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National Institute of Corrections Training Academy Evaluation Project, 2005-2006

Participant Demographics, Overall Evaluation of Training, and Applicability Ratings

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This is the first in a series of research bulletins resulting from NIC's Training Academy Evaluation Project (TAEP). The TAEP is being conducted by a team of researchers from the Center for Criminal Justice Education and Research, at Eastern Kentucky University, in collaboration with NIC staff. The purpose of the series is to disseminate key findings from the TAEP in a manner that enhances understanding of training programs and, when appropriate, promotes program improvements. This is consistent with the NIC Balanced Scorecard requirement that strategic objectives be linked with measures of progress toward accomplishment of those objectives.

The TAEP was initiated in November 2004 after two members of the research team gave an invited presentation on evaluating training programs at the NIC Training Academy in Long-

Highlights

- Response rates for initial data collection efforts in the 2005-2006 TAEP averaged about 95 percent.
- Although follow-up response rates on 17 of 20 training programs averaged over 81 percent, two 2006 MNFO trainings achieved follow-up response rates of less than 36 percent. (The remaining follow-up is scheduled for March 2007.)
- The average juvenile corrections training program participant is more likely to be female, more highly educated, newer to her job, work in smaller facilities, and receive lower compensation than her counterpart attending an adult corrections training program.
- Overall, participants in both juvenile and adult training programs expressed high opinions of the quality of the training programs they attended, rating them an average (mean) of 4.3 on a 5 point scale.
- On average training participants felt the training was relevant to their jobs/organizations (mean = 4.22) and largely retained that opinion even several months after returning to their workplaces (mean = 4.04).
- Participants encountered numerous barriers while attempting to apply training content in their organizations, most commonly: lack of funding or infrastructure; workload and time constraints; and staff/organizational resistance.
- The most commonly reported resources available to participants in applying the training content were other staff and staff development/training.
- Juvenile training participants overestimated the extent to which personnel or staff, and certain key persons would act as resources in applying the training to their organizations, while underestimating the extent to which staff development/training and teamwork would constitute resources.
- Adult training participants overestimated the extent to which certain key persons would act as resources in applying the training, while underestimating the extent to which teamwork would be a resource.
- Juvenile training participants overestimated the extent to which organizational resistance would be a barrier to implementing their training on the job, while underestimating the extent to which time/workload would be a barrier.

mont, Colorado. The presentation involved high levels of interaction with and input from NIC staff. Strengths and limitations of a training evaluation model devised by Kirkpatrick were considered at length.[1] Discussion with NIC staff resulted in consensus to apply a version of this model to seven training programs during 2005. These programs included Correctional Leadership Development (CLD-A) and Management Development for the Future (MDF), both adult programs. The juvenile programs were: Training Design and Development (TDD), Training for Juvenile Agency Training Directors and Coordinators (JATD), Meeting the Needs of Female Offenders (MNFO), Critical Elements of Re-entry and Continuing Care Systems (CER/CCS), and Correctional Leadership Development (CLD-J). The five juvenile programs involved interagency agreements with the Office of Juvenile Justice and Delinquency Prevention (OJJDP).

It was further agreed that the research team would have two interrelated roles during the initial cooperative agreement, which ran from March 15, 2005 to March 14, 2006. These roles included conducting a pilot evaluation and assisting NIC in building capacity to conduct evaluation research. These roles were intentionally not prioritized.

Following this, members of the research team collaborated extensively with NIC Program Specialists to develop evaluation designs and instruments for each of these programs. Following the Kirkpatrick model, training outcomes were evaluated at four levels: (1) participant reaction, (2) participant learning, (3) participant behavioral change, and (4) organizational change.

This initial bulletin in the series provides a demographic profile of the training participants, summarizes data on participants' reactions to training, and summarizes participants' ratings of the applicability of the training. In addition to data from 2005 trainings, the bulletin includes data from trainings conducted during 2006, as the second cooperative agreement between NIC and the CCJER research team took effect in July 2006. This agreement continues the evaluation of JATD, MNFO, CER/CCS, CLD-J, and MDF. TDD and CLD-A were not part of the 2006 agreement. However, the New Juvenile Facility Director training (NFD) was added to the 2006 TAEP.

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Although many persons and organizations contributed to the project described in this bulletin, any errors or omissions are those of the authors alone.

The preliminary findings and views presented in this bulletin are those of the authors and do not necessarily reflect the positions or policies of the National Institute of Corrections, Eastern Kentucky University, or any other individual or organization.

