assessment engine of Aspiring Minds is an effective tool to make hiring decisions. The current study showed that it could predict the interview results with high efficiency. This shows that AMCAT scores can be used as a standardized objective input for making hiring decisions.

Not only does the use of AMCAT **phenomenally reduces the number of**

interviews to be conducted for hiring a given number of candidates, the scores would help the interviewer take lesser time in the interview and take a more confident and objective decision.

This study shows that AMCAT can help organizations save time and cost by a significant amount and enable them to hire consistent workforce.

AMCAT achieves such efficiency due to its adaptive nature and wide coverage of skill and aptitude assessment.

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Pre-Assessed Pools | Internal Workforce Health-Check

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