Profile XT

EXECUTIVE SUMMARY

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INTRODUCTION

In these days of change, one of the primary goals for business is staying a step ahead of unpredictability. To maximize certainty and reduce expenses, the key strategic advantage for most companies is maintaining the performance of their employees. Employees who are well matched to their position have higher attendance records, less turnover, higher job satisfaction, and superior job performance. Both the employee and the employer share the benefits of enhanced job matching and the company is better prepared for changes in the business world.

The Profile XT™ is designed to facilitate achieving the best possible job fit. Our clients use the Profile XT to make effective job placements, develop effective work teams, to design optimal training programs based on the trainees' style of learning, to help supervisors determine which approach will work best when working with a particular employee, to help develop succession plans, etc.

The Profile XT is a psychometric instrument whose roots extend over the last twenty-six years. More than two hundred thousand job applicants and incumbents have participated in its development. These sample groups represent a diverse cross section of ages, ethnic groups, income levels, educational levels, job titles, companies, and industries. The Profile XT is the product of collaboration between several test development psychologists and specialists coordinated by Profiles International, Inc.

The Profile XT investigates several areas as a part of evaluating how an individual fits into a particular job. These areas are composed of a variety of constructs measured as ten-point standardized scales. Each scale represents a construct related to one of three areas and theories:

1. *Behavioral Traits:* The psychological premises of Adler, Beck, and Ellis – that observable behavior is a reflection of cognitive states
2. *Occupational Interests:* Holland's person-environment typology theory – that one's motivation for work can be associated with various categories
3. *Thinking Style:* Cognitive Learning Theory – that cognitive processes are reflected in one's style of learning

In general, the overriding theme of the PXT scales lies in Cognitive Psychology: conclusions about unobservable cognitive processes can often be drawn from objective, methodical observations of people's behavior. The act of reporting one's behavior is a reflection of the total person within, which partially determines one's fit for a number of work environments.

To create scales that measure constructs relevant to both our underlying theoretical perspective and our focus on the core of work-related behavior, a substantial pool of items was developed, administered, and factor analyzed. The resultant constructs that we identified satisfied our conceptual and practical needs, without creating an overly

complex assessment of the countless layers of human personality. In other words, while personality may be described in a great number of constructs, a practical compromise was to focus on nine essential aspects of behavior, six occupational interests, and five measures of learning potential.

Our practical intent is to provide the business community with an easy-to-administer assessment of relevant, work-related constructs that describe the working individual. These constructs, as measured by the PXT scales, provide the assessment user with a variety of relevant and applicable questions with which to interact with a candidate. Reliability and construct validity analyses met with our expectations, revealing coherent, consistent, and practical scales with which to measure the working population.

The Profile XT investigates several areas (Behavioral Traits, Occupational Interests, and Thinking Style) as a part of evaluating how an individual fits into a particular job. By reviewing broad areas of occupational interests, behavioral traits, and thinking style, we expand our ability to discover which areas will be most effective in determining job fit for a given position. By attending to each of the three areas, we enhance the opportunity to identify the factors that will lead to the best job fit.

USING JOB MATCH PATTERNS

The job match process for the Profile XT is an effective approach that minimizes the time required to efficiently describe jobs, people, and their degree of match. The descriptive process usually starts by examining the score pattern of those who are most successful within a position and those who seem to be overly challenged by the position. From this information, a pattern of scores across the various dimensions measured by the Profile XT may be developed to serve as the initial "success profile," or Job Match Pattern, upon which the job matching is based.

The Profile XT allows for the concurrent study of available incumbents, job requirement assessments by those who know the job, preliminary job patterns from the Profiles International pattern library, and a combination of these. Even with a small sample, you will have a good place to start the process and an approach that will allow further refinement of the job pattern with on-going evaluation. It should be noted that this initial success profile is continuously updated as more empirical information becomes available. This is important as a part of continually maintaining the job relevance of any process used in employee placement.

Based on this "success profile" knowledge of what is necessary for success in a position, we can build a Job Match Pattern for each factor. This pattern consists of a range along each scale in which the scores of the most effective performers tend to fall. The farther outside this range (Job Match Pattern) a score falls, the less likely there will be a good fit of that individual to the job in regard to that particular factor. In the Profile XT reports, job match is reported as a percent match to a specific Job Match Pattern.

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This allows for a variation between persons who may still share a good job fit to a position.

By using a Job Match Pattern, it becomes easy to quickly identify individuals that will tend to fit well into positions, and in what way they might have adjustments to make. This information is important for both job placement and job training.

The scores on each scale of the Profile XT are reported on a STEN (10-point) scale starting with a one at the low end and going to a ten on the high end. The raw scores have been normed so that the distribution of scores for the typical working population will fall on each scale with a normal distribution. In other words, on each scale about 2/3rds of the scores will fall at 4, 5, 6 or 7, and as you move toward either end of the scale, the frequency of scores will taper off.

