APS Facility, APS In-Home and CPS Pre-Employment Test Evaluation

February 12, 2007

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Executive Summary

Historically, the Department of Family and Protective Services has experienced high staff turnover. To address this issue the Human Capital Initiative was implemented. One aspect of the initiative is a pre-employment test, developed in coordination with DFPS Child and Adult Protective Services and provided by the private company Performance Assessment Network (PAN).

The DFPS Performance Management Group was assigned to investigate four research questions:

1) Is there ethnic and/or racial bias in hiring that can be attributed to the pre-employment test?

2) Is there ethnic and/or racial bias in the recommendation rankings of the applicants?

For CPS and APS In Home combined, more than 70 percent of all applicants in each ethnic group achieved a rating of at least “Recommended.” These results are consistent with the agency’s desired hiring outcomes and with the “Four-Fifths Rule” (see page 18).

Among CPS applicants, White applicants scored “Highly Recommended” significantly more frequently than other ethnicities, and “Not Recommended” significantly less frequently than other ethnicities. Black applicants scored “Not Recommended” at a significantly higher rate than other ethnicities. These findings merit further inquiry.

Fifty-two percent of all APS Facility applicants who took the Facility test received a rating of “Not Recommended;” quite significantly higher than the failure rate for all other programs. This finding directs our attention to the cutoff threshold scores used in the APS Facility test (see pages 9, 20).

3) Does the use of the pre-employment test increase retention of staff?

New hire data in both CPS and APS reveal that the FY 2006 cohort had a smaller percentage of employee turnover compared to the FY 2005 cohort. This could be attributable to the pre-employment screening or a number of other factors. It is premature to expect a definitive conclusion this early in the evaluation. In Phase II and subsequent phases, the additional cohorts of employees hired in subsequent fiscal years will broaden this analysis enough to provide more conclusive evidence about the impact of the test on staff retention.

4) For CPS, are stipend students having difficulty passing the test? And if so:
   - what percentages of stipend students are not passing the test; and
   - are the stipend students that are having difficulty coming from any particular schools?

CPS Stipend Student data do not reflect that students from any of the source universities are “Recommended” at a higher or lower rate than the others (see page 14).

In Phase II, the scope of evaluation expands to include program performance and outcome indicators.

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1 PAN drew from several ‘industry standard’ personality and aptitude tests to create customized, job-specific assessments for DFPS (see p. 4). These source tools have been tested and normed to control for inherent ethnic bias.
Introduction

Due to the difficult nature of the work that DFPS is tasked with performing, the agency has historically experienced high staff turnover. While the agency has made some recent progress in reducing turnover, the goal remains to create, train and maintain a stable workforce that can perform at full capacity, with the ability to support a full caseload and optimize client outcomes. Although the number of vacancies is a small percentage of the agency’s total workforce, the constant loss of tenured and trained staff creates a significant burden on the field supervisors, who are responsible for filling the vacancies and equitably distributing cases to the remaining staff. As a part of DFPS Renewal efforts, the legislature required that the agency improve retention and turnover by doing a better job of initially choosing staff that will be more successful in providing protective services and therefore will be more likely to stay in DFPS positions.

In response to the turnover issues, DFPS implemented the Human Capital Initiative. One aspect of the Human Capital Initiative is a pre-employment test developed and provided by Performance Assessment Network (PAN). This pre-employment test was implemented to help the agency become more proficient at hiring the right staff in a timely manner, and by doing so, allowing supervisors more time for their primary task of ensuring quality casework in their units.

The purpose of the pre-employment test is to quantify applicants’ skill sets for consistent assessment and reliably screen applicants. By selecting applicants who rate highly on skills associated with direct services work, DFPS would hire the right people and fill vacancies more quickly. By hiring qualified applicants with the correct skill set for protective services work, the new hires would be better suited to doing the difficult work required of them and this would increase staff longevity and retention.
Component Source Tests for the DFPS Pre-employment Test

Adult Basic Learning Examination (ABLE)

The Adult Basic Learning Examination (ABLE) is an achievement test designed specifically for adults and assesses basic skills using items that encompass areas of everyday knowledge. By using real life situations, rather than tasks associated with scholastic success, it is a more realistic assessment of basic knowledge and achievement. ABLE consists of six subtests but, for the Texas DFPS Caseworker position, only four of the subtests are necessary. The revised assessment consists of 150 items and takes approximately 2 hours to complete.

The Texas DFPS Caseworker ABLE consists of the following subtests:

- **Vocabulary**: knowledge and understanding of words frequently encountered by adults in their work and/or daily activities.
- **Language**: grammar skills as they relate to written and oral comprehension.
- **Reading Comprehension**: the ability to make inferences from short written passages.
- **Problem Solving**: the ability to determine outcomes and retrieve information using conceptual information.

Each subtest is broken into clusters of items that cover the global competency being assessed. These clusters provide a comprehensive assessment of the Caseworker’s basic knowledge and skill set.

The ABLE report includes raw scores on the subtests and an overall summary of the Caseworker’s achievement. Pre-determined cut scores allow the DFPS hiring specialists to determine a course of action for each Caseworker applicant.

