Compensating For Low Perceptual Speed In College

By: Irvin C. Shambaugh
Chief Scientist

Occasionally an examinee will complain that his test administrator is spending too much of the summary conference discussing the low scores on the score sheet. Most people like to hear a lot about their strengths and little, if anything, about their weaknesses.

While AIMS' test administrators also prefer to stress an individual's high scores, they know from experience that a single low score can interfere with the potential success predicted by many high scores. Discussing low scores is particularly important because there usually are proven ways of compensating for each of these potential problems. Only by being aware of the nature of possible weaknesses and the means for overcoming them can you avoid these pitfalls to a successful career.

One of the important low scores that often must be explained is Perceptual Speed, an aptitude involved in the speed and accuracy of processing clerical activities. This factor is particularly troublesome because, while unimportant in many occupations, it can make it difficult to complete the educational programs necessary to prepare for these occupations.

In recent years, AIMS has been trying to document the difficulties low perceptual speed individuals experience in college. In addition, these studies have tried to uncover methods for overcoming this problem that were not included in the discussions in AIMS' latest book, YOU AND YOUR APTITUDES.

First, cases were collected of recent examinees who had attended large universities (enrollment of more than 20,000 undergraduate students). The experiences of low, average, and high perceptual speed individuals were compared. While these cases did not constitute a truly random sample of the students at these universities, the results were not encouraging of low perceptual speed students.

Many of the low-scoring cases had grade-point averages (GPA) below 2.0. Few had above average grades. The average perceptual speed score was higher for each successive class (Freshman, Sophomore, Junior, Senior). Even more alarmingly, in this sample there were no low perceptual speed students among the recent graduates of these schools. Since this study was completed, the AIMS staff has been looking for the lowest perceptual speed score recorded for a recent graduate of the largest of the universities included in this report. Currently, no one has been found scoring below the 42nd certile who meets these criteria.

It should be remembered that the comparisons in this first study were based on the pre-AIMS experiences of these individuals. Low perceptual speed students have been tested who have received their degrees from one of these large universities, but this happened after they completed the testing program.

This brings up the second and perhaps most interesting part of this research. A questionnaire was mailed to examinees who had been tested while still in high school

and who were now old enough to have completed college. They were asked about their college achievements, the problems they encountered, and the ways they had tried to deal with these problems.

The results should be very useful to any low perceptual speed high school student considering going to college.

At first, the responses to the questionnaire seem to contradict the earlier study. Disregarding AIMS' advice, many of these individuals enrolled at large universities. Even more surprisingly, there was no evidence that more low perceptual speed students graduated from small colleges than large universities. More than half of those who initially enrolled at a large university had completed their degree at the time they answered the questionnaire.

While it is not possible to eliminate all other explanations, there is one obvious difference between the first study where the low perceptual speed students had very poor results and the questionnaire study where they did much better. Only the respondents to the questionnaire knew about the perceptual speed aptitude, their low scores, and suggestions for reducing the effects of scoring low upon grades before they went to college. The importance of this difference is emphasized by the fact that most of the respondents listed the AIMS program among the factors that aided their success in college.

The low perceptual speed students did earn higher grades at the smaller colleges. Furthermore, in every case, when one of the respondents transferred from a large school to a small one, their grades improved by an average of over one GPA point.

The respondents were divided into two groups: those who already had graduated, or who were about to graduate and those who had left school before graduation or who were still in school with below average grades. The first group was labeled "successful," while the second group was called "unsuccessful."

There were two major differences between these two groups. First, the successful group reported fewer problems with poor study habits, such as, unable to keep up reading assignments, frustrated by the speed with which other students were able to do the same amount of work, had to drop courses in mid-semester, unable to keep up with homework, and unable to finish tests within time limits.

The second difference is concerned with how the successful group was better able to compensate for the lack of the perceptual speed aptitude. Both the successful and unsuccessful groups suggested techniques that they had found helpful. Some of these are listed later in this report. While there were some differences in how often each group mentioned some of these techniques, the most revealing results were in response to the question, "In college, how many hours a day did you spend on your schoolwork?"

In other studies using similar questions, the typical student reported spending 2-3 hours per day on out-of-class studies. The mean number of hours reported by the successful group in the current study was 4.64 hours/days. The unsuccessful group's

average was 2.58 hours studied per day. Thus, the unsuccessful group spent as much time as the typical college student but had unsatisfactory grades, while the successful group spent nearly twice as much time each day.