Once a good Job Match Pattern has been established, it may be used to evaluate the match to that job for anyone who has taken the Profile XT. The Job Match Pattern is composed of a range of scores for each scale. Because they are not absolute, the typical pattern will be three to five units wide. This range represents the area in which those who are expected to fit most easily into the job will score. The farther outside this range (pattern) a score falls, the less likely there will be a good fit of that individual to the job in regard to that particular factor. As mentioned earlier, job match is reported as a percent match to a specific Job Match Pattern.

The range of reported job matches is reported from 25% to 95%. A match percentage is provided for each of the three sections (Thinking Style, Occupational Interests, and Behavioral Traits) as well as for the total match. The higher the match reported, the higher the expectancy that the individual will fit well in the job under consideration. While this Job Match Pattern approach to matching individuals to a job provides information of great value and should be an important part of the placement decision, remember that the results from any test should never make up more than a third of the final decision.

THE THREE SECTIONS OF the Profile XT

The Behavioral Traits Section

Description

The Behavioral Traits section consists of nine Behavioral Traits scales and a Distortion scale. The nine scales are Energy Level, Assertiveness, Sociability, Manageability, Attitude, Decisiveness, Accommodation, Independence, and Objective Judgment. A

description of each is found in the Technical Manual and the User's Guide for the Profile XT.

The research for this section spans more than twenty years. Between 1992 and 2005, more than 200,000 job applicants and incumbents were administered the Behavioral Traits scales. In the last year alone, this section has been administered to tens of thousands as part of its ongoing development and improvement, including the maintenance of up to date norms. The Technical Manual summarizes the results of our validation projects, which examine the relationship between the Behavioral Traits scales and a diverse range of criteria.

The results of these projects provide consistent and substantial support for the predictive validity of the Behavioral Traits section. Correlations between Behavioral Traits scale scores and measures of sales success, management performance, customer service, conscientiousness, turnover, and organizational status were consistently strong (correlation coefficients in the middle .40's).

As an example of the findings, the Energy Level scale and Assertiveness scale tend to be significantly related to sales success, management performance, and organizational status. The Profile XT's Attitude, Accommodating, and Objective Judgment scales tend to be significantly related to customer service effectiveness, employee conscientiousness, and turnover.

Reliability

Reliability refers to how consistently an assessment measures what it is designed to measure. Acceptable levels of reliability are generally acceptable if .70 or higher. Reliabilities for the nine Behavioral Traits scales for a sample of more than 200,000 job applicants and incumbents were computed. Coefficient alpha reliabilities for the nine Behavioral Traits scales for this sample averaged .79.

Reliability analyses indicate that the nine Behavioral Traits scales are reliable and produce consistent results. Excellent test-retest reliability has been demonstrated as well across all scales of the Behavioral Traits Section.

Validity

With regard to the internal validity of the Behavioral Traits section, an analysis of the correlation among the Behavioral Traits scales indicated a pattern of converging and diverging relationships that are clearly consistent with expectations based on the constructs being measured.

Construct validity studies report good congruence with other measures of Behavioral Traits such as the California Psychological Inventory, the Guilford-Zimmerman Temperament Survey, and the Gordon Personal Profile-Inventory.

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Studies have shown that the Behavioral Traits scales are effective in making placements for a good job fit. To summarize the results of some of the studies reported in the technical manual:

- High positive correlation between related scales.
- Negative correlation between polar opposite scales.
- Insignificant correlation between unrelated scales.
- Good correlation between scale scores and measures of job performance

Our ongoing adverse impact analysis of the Profile XT Behavioral Traits Section demonstrates that no practical impact is made on an individual's Job Match Percent.

In summary, statistical analysis of the nine scales of the Profile XT Behavioral Traits section clearly indicates that they provide a reliable and accurate measure of various relevant dimensions of normal adult personality that are useful for predicting a number of important business-related criteria.

The Occupational Interest Section

Description

It can be argued that the greater the degree of similarity between a person's interests and the occupational interests of those who have demonstrated success in a job, the more likely it is that there will be a successful match. This suggests that the person will be more satisfied, remain in their job longer, and be motivated to perform the job better. The results of our studies clearly support this "Best Fit" job screening and placement strategy.

The Occupational Interest Section contains 110 activities in 55-paired sets. The assessment user selects one activity from each pair to express his or her level of personal interest. This section of the Profile XT was specifically developed to measure an individual's interest in the six major occupational themes: Enterprising, Financial/Administrative, People Service, Technical, Mechanical, and Creative. These scales are described in both the Technical Manual and the User's Guide for the Profile XT.