The Six Factor Personality Questionnaire

The Six Factor Personality Questionnaire (SFPQ) is an assessment measuring several important aspects of personality for both business and clinical settings and is applicable to the Texas DFPS Caseworker position. The SFPQ uses what are referred to as the “Big Five” aspects of personality, and then breaks these factors into critical characteristics. The questionnaire is comprised of 108 items and takes approximately 15 minutes to complete. Each item has a 5-point rating scale where the Caseworker indicates his/her level of agreement with the statement as a description of his or her own personality.
The Texas DFPS Caseworker SFPQ assesses the following personality dimensions:

- **Agreeableness**: the general nature of the Caseworker, whether someone is even-tempered or more excitable.
- **Extraversion**: how sociable the Caseworker is, whether someone is open to others or closed off.
- **Independence**: how autonomous the Caseworker is, whether someone is self-determined or needs direction from others.
- **Industriousness**: the ambition and focus of the Caseworker, whether someone has high ambition and a strong focus on work or has low ambition and tends to give up easily.
- **Methodicalness**: the degree to which the Caseworker can tolerate ambiguity, whether someone will not act without receiving all information or is more inclined to make spur of the moment decisions.
- **Openness to Experience**: the flexibility and adaptability of the Caseworker, whether someone likes change and new experiences or prefers stability and routine.

Each personality factor is further broken down into three characteristics to better gauge and describe the personality of the Caseworker. The SFPQ report provides ratings across the six personality dimensions and across the characteristics of each dimension. Pre-determined scoring bands for each personality dimension allow the assessor to determine a course of action for the Caseworker applicant.

**Testing Procedure**

Applicants for APS Facility, APS In Home and CPS worker positions are hired using a standardized process. Based on the minimum requirements for the position, applicants are screened and ranked. Those applicants that pass this initial screening are referred to AccessHR. AccessHR sends the applicant a test link through email and once the applicant completes the test, AccessHR updates the applicant profile by attaching the results. The profile now lists the applicant’s rank as “Highly Recommended,” “Recommended” or “Not Recommended.” Those applicants ranked “Highly Recommended” are interviewed first, except in the case of an applicant from Office of Eligibility Services (OES). An OES candidate will be interviewed first. (Priority ranking of OES applicants is explained in the next section.)

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2 *APS job codes: 5023Z, 5024Z, 5025Z, 5026Z.*
*CPS job codes: 5024C, 5024Y, 5025C, 5025Y, 5026C, 5026Y, 5027C, 5027Y.*
Below is the breakdown of the ratings for CPS, APS In Home, and APS Facility. Please note the following:

- 30% Not Recommend <= 30\textsuperscript{th} percentile
- 40% Recommended > 30\textsuperscript{th} percentile and <= 70\textsuperscript{th} percentile
- 30% Highly Recommended > 70\textsuperscript{th} percentile

Once the pool of “Highly Recommended” applicants is exhausted, those ranked “Recommended” may be interviewed. Although the core content of the tests are the same, APS Facility, APS In Home and CPS tests each have different cutoff scores that define each rating.

There are certain groups of applicants that are not required to take the test; they are:

- **Office of Eligibility Services (OES) applicants** - DFPS made a commitment to HHSC to offer the OES employees a preferential streamlined hiring preference for unit level direct service positions. If there are OES candidates who meet minimum qualifications for a particular job in the applicant pool, other applicants may not be considered until the pool of OES candidates is exhausted. Although the agency prefers that OES candidates take the pre-employment test, it is not a requirement and the score is not used in the hiring decision.

- **Stipend Students** - The agency supports a Title IV-E stipend project in cooperation with several universities throughout the state. Students selected through an application process are provided a stipend to pay for some of their tuition. The stipend agreement requires a commitment to work for Child Protective Services upon graduation from a qualified program. Initially, CPS preferred that the students take the test after graduation before beginning work, but their test score did not determine whether they were hired. Recently, the stipend contract was updated with the provision that they must be “Recommended” or “Highly Recommended” in order to receive a stipend.

- **Current Employees** - If an employee is currently employed in a caseworker position, they are not required to take the test and they may transfer within their program or across programs. This includes employees who are Adult Protective Service (APS) Specialists, Child Protective Services (CPS) Specialists, Child Care Licensing (CCL) Specialists, Residential Child Care Licensing (RCCL) Specialists and Investigators, and Statewide Intake (SWI) Specialists.

- **Former Employees** - Former CPS and APS Specialists who have been separated from the agency for less than two years do not have to take the test.

\[\text{PAN: The range of possible raw scores for each of the three batteries is different and cannot be compared across tests (i.e., a 1.5 on the CPS battery is not the same as a 1.5 on APS In-Home and vice versa). The three test batteries are all scored differently.}\]
Data
Data was collected from PAN, Convergys (Applicant EEO data) and the DFPS Data Warehouse through Management Reporting and Statistics (MRS). Data collected from PAN are records of each applicant’s test results for all three tests, CPS, APS In Home and APS Facility. The evaluation data consists of Test ID, Test Date, Applicant Name, Score and Rating. The tests were taken during fiscal year 2006.