This relationship between success in school and the number of hours studied was further examined by determining the correlation between GPA and the number of hours of daily study reported by these low perceptual speed students. For students attending large universities, the correlation was 0.54. While there are other factors which may influence grades such as the difficulty of the college attended, the difficulty of the major pursued, the student's vocabulary level, the student's tendency toward an Extrovert frame of reference, etc., there is a significant relationship between these two variables.

There was one other finding that indicated the importance of good study habits. There were certain strategies for coping with low perceptual speed that were more popular with the unsuccessful group. These items indicate a tendency to look for short-cuts. Or perhaps an alternate interpretation would be that they were so handicapped by their low perceptual speed (and poor study habits) that they needed to resort to these approaches. As one respondent stated, "In those cases where there was nothing left to do, I cheated."

The types of assistance more frequently checked by the unsuccessful group included:

Choose instructors who assigned less homework,
Turned in homework assignments that were copied from someone else,
Cheated on one or more examinations.

CONCLUSIONS

While it has not been possible to include all of the results in this Research Bulletin, there are several implications of this study that should be helpful to individuals who score below average on the Perceptual Speed worksample. Certainly one of the important results is that the chances for success even at large universities may not be as bleak as previously considered.

However, any optimism that this result might cause should be tempered with a realization that this success was not automatic or universal. Certain factors seem to have aided this sample's successful low perceptual speed college graduates.

Low Perceptual Speed College Students Should:

1.Be prepared to work longer hours than other students,
2.Work to build good study habits before enrolling in college,
3.Learn coping strategies for dealing with detailwork and tests,
4.Be aggressive in seeking help when it is needed.

-Working Longer Hours

In addition to the evidence already cited, there are other reasons to consider planning to work more hours than other students. Many of the respondents indicated problems with poor study habits. On an open-ended question about specific problems

they had encountered, the low perceptual speed students mentioned factors like poor reading skills, taking too many hard courses during the same semester, and good grades required working more hours than other students.

Therefore, low-scoring students should plan on spending more time on homework than their classmates in college. Unless the individual has very good study habits or a relatively easy group of courses, he or she should plan on working 4-5 hours daily on out-of-class assignments.

-The Importance of Good Study Habits

Since low perceptual speed individuals must compete in an educational system where many of the assignments and tests are biased in favor of faster students, it is obvious that they should not do anything that will further aggravate this condition and do everything possible to reduce this time deficit. The problem in college most frequently cited by this sample was poor study habits.

Other common problems included:

Lack of study time due to extracurricular and social activities,
Unable to keep up with reading assignments,
Difficulty with basic math computations,
Unable to concentrate because of roommate(s).

Many of the specific suggestions made by this group dealt with improving study habits and study skills:

Use calculators with math-related courses,
Use computers for word processing (term papers),
Take difficult courses during summer sessions,
Take fewer courses per semester,
Develop good note-taking skills,
Set up a fixed study schedule,
Never put off homework assignments,
Improve your math ability,

Develop good test-taking skills, such as:

Skip time-consuming questions until the end of the test,
Write down whatever you can for partial credit,
Do not show all of your computations, Etc.

Therefore, failure to prepare for college can be especially harmful to those with low perceptual speed. They should work on improving as many of their study skills as possible. Even if they have good skills in reading, math, and note-taking, they should still be concerned with general study habits, such as:

Learning how to schedule their work assignments,
Learning to use their time efficiently,
Learning how to eliminate distractions,
Learning how to balance homework with extracurricular interests, Etc.

They should not wait until they are enrolled in college to work on developing these skills.

-Large University or Small College?

Despite the success of a number of the respondents in earning their degrees at large universities, AIMS will continue to recommend that low perceptual speed individuals give serious consideration to the alternative of choosing a smaller college. There are two reasons for continuing to make this recommendation.

First, even in this study, grades were higher for the low perceptual speed students at the smaller colleges. These higher GPA's can be very important if the individual is considering graduate or professional school.

The second reason for recommending smaller colleges seems even more compelling-the sacrifice that the low perceptual speed students need to make if they are to maintain above average grades. The indication from the reports of this sample is that large universities require that the low perceptual speed students spend perhaps three times as much effort as the smaller colleges.

1. Remember that in previous studies, the average study time reported by all types of college students was 2-3 hours per day.

2. The low perceptual speed students attending small colleges reported spending less than this average. None of them reported spending more than 3 hours per day.

3. At average size colleges (4-10,000 students), the reports matched the average for all students (2. 71 hours per day). Only about 15% of the students at this size college reported spending more than 3 hours per day.

4. At the large universities, the amount of detailwork was too great for most of those scoring low in perceptual speed to complete in a few hours. Most of the respondents spent more than three hours per day.