Reliability

Coefficient alpha is a statistical measure of reliability. The higher a test's coefficient alpha, the more consistent the questions are for that test. The average coefficient alpha for the six Occupational Interest scales is .77. Excellent test-retest reliability has been demonstrated as well across all scales of the Occupational Interests Section.

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Validity

A diverse range of relevant criterion groups such as sales, financial, construction, and architects tend to have occupational interest profiles that are consistent with the scale meanings. In addition, work outcome measures such as turnover and work performance are significantly related to the constructs measured by the Occupational Interest Section.

Analysis of the Occupational Interest Section indicates the following:

- The Occupational Interest Section scales are internally consistent and independent from each other.

- The Occupational Interest Section is a reliable measuring instrument.

- The Occupational Interest Section has been shown to categorize or classify job applicants and employed individuals in ways that are consistent with the scale meanings.

- High point scale patterns have been shown to be significantly related to specific occupational groups.

- The Occupational Interest Section has been shown to predict statistically significant differences in average scale scores for diverse occupational groups and for work outcome measures.

Our ongoing adverse impact analysis of the Profile XT Occupational Interests Section demonstrates that no practical impact is made on an individual's Job Match Percent.

The Thinking Style Section

Description

The Learning Index score in the Thinking Style section is a composite of four sub-scales: Verbal Skill, Verbal Reasoning, Numerical Ability, and Numeric Reasoning. It is an index of expected learning, reasoning, and problem solving ability. Typically, the more easily an individual processes information, the greater the pace at which they may learn those skills that are used on the job. Often, maximizing that learning means finding the approach that will make the most of their available learning skills.

Reliability

Coefficient alpha is a statistical measure of reliability. The higher a test's coefficient alpha, the more consistent the questions are for that test. The average coefficient alpha

for the four Thinking Style scales is .81. Excellent test-retest reliability has been demonstrated as well across all scales of the Thinking Style Section.

Validity

The relationship between Thinking Style section scores and job performance criteria has been demonstrated across a variety of positions in different industries. In the development of the Profile XT, a sample of 3,260 individuals has been evaluated in 52 studies examining 110 job titles in 15 industries. The results reported support the effectiveness of scores on the Thinking Style section in predicting job performance.

Our ongoing adverse impact analysis of the Profile XT Thinking Style Section demonstrates that no practical impact is made on an individual's Job Match Percent.

ILLUSTRATIONS OF the Profile XT AT WORK

A study for a large, nationwide sales company is presented in the Technical Manual as a typical application for the Profile XT. The results demonstrate how the Profile XT produces information that significantly improves the employee selection and placement process within an organization. More importantly, this process improvement saves companies a substantial amount of money and time.

The employer initially provided a list of the 12 top performers so that they could be used to develop the Job Match Pattern. The criterion was from an in-house process that the company routinely uses to assess the performance of their sales people.

The standard software was utilized to build a Job Match Pattern using the 12 top performers. This was done using the software's integral Concurrent Study process. The resulting Top Performer Job Match Pattern was used for all subsequent job matching.

All subjects (including, but not limited to the original set of top performers) were matched against the resulting Top Performer Job Match Pattern with a 79% or greater match designated as an acceptable matching point. Analysis yielded the following results:

- Of those twelve Top Performers identified by the employer, 92% matched the pattern at or above the matching point.
- Of the 15 bottom performers (as identified by the employer), only 20% matched the pattern at or above the matching point.
- Of the remaining subjects who were identified as performing in the middle range, approximately one-half matched the pattern at or above the matching point (selection rate, 52%).

To summarize this study:

- Approximately 9 out of 10 of the top performers were selected as a good match to the Job Match Pattern while 4 out of 5 of the poor performers were not selected.
- While only 54% of the current sales people were selected as a good match to the Job Match Pattern, 92% of the most successful sales persons were included in that selected group, and only 20% of those who seem to be challenged by the position were included.
- More than half of the salespersons selected were proven top performers (52%).

Additional Studies

Users of the Profile XT™ frequently report the results of applying Job Match Patterns to help resolve difficulties in their businesses. Appendix E of the Technical Manual provides examples of these studies. Very brief summaries of a few of these studies are reported here to demonstrate the effectiveness of this assessment in actual use.

The Profile XT in Use by a Credit Union

This twelve-month study, conducted by a financial institution, ended in March 2002. The focus was on turnover for a credit union's Member Services representatives and its correlation with scores on the Profile XT.

Summary
These data suggest that had only those who scored an overall Job Match Percent of 75% or greater been hired, the turnover would have been 25 percent (25% x 60 hires x $6,000 each hire = $90,000 turnover cost). This would have resulted in a savings of $198,000.