1. The Applicant EEO (Equal Employment Opportunity) data is collected from the optional EEO form. The variables collected are SSN, Ethnicity, Gender, University, Job Code and Name. Applicant EEO data was matched with the PAN records to yield gender and ethnic data for each test by rating.

2. MRS provided statistics on FY 2005 and FY 2006 retention and new hires, and then total employee data was analyzed by ethnicity and region for each program.

3. The PAN and EEO data used in this evaluation require several important caveats.
   - The PAN and EEO data were initially collected without a primary key between the two data sets. In order to link the PAN test results with the corresponding EEO data, the only option was to concatenate the applicant’s first and last names, creating a unique identifier for each applicant. This process created duplicate data and associated reliability issues.
   - To mitigate contamination by duplicate data, if an applicant’s data appears to be duplicated, then the applicant’s highest score for each test was used in the analysis.
   - Because PAN does not know an applicant’s future job code or region, these elements were not included in the analysis.

Research Questions:
The evaluation team was assigned to investigate the following research questions:

1. Is there ethnic and/or racial bias in hiring that can be attributed to the pre-employment test?
2. Is there ethnic and/or racial bias in the recommendation rankings of the applicants?
3. Does the use of the pre-employment test increase retention of staff?
4. For CPS, are stipend students having difficulty passing the test? And if so:
   - what percentages of stipend students are not passing the test; and
   - are the stipend students that are having difficulty coming from any particular schools?
5. Questions for Phase II

- In FY 2007, this evaluation will be expanded to include analysis of the currently identified program performance metrics data from Fiscal Years 2005 - 2007. The purpose of this phase is to analyze whether performance has been significantly affected by the use of the pre-employment test over time.

- Further analysis will include employee turnover and longevity data.
PAN Data Analysis

Chart 1: Total PAN Tests Completed by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>CPS</th>
<th>APS Facility</th>
<th>APS In Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>206</td>
<td>4</td>
<td>42</td>
</tr>
<tr>
<td>02</td>
<td>129</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>03</td>
<td>782</td>
<td>7</td>
<td>121</td>
</tr>
<tr>
<td>04</td>
<td>276</td>
<td>11</td>
<td>69</td>
</tr>
<tr>
<td>05</td>
<td>115</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td>06</td>
<td>901</td>
<td>12</td>
<td>70</td>
</tr>
<tr>
<td>07</td>
<td>570</td>
<td>26</td>
<td>71</td>
</tr>
<tr>
<td>08</td>
<td>370</td>
<td>38</td>
<td>89</td>
</tr>
<tr>
<td>09</td>
<td>97</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>10</td>
<td>23</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>11</td>
<td>316</td>
<td>14</td>
<td>28</td>
</tr>
</tbody>
</table>

| Total test completed w/ EEO | 3,785 | 122 | 572 |
| Total test completed w/out full data | 1,427 | 31 | 172 |
| Total PAN test completed | 5,212 | 153 | 744 |

Chart 1 contains data for all pre-employment (PAN) tests completed by region, the number of completed tests with incomplete data and the number of tests with EEO data. Linking the PAN results to the EEO data set is required in order to break the PAN results down to the regional level. In all, 5,212 tests were completed for CPS, 153 for APS Facility and 744 for APS In Home. 79.7 percent of the APS Facility tests were accompanied by identifiable EEO data, followed by APS In Home with 76.9 percent with EEO data, and 72.6 percent of the completed CPS tests.

Chart 2: PAN Tests Completed by Rating and Program

<table>
<thead>
<tr>
<th></th>
<th>CPS</th>
<th>%</th>
<th>APS Facility</th>
<th>%</th>
<th>APS In Home</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Recommended</td>
<td>2,324</td>
<td>44.6%</td>
<td>12</td>
<td>7.8%</td>
<td>435</td>
<td>58.5%</td>
</tr>
<tr>
<td>Recommended</td>
<td>1,026</td>
<td>19.7%</td>
<td>62</td>
<td>40.5%</td>
<td>216</td>
<td>29.0%</td>
</tr>
<tr>
<td>Not Recommended</td>
<td>1,862</td>
<td>35.7%</td>
<td>79</td>
<td>51.6%</td>
<td>93</td>
<td>12.5%</td>
</tr>
<tr>
<td></td>
<td>5,212</td>
<td>100.0%</td>
<td>153</td>
<td>100.0%</td>
<td>744</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Chart 2 represents all pre-employment tests completed, by Rating and Program, so far in Phase I of the evaluation. The data in Chart 2 differs from previous data in that these are presented irrespective of the availability of connected EEO data, thus the Ethnicity and Region of the applicants cannot be known. However, the results for APS Facility applicants are still noteworthy. 51.6 percent of the applicants were “Not Recommended” and only 7 percent were “Highly Recommended”. PAN has been notified of this apparent discrepancy and has agreed to work with the DFPS Performance Management Group on re-examining the cutoff threshold score for this particular test.
Question 1: Is there ethnic or racial bias in the testing instrument as it impacts CPS?

