GAIN Appraisal Program Fourth Report 1990
Executive Summary

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Introduction

The Greater Avenues for Independence (GAIN) Legislation, AB 2580 (Chapter 1025), enacted by the California Legislature in September 1985, contained a full range of employment-related training and supportive services designed to provide Aid to Families with Dependent Children (AFDC) program applicants and recipients with the skills needed to acquire unsubsidized employment. Education and training are key components of this welfare reform legislation.

Assessment has been integral to the GAIN program since its inception, providing the foundation upon which training and educational needs are identified and an employability plan is developed. Implementation of the GAIN Legislation at the county level was designed to occur gradually over a six year period, beginning in June 1986. In keeping with the GAIN statute and regulations mandate which specifies that the county welfare departments shall determine if a registrant lacks basic literacy, mathematics, or English language skills, tests were designed and developed by the Comprehensive Adult Student Assessment System (CASAS) through a contract administered by the California State Department of Social Services in cooperation with the California Department of Education to assess the basic reading, math and functional listening comprehension skills of GAIN participants. Together these tests comprise the "GAIN Appraisal Program."

CASAS' test item validity has withstood ongoing internal review and external evaluation since 1980. The GAIN Reading Appraisal, the GAIN Math Appraisal, and the GAIN Listening Appraisal which comprise the GAIN Appraisal Program have proven to be internally consistent, reliable and accurate with the psychometric model used. On the basis of test results, participants lacking basic reading, mathematics or English language skills shall have provisions for obtaining these skills incorporated into their GAIN participant contract. Referral criteria are available to assist in appropriate referrals to Adult Basic Education (ABE), General Educational Development (GED) instruction or English as a Second Language (ESL) programs. This educational opportunity facilitates the movement of GAIN participants toward unsubsidized employment.

Test Score Characteristics and Interpretation

CASAS assessment instruments have been widely used throughout the United States since 1980 to assess the functional literacy of adults and youth including an estimated 300,000 welfare recipients. Based upon this extensive experience and corresponding database, levels of functional literacy have been determined. The following briefly summarizes these levels of functional literacy relative to the workplace.

Below 200

Adults scoring below a 200 scale score have difficulty with the basic literacy and computational skills necessary to function in an employment setting and/or in the community. These adults can handle routine, entry-level jobs, but are often limited to jobs requiring only the most basic oral communication in a setting in which all tasks can be demonstrated. These adults have difficulty providing basic personal identification in written form (e.g. job applications), are not able to compute wages and deductions on paychecks, and cannot follow simple directions and safety procedures.

200 - 214
Adults scoring at a 200 through 214 scale score level can function in entry-level jobs that require simple oral communication skills where performance tasks are demonstrated. They have difficulty pursuing other than entry-level jobs requiring minimal literacy skills. They can fill out simple job application forms and demonstrate only basic computations.

215 - 224
Adults scoring at a 215 through 224 scale score level are able to perform basic literacy tasks and basic computational skills in a functional employment setting. They are generally able to function in jobs or job training that involves following oral and written instructions and diagrams. They usually have difficulty following more complex sets of directions.

225 and Above
Adults scoring at or above a 225 scale score can usually perform work that involves following oral and written directions in familiar and some unfamiliar situations. They can function at a high school entry level in basic reading and math and, if they do not have a high school diploma, can profit from instruction in General Educational Development (GED) and have a high probability of passing the GED test in a short time.

GAIN Appraisal Program Database

Data collection which has been ongoing since the initial implementation of the GAIN Legislation includes not only test score performance but also provides salient demographic, educational and program characteristics of GAIN participants. Data presented herein update the GAIN III Report by 70,358 participants for the time period from May 1989 through April 1990. The data reported below are cumulative, based upon 191,863 GAIN clients throughout the 58 counties in California for the time period from July 1986 through April 1990.