The Profile XT in Use by a Psychiatric Hospital

A mental health facility found itself devoting a great deal of time to a weekly hiring board. Turnover was increasing year by year and an intervention was needed. The Profile XT was utilized to help identify top performers and decrease the turnover (and the associated time spent in hiring board meetings) at the facility. The reduction in turnover of 52% yielded a savings in excess of $300,000.

Summary
During the study, new employees maintained better retention rates and involuntary terminations dropped significantly, while the time and expense for terminations and

rehiring also decreased to more favorable and efficient levels. The process of identifying top performers through a Job Match Pattern proved to be a valid means for the selection and retention of Mental Health workers.

The Profile XT in Use by a Travel Agency

A travel agency conducted two studies between March 2001 and September of 2002. The intent of the first study was to identify trends based on performance data and the relationship of these trends to the Overall Job Match Percent on the Profile XT. The second study focused on analyzing turnover rates and the use of the Profile XT.

Study Summary: Performance Issues

By selecting candidates based on an objective Overall Match on the Profile XT, more top performers can be selected than bottom performers, saving on training budgets and enhancing overall sales performance. The process of identifying top performers through the Job Match Pattern is definitely a valid means for improving productivity of a sales department.

Study Summary: Turnover Issues

During the study, one hundred and eighty-one new employees were hired, while twenty-nine separated from the company. This represented a 43% reduction in turnover (down to 16% turnover from the pre-treatment rate of 28%). The company reported a savings of $330,000 in hiring costs alone. The process of identifying top performers through a Job Match Pattern proved to be a valid means for selection and retention in the study.

The Profile XT in Use in a Retail Company

A retail office supply business conducted this twenty-two month study, January 2001 through October of 2002. The focus was on turnover and performance for their corporate account managers and their relationship to Job Match on the Profile XT. Three hundred and seventy account managers were used for this study.

Summary
Matching to a well-developed Job Match Pattern helped to decrease turnover, save money, and save training time. Additionally, top and bottom performance could be predicted before a candidate was selected and this greatly enhanced sales for the company. The process of identifying top performers through the Job Match Pattern was definitely a productive means for selection and retention at this company.

The Profile XT in Use by a Hospital

A large hospital system provides an example of the Profile XT in the selection of Registered Nurses. The study was conducted to investigate the possible use of the Profile XT Job Match Pattern program to further refine their selection process and identify those with the potential to become top performers.

Summary

If an Overall Job Match percent of 83% had been used to select the individuals into two groups (Top Performers and Not Top Performers), eighty-three percent of the top performers would have been selected for the Top Group, and none (0%) of the bottom performers would have been selected for the Top Group. Also, 71% percent of the Moderate Performers would have been selected for the Top Group. Clearly selection will be enhanced by identification of potential Top Performers using the Job Match Pattern system found in the Profile XT.

SUMMARY AND CONCLUSIONS—THE PROFILE XT

In conclusion, the concurrent and predictive validity data summarized in the Profile XT Technical Manual consistently support the thesis that employees, well matched with their occupations and with the organizations in which they are employed, are inclined to be satisfied, to remain with their employer, and to be productive employees. A diverse range of relevant criterion groups such as sales, administrative, management, and supervisors tend to have profiles that are predicted and are consistent with the scale meanings.

Work outcome measures such as turnover and work performance have also been demonstrated to be significantly related to scale scores. The Profile XT provides accurate and useful information for pre-employment screening/placement and for occupational and career guidance.

The Profile XT is designed to facilitate placing persons in the best jobs by building Job Match Patterns and using an Overall Match percentage when reviewing an individual for possible placement. By building Job Match Patterns with either actual top performers (concurrent study method) or by analysis of a job by those who know the job well (job analysis survey method) and with the aid of preliminary patterns from the pattern library, a valid job pattern may be developed.

Because the overall match to a Job Match Pattern blends information about an individual's fit in thinking style, occupational interests, and behavioral traits, the impact of any one scale is only a small portion of the total. This helps protect against introducing adverse impact into the placement process.

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In one study presented in the Technical Manual, more than 500 ethnically mixed individuals (Caucasian, Asian, African-American, and Hispanic) were matched to Job Match Patterns in four diverse jobs (Customer Service Representative, Administrative Assistant, Human Resource Manager, and Sales). Using the government's rule of 4/5^{ths} as a criterion, no adverse impact was noted.

Taken all together, the full process used with the Profile XT is designed to help one understand what is required for success in a job and then know how well a given individual will fit into that job. Employers enjoy success in making good job placements when they use the Profile XT to find out what is relevant for success in a position and to measure those things well. As we said initially, the key strategic advantage for most companies is the performance of their employees. The Profile XT has proven to be an excellent tool for matching employees to the jobs that will maximize their performance.