In Figures 1, 2 & 3, during FY 2006, CPS had a total of 1,545 new hires compared to 1,410 in FY 2005, an increase of 9.6 percent. In FY 2006, of new hires,

- 43.4 percent were White,
- 32.7 percent were Black,
- 21.3 percent were Hispanic.

As seen in Figure 3, Black new hires increased by 16.4% between FY 2005 and FY 2006, and White new hires increased by 9.5%. Please note that there are many confounding variables that can impact the recruiting and hiring of new employees.

As seen in Figure 4, Black new hires increased by 16.4% between FY 2005 and FY 2006, and White new hires increased by 9.5%. Please note that there are many confounding variables that can impact the recruiting and hiring of new employees.

Figure 4 shows the average monthly CPS employees during FY 2005 and FY 2006, including both current employees and new hires.

Consistent with the data on new hires:

- The average number of Black employees increased by 15.7%.

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4 CPS job codes: 5024C, 5024Y, 5025C, 5025Y, 5026C, 5026Y, 5027C, 5027Y.
5 Data from MRS as of Aug-2006.
6 CPS job codes: 5024C, 5024Y, 5025C, 5025Y, 5026C, 5026Y, 5027C, 5027Y.
• Total Hispanic employees increased 3.3%.
• Whites employees decreased by 0.8%.

**Conclusion:** On the basis of the data thus far, it does not appear that the implementation of the pre-employment test negatively impacted the ethnic composition of CPS workforce. However, further analysis over a longer reporting period is required to more fully assess the impact.

**Chart 3: CPS Applicant Ethnicity by Rating**

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Rating</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Highly Recommended</td>
<td>777</td>
<td>50.5%</td>
</tr>
<tr>
<td></td>
<td>Recommended</td>
<td>516</td>
<td>33.5%</td>
</tr>
<tr>
<td></td>
<td>Not Recommended</td>
<td>246</td>
<td>16.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>1,539</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Highly Recommended</td>
<td>479</td>
<td>37.0%</td>
</tr>
<tr>
<td></td>
<td>Recommended</td>
<td>485</td>
<td>37.5%</td>
</tr>
<tr>
<td></td>
<td>Not Recommended</td>
<td>329</td>
<td>25.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>1,293</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Highly Recommended</td>
<td>273</td>
<td>37.7%</td>
</tr>
<tr>
<td></td>
<td>Recommended</td>
<td>296</td>
<td>40.9%</td>
</tr>
<tr>
<td></td>
<td>Not Recommended</td>
<td>155</td>
<td>21.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>724</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Highly Recommended</td>
<td>42</td>
<td>55.3%</td>
</tr>
<tr>
<td></td>
<td>Recommended</td>
<td>20</td>
<td>26.3%</td>
</tr>
<tr>
<td></td>
<td>Not Recommended</td>
<td>14</td>
<td>18.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>76</td>
<td></td>
</tr>
</tbody>
</table>

**Grand Total** 3,632

**Question 2:** Is there ethnic and/or racial bias in the recommendation rankings of the applicants?

In all, 3,632 applicants took the CPS pre-employment test. From Chart 3 and Figures 5-8, a total of 1,571 (43%) received a rating of “Highly Recommended”, 1,317 (36%) were “Recommended”, and 744 (21%) were “Not Recommended”. There were a total of 2,894 (80%) female applicants and 738 (20%) male applicants.8

7 Only applicant’s highest rating is counted, multiple test scores are teased out.
8 Although an applicant may have taken the test multiple times, only his/her highest score is reflected in the data.
Chart 3 highlights:

- 50.5 percent of the White candidates were “Highly Recommended” for an interview.
- Black applicants were split evenly between “Highly Recommended” and “Recommended” at 37.0 percent and 37.5 percent, respectively.
- Of the Hispanic applicants, 37.7 percent scored “Highly Recommended” and 40.9 percent were “Recommended”.
- Of the 744 applicants that were “Not Recommended”
  - 246 (33.1%) were White
  - 329 (44.2%) were Black
  - 155 (20.8%) were Hispanic.

Conclusions:

- The “Four-Fifths Rule” is a common and customary standard for analyzing the presence of bias against ethnic groups in hiring outcomes. It is interpreted to mean that the selection ratio of a minority group is at least 80% of the ratio of the majority group.  
- For all ethnicities, 79.5 percent of the applicants received a score of “Recommended” or above.
- A Chi Square analysis of the test results across ethnic groups revealed that White applicants were “Highly Recommended” to a significantly greater degree than other ethnicities. Whites also scored “Not Recommended” significantly less than other ethnicities.
- Black applicants, on the other hand, were “Not Recommended” to a significantly higher degree when compared to other ethnicities.
- However, more than 70 percent of applicants from all ethnic subsets were “Recommended” for an interview, which is consistent with the agency’s intent and the design of the test.
- The percentage of African American new hires increased in FY 2006.
- It should be noted that in January 2006, at the agency’s request, PAN recalibrated the CPS algorithm and cutoff scores to better match the desired 30 percent, 40 percent, 30 percent rating distributions.