This fourth annual GAIN report contains a wealth of information regarding GAIN clients in this study population throughout the state of California, the major findings of which are incorporated into this Executive Summary. As with any data, caution should be exercised in interpretation. Limitations in data collection, processing and analysis have their origins in the gradual implementation rates at the county level; data collection instruments modified over time based on evolving operational needs; and data collection materials which are submitted incomplete. Where some of the largest, most demographically diverse counties have not met projected implementation rates, those counties are underrepresented in this study population thus limiting the potential for the generalization of findings to the larger GAIN population. Program implementation rates rather than program size determine the proportional contribution of each county in this dynamic database.

Demographic, Educational, and Program Characteristics

The demographic, educational and program-specific characteristics of individual GAIN program participants are captured in the data collection process and subsequently aggregated for analysis and reporting purposes. Detailed data are presented in GAIN IV which provides a demographic and educational profile of GAIN participants in this study population. Program-specific characteristics of participants pertaining to their aid category (AFDC-FG, AFDC-U, RCA, GR), aid status (New, Existing, Restoration) and registration status (Mandatory, Voluntary) are also provided.

Demographic Characteristics

Gender

In this GAIN study population, 64.2 percent are Female and 35.8 percent are Male.

Age

More than two-thirds (67.5%) of the GAIN participants in this study population are less than 35 years of age and nearly half (48.7%) are age 25 to 35. Approximately 30 percent are from 35 to 50 years old and only three percent are 50 years and older. The age 45 and over category comprises 6.8 percent of this GAIN population.

Ethnic Background

Three ethnic categories account for 86.5 percent of this study population, namely Caucasian (44.7%), Hispanic (25.3%) and Black (16.5%). The remaining categories which together comprise 13.5 percent of this study population are Indo-Chinese (4.2%), Native American (3.6%), Asian (2.5%), Filipino (0.7%), Pacific Islander (0.6%) and Other (1.9%).

Native Language

Two languages, specifically English (83.7%) and Spanish (8.4%), account for more than 92 percent of the total reported. Seven languages (Vietnamese, Laotian, Cambodian, Korean, Chinese, Japanese and Tagalog) and an Other category account for the remaining 7.9 percent of the native languages reported.

Educational Characteristics

Highest Grade Completed

Only 12 percent of the study participants reported that they have completed more than 12 years of school. Approximately three-quarters (76.1%) of this population reported that they have completed nine through twelve years of education and approximately 12 percent of participants reported completion of less than nine years of school. Nearly seven percent of these reported completing 0-6 years and approximately six percent completed 7-8 years of school.

Diploma/Degree Awarded

Only 45.7 percent of the GAIN participants in this study population reported earning a High School Diploma or equivalent and eight percent reported having earned either a Technical, Associate of Arts (AA), or Four Year Degree. Another 46 percent reported that they had not earned a diploma/degree of any kind.

Last School Attended

Nearly 70 percent of those GAIN participants for whom data are available reported that the last school they attended (high school or below) was in California.

Program Characteristics

Aid Category

GAIN participants are classified into one of four aid categories including AFDC-Family Group (AFDC-FG), AFDC-Unemployed Parent (AFDC-U), Refugee Cash Assistance (RCA), or General Relief/General Assistance (GR). Nearly 70 percent (68.8%) are AFDC-FG and the remaining 31.2 percent are predominantly AFDC-U. The RCA and GR categories combined comprise less than one-half of one percent of this GAIN study population.

Aid Status
GAIN participants are further classified as a New, Existing or Restoration case. Approximately 47 percent of the GAIN participants in this study population are New cases. Existing cases accounted for another 47 percent and the remaining 6.4 percent are Restoration cases.

Registration Status
GAIN participants have either a Mandatory or Voluntary registration status. The greatest majority (84.6%) of the GAIN participants in this study population have a Mandatory registration status.

Appraisal Score Performance

Assessment of GAIN participants' functional reading, mathematics and English listening comprehension skills is an integral component of the GAIN Appraisal process. Unless otherwise indicated, the GAIN Reading Appraisal and GAIN Math Appraisal are administered to participants to assess their basic reading comprehension and basic math skills in a functional or "life-skills" context. The following test score data are based on test score performance of 182,112 participants on the Reading and Math Appraisals for the time period from July 1986 through April 1990.

