Validity Study

Validation of the Language-Free Computer Programmer/Analyst Aptitude Test

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Two criterion-related validation studies are reported. The grade point averages of 91 students at two colleges were correlated with the students' scores on the Language-Free Computer Programmer/Analyst Aptitude Test (LPAT). In both studies, the correlation between the LPAT and GPA was statistically significant (r = .39 and r = .37, uncorrected).

Samples

Two groups of college students were the participants in these two studies. The first sample consisted of 41 students majoring in computer or business areas at a business school near Harrisburg, PA. Four students did not release their grade point averages and were not included in the analysis. The second sample consisted of 50 students in an IT program at a community college in Nebraska. Two students did not complete all the test sections and two students did not release their GPAs. They were not included in the analysis.

Predictor Information

The Language-Free Programmer/Analyst Aptitude Test (LPAT) was the predictor for both studies. The LPAT is an objective, paper-and-pencil test designed for use in selecting trainees, entry-level employees, and more advanced personnel. It asks tough, realistic questions requiring reasoning, problem solving, computer math/algebra, and following procedural rules. By not asking questions about any specific computer language, the LPAT measures aptitude or potential rather than knowledge of syntax or commands.

The LPAT can be used to identify people with the aptitude to become excellent programmers or analysts, help identify which new college graduates will become the best programmers, or select people to enter a training program. The LPAT can also be used with experienced programmers or analysts to see how capable they really are. The questions on the test are similar to actual job tasks.

The LPAT covers the three abilities that are most needed to work as an applications programmer or analyst. It tests these essential areas rigorously using

questions that have the look and feel of programming. The three sections of the test have several different types of questions, as follows:

Reasoning and Problem Solving
- Determining what information is relevant to a particular problem
- Using diagrams

Numerical and Logical Analysis
- Changing ideas into formulas
- Following logical rules, and analyzing problems
- Learning and Using Pattern Matching Rules

Using and Analyzing Written Documents
- Understanding written assignments
- Understanding and using basic business English

The internal reliability of the overall LPAT score is .97. The LPAT also yields nine subscores, but these are not considered in this report.

Criterion Information

The criterion for both samples was the students' official grade point averages as reported by the colleges. No reliability information is available for this criterion.

Validity Information

The correlation between the overall LPAT score and GPA for the first sample was .39 (n=37, $p < .01$). The correlation between the overall LPAT score and GPA for the second sample was .37 (n = 46, $p < .01$).

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