9 PAN
10 PAN.
Question 3: Does the use of the pre-employment test increase retention of staff?

The retention analysis was conducted using a cohort of CPS employees hired in the months of September, October and November of FY 2005 and of FY 2006.

• The FY 2005 cohort is the comparison group.
• The FY 2006 cohort contains applicants hired after the implementation of the pre-employment test.
• The aggregate number of employees who terminated each month is divided by the total number hired to yield the percent no longer employed.
• During September, October and November of FY 2005, 286 employees were hired and 416 were hired during the same months in FY 2006.

Chart 4: Percent CPS New Hire Employees that Terminated Employment by Months After Hire

<table>
<thead>
<tr>
<th></th>
<th>1 month</th>
<th>2 months</th>
<th>3 months</th>
<th>4 months</th>
<th>5 months</th>
<th>6 months</th>
<th>7 months</th>
<th>8 months</th>
<th>9 months</th>
<th>10 months</th>
<th>11 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hired Sep, Oct Nov 2005</td>
<td>3.5%</td>
<td>7.0%</td>
<td>10.5%</td>
<td>12.9%</td>
<td>18.5%</td>
<td>23.8%</td>
<td>27.3%</td>
<td>31.5%</td>
<td>35.0%</td>
<td>36.7%</td>
<td>40.2%</td>
</tr>
<tr>
<td>Hired Sep, Oct Nov 2006</td>
<td>0.7%</td>
<td>3.1%</td>
<td>6.5%</td>
<td>8.2%</td>
<td>9.9%</td>
<td>12.5%</td>
<td>15.1%</td>
<td>18.8%</td>
<td>20.7%</td>
<td>26.0%</td>
<td>28.6%</td>
</tr>
</tbody>
</table>

Chart 4 illustrates the percentage of CPS new hire employees that terminate employment each month after hire.

• After one month
  o In FY 2005, 3.5 percent, or 10 employees, terminated 1 month after being hired.
  o In FY 2006, 0.7 percent, or 3 employees, terminated I month after being hired.
• After 6 months
  o In FY 2005, 23.8 percent, or 68 employees, are no longer employed.
  o In FY 2006, 12.5 percent, or 52 employees, are no longer employed.
• After 11 months
  o In FY 2005, 40.2 percent, or 155 employees, are no longer employed.
  o In FY 2006, 28.6 percent, or 119 employees, are no longer employed.

Conclusion: Based on the data in Chart 4, the FY 2006 cohort had a smaller percentage of employee turnover compared to the FY 2005 cohort. This could be attributed to the pre-employment screening or a
number of other factors. A larger cohort of employees (i.e., an entire fiscal year’s new hires) will be analyzed and included at the close of FY 2007. In Phase II (and any subsequent phases), the additional cohorts of employees hired in subsequent fiscal years will broaden this analysis enough to eventually provide conclusive evidence about the test’s impact on staff retention.

CPS Stipend Student Data

Question 4: Are CPS stipend students having difficulty being successful on the pre-employment test?

Chart 5 contains data on stipend student pre-employment test ratings by region and ethnicity for FY 2006. The data contain only those stipend students for whom PAN data were available (34 CPS stipend students).  

- 50.0 percent of these were “Highly Recommended”
- 20.6 percent were “Recommended”.
- 29.4 percent were “Not Recommended”

By Region:

- Region 11 had 14 students (64.3% “Highly Recommended”).
- Region 3 had 8 students (50.0% “Highly Recommended”).
- Region 7 had 6 students with only 1 student rated “Highly Recommended” and 2 students rated “Not Recommended”.

Chart 6 reflects the stipend students’ pre-employment test rating, by region and university, for FY 2006. Again the data contain only students for which PAN data was available (only CPS stipend students completed the pre-employment test).

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Chart 6: Stipend Student PAN Rating by Region and University FY 2006

<table>
<thead>
<tr>
<th>Rating</th>
<th>Region</th>
<th>University</th>
<th># Stipend Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Recommended</td>
<td>1</td>
<td>West Texas A&amp;M University</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>North Texas State University</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>University of Texas at Arlington</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Lamar University</td>
<td>1</td>
</tr>
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<td></td>
<td>5</td>
<td>Stephen F. Austin State University</td>
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<td>University of Houston</td>
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<td>Texas A&amp;M University - Kingsville</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>University of Texas - Pan American</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>17</strong></td>
</tr>
<tr>
<td>Recommended</td>
<td>3</td>
<td>University of Texas at Arlington</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Lamar University*</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Texas State University</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>7</strong></td>
</tr>
<tr>
<td>Not Recommended</td>
<td>3</td>
<td>University of Texas at Arlington</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Texas State University</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>University of Texas at Austin</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Texas A&amp;M University - Kingsville</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>University of Texas - Pan American</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

**Total Students**: 34

**Conclusion**: In all, data could be collected for a total of 34 students. Region 11 was the source of 50 percent of “Not Recommended” students but also of 50 percent of the “Highly Recommended” students. Based on these data there are no significant differences between institutions in the apparent quality (“Recommended” versus “Not Recommended”) of students being referred.