Reading Appraisal Scores
Approximately 76 percent of this GAIN study population scored at or above a 225 scale score indicating that they can function at a high school entry level in basic reading and perform functional reading tasks. Nearly 14 percent had a reading appraisal score between 215 and 224 indicating that they are functioning below a high school level and only marginally capable of performing functional reading tasks. Approximately 12 percent had a scale score below 215 indicating that they could not demonstrate even a minimal level of functional literacy required for most jobs and indicating the need for an educational referral. The mean or average Reading Appraisal score was 233.3.

Math Appraisal Scores
Approximately 36 percent of the GAIN participants in this study population achieved a scale score of 225 and above on the Math Appraisal and would be able to perform functional math tasks in the workplace. The slightly greater than 26 percent who scored at the 215 through 224 level would be only marginally able to perform math tasks in the workplace. Of the remaining 37.5 percent, approximately 30 percent scored between a 200 and 214 scale score and nearly eight percent scored below 200. This means that more than one-third of the GAIN participants in this study population could not perform functional math tasks required for most jobs. The mean or average scale score on the GAIN Math Appraisal was 218.9 indicating that on the average this GAIN population can perform basic math tasks at only a marginally functional level.

Appraisal Scores by Gender
Eighty percent of the females and approximately 70 percent of the males in this GAIN study population achieved a scale score of 225 and above on the GAIN Reading Appraisal and would be able to perform functional reading tasks in a work environment. Approximately 13 percent of the females compared to 16 percent of the males scored at the 215 through 224 level indicating their marginal ability to perform work-related reading tasks. Only 7.5 percent of the females compared to 13.7 percent of the males scored below 215 on the reading test indicating their inability to perform

basic functional reading tasks required for most jobs. The mean reading scale score was 230.9 for males and 234.7 for females.

The percentage of males and females scoring at each scale score level on the GAIN Math Appraisal is nearly identical. Approximately 37 percent of both males and females achieved a scale score of 225 and above and 26 percent scored at the 215 through 224 level. In other words, approximately 63 percent of both males and females would be able to at least marginally perform functional math tasks in a work environment. More than 36 percent of the participants in both groups scored below 215 and would not be able to perform the functional math tasks required for most jobs. The mean math scale score was 219.3 for males and 219.1 for females.

Appraisal Scores by Age

Participants age 45 and over demonstrated lower functional literacy on the GAIN Reading Appraisal. Only 57.6 percent of participants age 45 and over achieved a scale score at the 225 and above level on the GAIN Reading Appraisal compared to from 74 to 79 percent of participants in each of the other age categories. The percentage of participants in each age category scoring below a 215 scale score on the Math Appraisal also increased with age. On the GAIN Math Appraisal, only 28.8 percent of participants age 45 and over scored 225 and above.

Appraisal Scores by Ethnic Background

Nearly 90 percent of the Caucasians in this study population scored at the 225 and above level compared to 30 and 35 percent respectively of the Indo-Chinese and Asians. The mean reading score by ethnic background ranged from 215.8 (Indo-Chinese) to 239.1 (Caucasian). Mean reading scale scores are lower than the overall mean (233.3) for Indo-Chinese (215.8) , Asians (218.4), Hispanics (229.2), Native Americans (229.3), Pacific Islanders (229.8), Filipinos (230.4), and Blacks (230.6). The mean scale scores by ethnic background on the GAIN Math Appraisal were considerably lower ranging from 212.9 for both Asians and Indo-Chinese to 225.0 for Caucasians. For the other ethnic groups, mean scale scores on the GAIN Math Appraisal were Blacks (213.3), Hispanics (214.0), Native Americans (215.1), Filipinos (216.3), and Pacific Islanders (216.8).