APS Analysis

**Question 1:** Is there ethnic/racial bias that can be attributed to the pre-employment test as it impacts APS?

Figures 9, 10 & 11 provide graphic data on APS new hires for FY 2005 and FY 2006.

- **Total New Hires:**
  - 2005: 194
  - 2006: 164

- **Ethnic Breakdown:**
  - **Hispanic:**
    - 2005: 78
    - 2006: 66
  - **Black:**
    - 2005: 46
    - 2006: 45
  - **White:**
    - 2005: 67
    - 2006: 43
  - **Other:**
    - 2005: 3
    - 2006: 10

- **Ethnic Distribution:**
  - 2005: Hispanic 35%, Other 2%, White 39%, Black 24%
  - 2006: Hispanic 26%, Other 6%, White 41%, Black 27%

- **Average Monthly Employees:**
  - **Black:**
    - 2005: 17
    - 2006: 18
  - **Hispanic:**
    - 2005: 7
    - 2006: 10
  - **White:**
    - 2005: 10
    - 2006: 11
  - **Other:**
    - 2005: 1
    - 2006: 1

- **Fiscal Year Changes:**
  - **Black:**
    - 2005: +42.9%
    - 2006: +10.0%
  - **Hispanic:**
    - 2005: -35.8%
    - 2006: -15.4%
  - **White:**
    - 2005: -2.2%

**Notes:**

- **APS Job Codes:** 5023Z, 5024Z, 5025Z, 5026Z.
- **Except “other.”**
- **APS Job Codes:** 5023Z, 5024Z, 5025Z, 5026Z.
The average number of Whites increased 5.9%.

**Conclusion:** Taking into account data from Figures 11 and 12, it does not appear that the pre-employment test significantly altered the ethnic structure of APS workforce nor did it result in biased or skewed hiring outcomes for any specific ethnic group. New hires decreased across all ethnicities; however, the average monthly total of APS employees increased for all ethnicities. It is not clear whether the increase in yearly average employees can be attributed to the pre-employment test, since new hires decreased overall.

**Question 2 - APS In Home:** Is there ethnic or racial bias in the recommendation rankings of the APS In Home applicants? Chart 7 and Figures 13-16 contain the PAN and EEO data for a total of 567 APS In Home applicants.

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*For applicants with multiple test scores, only the highest rating is counted.*
The APS In Home results are more positive than for facility applicants.

- 62.8 and 62.9 percent of White and Hispanic applicants were “Highly Recommended” respectively.
- 57.7 percent of all applicants scored “Highly Recommended” as opposed to only 13.2 percent “Not Recommended”.
- 86.8 percent of all applicants of all ethnic groups were rated “Recommended” and above.

**Conclusion:** The “Four-Fifths Rule” is a common and customary standard for analyzing the presence of bias against ethnic groups in hiring outcomes. It is interpreted to mean that the hiring selection ratio of a minority group is at least 80 percent of the ratio of the majority group.\(^\text{17}\) For our purposes, the selection ratio is the number of “Recommended”/”Highly Recommended” scores divided by the total number of applicants. Phase I analysis reflects that the hiring results of the CPS and APS In Home pre-employment tests currently meet the Four-Fifths standard. Chi Square revealed no significant differences between the observed and expected values for ethnic group and rating achieved on the test.

\(^{17}\) PAN
Question 2 – APS Facility: Is there any ethnic or racial bias in the recommendation rankings of the APS Facility applicants? Chart 8 below and Figures 17-20 reflect the combined PAN and EEO data for APS Facility applicants. The applicable data consist of 120 applicants who both completed the test and provided corresponding EEO data.

- This test resulted in 61.3 and 58.5 percent of both Blacks and Hispanics scoring in the “Not Recommended” range, respectively.
- Blacks accounted for only 1 percent of the “Highly Recommended” scores.
- The distribution of the “Highly Recommended” rating favored Whites with 72.7 percent.

If an applicant has multiple tests, only the highest rating is counted.
Looking at the distribution another way, of the applicants that scored “Recommended” and higher,

- 50.0 percent were White,
- 20.7 percent were Black, and
- 29.3 percent were Hispanic.

51.6 percent of all applicants applying were “Not Recommended,” compared to 20.5 percent for the CPS test and 10 percent for APS In Home.

**Conclusion:** Chi Square analysis revealed no significant differences between the observed and expected values for the applicant’s ethnicity and rating achieved on the test. We suspect this may be due to the small Facilities applicant pool. However, the high failure rate for all applicant groups leads us to believe the cutoff score threshold methodology is flawed. Further inquiry in the scoring of the APS facility test is being conducted.  

As reflected in Phase I of this evaluation, hiring outcomes resulting from the APS Facility test, do not meet the Four-Fifths standard described above. However, the proposed recalibration is expected to rectify this problem. The original cutoff scores were based on the validation sample, which is an accepted practice, although for this particular test, the sample was rather small.

**Question 3:** Does the use of the pre-employment test increase retention of staff?

The retention analysis for APS was conducted using a cohort of APS employees hired in September, October and November of FY 2005 and FY 2006.

- The aggregate number of terminated employees each month is divided by the total number hired to yield a percent no longer employed.
- During September, October and November of FY 2005, 27 employees were hired.
- 71 were hired during the same months in FY 2006.

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19 While the core questions on each test battery are the same, the scoring and range of possible scores for each test battery is different. Therefore, scores on the APS Facility Caseworker Assessment cannot be compared to scores on the APS In Home Caseworker Assessment or the CPS Caseworker Assessment.

20 PAN.
Chart 9 represents the percentage of APS new hire employees that terminate employment each month after hire.

- **After 1 month**
  - In FY 2005, 3.7 percent, or 1 employee terminated after 1 month.
  - In FY 2006, 2.8 percent, or 2 employees terminated after 1 month.

- **At 6 months**
  - In FY 2005, 22.2 percent, or 6 employees, are no longer employed.
  - In FY 2006, 12.7 percent, or 9 employees, are no longer employed.

- **After 11 months**
  - In FY 2005, 40.7 percent, or 11 employees, are no longer employed.
  - In FY 2006, 32.4 percent, or 23 employees, are no longer employed.

**Conclusion:** Based on the data in Chart 9, the FY 2006 cohort had a slightly smaller percentage of employee turnover compared to the FY 2005 cohort. This could be attributed to the pre-employment test or a number of other factors. It is premature to reach a definitive conclusion this early in the process. At the close of FY 2007, the entire fiscal year’s cohort of new employees will be analyzed.
Final results

- Chi-square was utilized to ascertain the degree of confidence in the statistical significance of differences observed in the data.
  - In CPS, White applicants were “Highly Recommended” to a significantly greater degree than other ethnicities, and “Not Recommended” to a significantly smaller degree.
  - In CPS, Black applicants were “Not Recommended” to a significantly greater degree than others.
  - This preliminary finding may generate some concern; it certainly merits continued investigation in the subsequent phases of the evaluation.

- The apparent differences in test results have not resulted in disproportionate hiring outcomes.
  - Within each ethnic group, over 70 percent of the applicants are rated as “Recommended” or higher. This is consistent with the agency’s intent and the design of the pre-employment test.
  - While parity between all ethnic groups (in the “Highly Recommended” and “Not Recommended” ratings) might be the optimal expectation, at this point its absence does not establish a bias or even a cause attributable to the instrument. Further investigation is warranted and this issue will be followed in Phase II.

- On the APS Facility test, a significantly higher percentage of applicants across all ethnicities were “Not Recommended”.
  - This may be the result of setting cut-off threshold scores too high, but further inquiry is in order. PAN has been notified of the incongruity and will work with DFPS to investigate and address the concern.

- The study of stipend students and their source universities in Phase I reveals no concerns about the pre-employment test. No evidence was found implicating either the test or a particular university in creating unintended obstacles to the hiring of stipend students.

- Further analysis is needed to more accurately determine whether or not the pre-employment test is increasing longevity, decreasing turnover, or facilitating improved policy compliance and client outcomes. For Phase II of the evaluation, additional data will be collected at the close of FY 2007 to measure new hire longevity, turnover, and performance data for the two fiscal years.
Next Steps
DFPS and PAN are working together to enhance the achievement pre-employment test. Below are some of the changes to take place.

DFPS PAN database changes:

- PAN will create new fields for data for use by the Service Center when ordering tests. Fields include: Tester SSN (no hyphens), Emp ID (ID of hiring specialist requesting the test up to 11 digits), and the Job Requisition ID (up to 10 digits).

Subject Title of Tester Email Change

- PAN will change the subject line in mail delivery of the test.

Executive Summary of Technical Manual

- PAN will provide DFPS with the Executive Summary of Technical Manual.

Data Dictionary Terms

- PAN will work to develop data element definitions.

Follow-up and Ongoing Update Meetings will be scheduled

DFPS and PAN will meet monthly to discuss:

- APS Facility Test pass rates and re-calibration; and
- CCL and Statewide Intake Worker Test and Interview Guide Development and Job Needs development for DFPS Training Section (Contract Amendments).

In FY 2007, Phase II of this evaluation will be expanded to include performance metrics, turnover and longevity data across Fiscal Years 2005–2007. These are not included in Phase I due to the lack of meaningful data this early in the life of the project.
Initiative Charter

DFPS Agency Reform Project

The DFPS Agency Reform Initiative Charter formally authorizes an initiative under the portfolio of the DFPS Agency Reform Program Management Office (PMO). The charter details the Executive Sponsor's expectations for the project and sets the requirements and the scope for the project.

<table>
<thead>
<tr>
<th>Date</th>
<th>Initiative Name</th>
<th>Initiative Leader</th>
<th>Program Coordinator</th>
<th>Executive Sponsor</th>
<th>Project Director</th>
<th>Project Start Date</th>
<th>End Date</th>
</tr>
</thead>
</table>

Purpose

DFPS has experienced higher than average turnover and a constant revolving door of staff for years. The agency has made progress in curtailing and even reducing the steady increase in turnover, while at the same time maintaining a fairly constant and relatively low vacancy rate. However, recent attention on the agency and increased caseloads has spurred an increase in the number of vacancies. Although the number of vacancies seems to represent a small number of the total workforce, it does represent a constant revolving door for which the agency is unable to maintain experienced staff who can carry the full workload.