Appraisal Scores by Native Language

Eighty-one percent of participants who identified English as their native language had reading test scores at or above 225 compared to 57 percent of the participants who identified Spanish and 42 percent of the participants whose native language is Vietnamese. There also exists a relationship between English reported as participants' native language and scores on the GAIN Math Appraisal. Approximately 39 percent of the participants' who reported English as their native language scored above 225 on the GAIN Math Appraisal compared to 34 percent of the participants whose native language is Vietnamese and approximately 19 percent of the participants who identified Spanish as their native language.

Appraisal Scores by Highest Grade Completed

Participants who completed more years of school had higher test scores than participants who completed fewer years of school. The mean reading scale score for participants who completed Grade Levels 0-6 was 216.0; for Grade Levels 7-8, 224.4; for Grade Levels 9-11, 231.4; for Grade Level 12, 236.9, and for participants who completed Grade Levels 13 and above, the mean reading scale score was 242.6. Nearly three-fourths (74%) of the participants who completed six or fewer years of school scored below 215 on the GAIN Math Appraisal thus lacking the basic functional math skills required in most employment. The mean math scale score for participants who

completed six or fewer years of school was 205.6 compared to mean scores of 209.6, 216.2, 222.2 and 229.8 for participants who respectively completed grades 7-8, 9-11, 12 and 13 or more years of school.

Appraisal Scores by Diploma/Degree Earned
The percentages of participants who scored above 225 on the GAIN Reading Appraisal ranged from 83 to 93 percent for those who reported earning a diploma or degree of some kind compared to only 63 percent for those who did not earn any type of diploma or degree. More than 16 percent of those without a diploma or degree scored below 215 on the GAIN Reading Appraisal and lack the minimal functional reading skills needed in the workplace. The mean math appraisal score of 212.7 for participants who reported no diploma or degree of any kind is indicative of the lack of minimal functional math skills as well. The mean scale scores on the GAIN Math Appraisal for participants who reported earning a diploma or degree of any kind ranged from 221.7 to 232.8.

Appraisal Scores by Location of Last School Attended
The mean score on the GAIN Reading Appraisal for participants in California was slightly higher (233.8) than the mean reading scale score (232.0) for those outside of California. Where participants last attended high school or below appeared to have little impact on math test score performance. The mean scale score on the GAIN Math Appraisal was 218.5 for those in California and 218.1 for those out of state.

Appraisal Scores by Program Characteristics
The AFDC-FG category had the greatest percentage of participants scoring above 225 on the GAIN Reading Appraisal. The mean reading scores by Aid Category were AFDC-FG 234.7; AFDC-U 231.5; RCA 226.3; and GR 227.0. No notable differences were identified based on participants' classification as a New, Existing or Restoration case. There is a difference, however, between Voluntary and Mandatory registrants. The mean scale score on the GAIN Reading Appraisal was 233.0 for Mandatory whereas Voluntary registrants had a mean score of 237.1. Math Appraisal score performance was similar for the two AFDC categories. Mean math scores were nearly identical for AFDC-FG (219.4) and AFDC-U (219.3) participants. Mean math scale scores were 213.3 for RCA participants and 212.4 for GR participants. Slight differences in math test score performance by Aid Status were identified. The mean math scale score for New cases was 219.8, Existing cases 218.4 and for Restoration cases the mean scale score was 219.2. There is a difference in GAIN Math Appraisal scores for Mandatory versus Voluntary registrants. Mandatory participants had a mean score of 218.7 compared to 221.3 for Voluntary participants.

Composite Appraisal Scores

Composite Appraisal Score Performance by Program Characteristics

Aid Category
Little difference was seen between the percentage of participants in the two AFDC categories who scored 225 and above on both tests (AFDC-FG 36.8% and AFDC-U 35.8%). There was a pronounced difference between these two groups, however, in the percentage who scored below 215 on both tests, 4.1 and 7.4 percent respectively. In the RCA/GR combined category, only 21.1 percent scored 225 and above on both the GAIN Basic Reading and Math Tests and more than ten percent (10.6%) scored below 215 on both tests.