Further, the revolving door creates additional burdens on the supervisors who have to constantly pull away from ensuring quality casework to fill vacancies.

Seeing the increase in caseload, the agency has requested additional resources to serve the increase numbers of vulnerable Texans in need. However, to fully utilize any additional resources, the agency has determined that it must address the revolving door and become more proficient at hiring the right staff in a timely manner, while not reducing the time a supervisor has to spend on ensuring quality casework from their units. The purpose of this project is ultimately to reduce the vacancy rate experienced in the direct service delivery areas of the agency.

A cooperative effort among the HHSC, the Convergys HR consultants (slated to take over many HHSC HR functions in 2005) and DFPS, has been determined to be the most appropriate approach for ensuring the full resources of the enterprise are available to address this critical issue.
Scope
The initiative scope includes all DFPS efforts in four primary areas.

1. Increase the pool of qualified applicants interested and suited to DFPS entry-level program positions.
2. Increase the capacity and efficiency with which DFPS hires and fills entry-level program staff vacancies.
3. Increase the quality of selections made for entry-level program staff vacancies, to increase the longevity and tenure of the workforce.
4. Implement efforts to improve the retention of staff.

Key Stakeholders
A cooperative effort among the HHSC, the Convergys HR consultants (slated to take over many HHSC HR functions in 2005) and DFPS, has been determined to be the most appropriate approach for ensuring the full resources of the enterprise are available to address these critical efforts.

- Legislature
- Governor’s Office
- HHSC COO area (including HR)
- Convergys (and their subcontractor PAN)
- CPS (state office and regions)
- APS (state office and regions)
- CCL (state office and regions)
- SWI
- DFPS Operations
- DFPS Center for Policy and Innovation

Major Deliverables/Milestones and High-Level Schedule

<table>
<thead>
<tr>
<th>Increase the pool of qualified applicants interested and suited to DFPS entry-level program positions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Explore, evaluate, and operationalize new recruitment strategies including hiring fairs, the use of social work job sites, partnering with military and educational placement centers, and expanded print advertising.</td>
</tr>
<tr>
<td>• Explore options and develop plans to attract applicants impacted by other HHSC program transition (such as Integrated Eligibility and Enrollment)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Increase the capacity and efficiency with which DFPS hires and fills entry-level program staff vacancies.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Redesign DFPS specific HR policy and procedure to integrate with and take advantage of accessHR system components and capabilities</td>
</tr>
<tr>
<td>• Implement hire-ahead programs</td>
</tr>
<tr>
<td>• Implement hiring specialists to recruit and select entry level program staff</td>
</tr>
</tbody>
</table>

Increase the quality of selections made for entry-level program staff vacancies, to increase the longevity and tenure of the workforce.

- Implement a standardized applicant selection | By September, 2005 |
process (individual for each program) for entry-level staff (to include application screen, testing, and interviewing) that will best identify candidates who are most likely to be successful and stay long-term in DFPS programs.

Implement efforts to improve the retention of staff.

- Implement funded salary enhancements from the Legislative session
  - By TBD
- Explore, evaluate, and operationalize other retention tools
  - By September 2007

Checklist of Initiative Components

<table>
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<tr>
<th>Component</th>
<th>Date Updated</th>
<th>Initials</th>
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<tbody>
<tr>
<td>Milestone Plan Contained in Charter</td>
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<tr>
<td>Communication Plan</td>
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<td>Status Report (Monthly)</td>
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<tr>
<td>Issue Management Report</td>
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</table>

Benefits Realization

- **Cost avoidance**: By reducing the vacancy rate, it is expected that DFPS will avoid the “costs” associated with turnover and the revolving door of staff.
- **Revenue enhancement**: NA
- **Service Improvements**: By decreasing the vacancy rate it is expected that direct service workers will experience reduced workloads and be able to provide improved services to clients.
- **Provider Benefits**: NA

Assumptions, Constraints and Risks

**Assumptions**

This project assumes continued and ongoing support from HHSC and the Convergys partners to be successful, particularly as it relates to recruitment, the development of selection processes, and the integration of DFPS business process with accessHR functionality. This project also assumes that all support provided by Convergys and their subcontracting partners are included in the contract they currently have with HHSC, that HHSC will be billed for any costs associated, and that DFPS will reimburse HHSC accordingly. This project also assumes regional support for and acceptance of increased consistency as it relates to hiring and selection efforts.

**Constraints**

This project may be constrained if some of the options considered are found to be cost prohibitive. This project may also be constrained by the number of dedicated resources to the recruitment and selection functions.

**Risks**

- Despite recruitment efforts, adequate applicant pools may not be available for DFPS positions.
- Using better applicant matching/selection processes may reduce the number of applicants hired from available pools.