Aid Status
More than 37 percent of the New participants, 34 percent of the Existing cases and 36 percent of the Restoration cases scored 225 and above on both the Reading and Math Appraisals. No notable differences in composite test score performance were identified relative to Aid Status.

Registration Status
Nearly 35 percent of the Mandatory participants compared to 42 percent of Voluntary participants scored at or above 225 on both the GAIN Reading and Math Appraisals.

Projected Educational Referral Model

A model was developed to permit simulated educational referrals integrating the general, recommended educational referral criteria with clients' composite test score performance and educational background. The following educational referral projections specific to this GAIN study population are derived from this model.

Projected Educational Referrals
It is projected that 60 percent of the GAIN clients in this study population would receive an educational referral. Of these, it is estimated that more than one-third (34.2%) would be referred to Adult Basic Education (ABE) programs, 19.1 percent to General Educational Development (GED) instruction, 5.4 percent to English as a Second Language (ESL) programs and the remaining 1.6 percent to further diagnostic assessment. All participants projected to receive no educational referral projection minimally scored at 215 and above on both tests. Nearly two-thirds (65%) scored at the 225 and above level on both GAIN Appraisals and have a high school diploma or equivalent.

Educational Referral Projections by Program Characteristics
The projected educational referral model was further utilized to develop educational referral projections in conjunction with data regarding participants' aid category, aid status and registration status.

Aid Category
The greatest percentage of participants estimated to receive no educational referral is in the AFDC-FG category (43.1%) followed by AFDC-U (38.7%). Twenty-seven percent of the participants in the RCA category are projected to receive no referral as are 24.2 percent of the participants in the GR category.

Approximately 34 percent of both AFDC categories are projected for referral to ABE programs compared to greater than 44 percent of participants in the RCA category and more than one-half (51.5%) of participants in the GR category.

Educational referral projections to GED instruction are similar for both AFDC categories and also for participants in the GR category. Twenty to 22 percent in each of these categories are projected to receive a GED referral. Only 17.3 percent of the participants in the RCA category are projected to receive an educational referral to GED instruction.

The greatest percentage of projected educational referrals to English as a Second Language (ESL) is in the RCA category (8.9%) and the lowest percentage in the AFDC-FG category (1.4%). The

percentages of participants in each aid category projected for referral to Level A or Level AA Testing ranged from one percent (AFDC-FG) to 2.5 percent (RCA).

Aid Status
No educational referral is projected for 42.8 percent of the New cases, 39.2 percent of the Existing cases or for 41.2 percent of the Restoration cases. Similar percentages in each group are projected for referral to ABE, GED and Level A and AA Testing. Slightly more than three percent of the New cases, 2.6 percent of the Existing cases and approximately one percent of the participants in the Restoration category are projected to ESL referral.

Registration Status
The GAIN participants in this study population with a Mandatory registration status have a predictably larger percentage (59.5%) projected to receive an educational referral compared to 53.1 percent of Voluntary participants.

Nearly 36 percent of Mandatory participants are projected for referral to ABE programs compared to 29 percent of participants with a Voluntary registration status. A greater percentage of Voluntary participants (22.6%) are projected for referral to GED instruction compared to an estimated 19.8 percent of Mandatory participants. More than two percent of the Mandatory participants are projected for ESL referral compared to approximately one percent of the Voluntary participants. Finally, an estimated 1.6 percent of GAIN participants with a Mandatory registration status are expected to receive a referral to Level A/AA Testing compared with one-half of one percent (0.5%) of Voluntary participants.

These GAIN Appraisal results and educational referral projections have far reaching implications, providing the vehicle for basic skills evaluation as mandated in GAIN statutes and regulations. These results also assist program managers through the availability of a reliable demographic, educational and program profile of this GAIN study population.

The Basic Skills Certification Test was piloted this past year and the ESL Certification Test has progressed through the developmental and field testing stages with statewide implementation expected in the near future. As data collection efforts continue, this proves to be an exciting year with significant contributions to this dynamic GAIN database.