Research Strategy

Background

This project is an applied research study that is evaluating training offered by NIC's Academy. Its design reflects the work of Donald L. Kirkpatrick, who, more than thirty years ago, described a model for the evaluation of training that involves four steps: (1) reaction, (2) learning, (3) behavior, and (4) results.[2] Briefly, reaction (level one) refers to determining how well participants liked a training program—for example, by distributing brief evaluation forms at the close of a training event. Level two involves measuring (e.g., through tests) participants' learning of facts, principles, skills, attitudes, and techniques. At the third and fourth levels, training evaluation can become more meaningful but also more complex and expensive. Level three (behavior) refers to the transfer of learning and includes changes in an individual's job performance or attitude that can be attributed to the training. At level four (results), the analysis shifts from impact on individuals to impact on the participant's organization. Conceptually, some have expanded level four to include measuring return on investment (ROI) and cost versus benefits, while others consider ROI analysis separately from level four.[3]

Objectives

The primary objectives and tasks of the evaluation project revolved around: 1) providing technical assistance and education to the NIC Academy staff to build capacity to perform evaluation research; and 2) assisting NIC Academy staff in evaluating the training programs mentioned previously.

Study Design

The primary research method utilized throughout this project was survey research. Some surveys were administered on-site at the NIC academy. In some cases, other surveys were mailed or administered onsite at the participants' workplace to participants and their immediate supervisors, team members, and co-workers. Other data were collected by NIC Correctional Program Specialists and third parties and made available to the CCJER.

Study Population

Participants were personnel who worked in corrections or juvenile justice and voluntarily made arrangements to attend the NIC Academy. Participants attended one or more of six administrations of two adult training programs (MDF or CLD-A) or one of 14 administrations of six juvenile justice training programs (TDD, JATD, MNFO, CER/CCS, CLD-J, or NFD). To date data have been collected on 458 individual participants (103 who attended adult programs and 355 who attended juvenile programs).

Data Collection

The procedure for survey administration adhered to the total design method (TDM) developed by Dillman.[4] The TDM is an established protocol for maximizing survey response rates. Participants were administered surveys immediately prior to, during, and immediately after the training. Depending on the particular training program, approximately three to 12 months after training, graduates were administered follow-up surveys. In some cases, additional personnel at participants' agencies were contacted and asked to complete surveys.

As can be seen in the "Initial" column in Table 1, response rates for surveys administered at the time of training averaged 94.7 percent. Such high response rates indicate low levels of attrition and high levels of cooperation with survey efforts. Low attrition is not surprising given that most of the 20 trainings under consideration were less than one week in duration, and most were conducted at remote host sites. Likewise, high levels of cooperation are typical of surveys administered face-to-face in group settings.

Table 1: Response Rates

2005 Response Rates:		Initial	Follow-up
TDD	05-D902	100.0%	93.3%
JATD	05-D801	98.8%	95.2%
MNFO	05-D1001	88.5%	65.5%
MNFO	05-D1001	99.0%	64.0%
CER/CCS	05-D1502	100.0%	75.9%
CER/CCS	05-D1501	100.0%	91.7%
CLD-J	05-D101	100.0%	96.3%
	Juvenile Avg	98.0%	83.1%
CLD-A	05-M101	99.4%	60.6%
CLD-A	05-M102	98.9%	78.7%
CLD-A	05-M103	94.7%	77.3%
MDF-1	05-R039	99.6%	73.5%
	Adult Avg	98.2%	72.5%
2005 Average		98.1%	77.8%
2006 Response Rates:		**Initial**	**Follow-up**
NFD	06-D301	99.0%	78.8%
JATD	06-D801	100.0%	89.6%
MNFO	06-D1001	100.0%	72.2%
MNFO	06-D1002	97.3%	35.5%
MNFO	06-D1003	88.9%	32.1%
CER/CCS	06-D1501	92.9%	100.0%
CLD-J	06-D101	100.0%	90.5% [a]
	Juvenile Avg	96.9%	68.0%
MDF-2	06-R012	93.3%	75.0%
MDF-3	06-R019	78.4%	[b]
	Adult Avg	85.9%	75.0%
2006 Average		91.4%	71.5%
'05-'06 Juvenile Avg		97.5%	75.6%
'05-'06 Adult Avg		92.0%	73.8%
2005-2006 Overall		94.7%	74.7%

[a] Follow-up data collection recently completed. Findings are not available as of this printing, except the response rate listed here.

[b] Follow-up data collection scheduled for March 2007.

In most cases high response rates were also obtained when collecting follow-up data, as can be seen in the "Follow-up" column of Table 1. However, the longer intervals (3-12 months as compared to a week or less) allow more time for attrition due to terminations, resignations, transfers, illness, retirements, etc. Likewise, cooperation levels are often lower on follow-up surveys as sur-

veys are mailed to participants' workplaces or homes. Participants are less likely to prioritize survey completion in these often demanding or distracting settings, than in a focused training setting. Nonetheless, follow-up data collection efforts on 17 of the 20 trainings under evaluation achieved response rates of 60.6 to 100 percent. This average follow-up response rate of 81.1 percent is quite acceptable for generalizing conclusions by the standards of social science.[5] However, two of the 2006 MNFO trainings achieved much lower follow-up response rates (35.5% and 32.1%).[6] Nonetheless, the overall follow-up response rate for participants of the 19 trainings who have received follow-up surveys remains quite high: 75.5 percent. The final training, MDF phase 3, is scheduled for follow-up data collection in March 2007.

Instrumentation

Surveys were developed in close cooperation with the respective NIC Correctional Program Specialists. Attempts were made to design and develop reliable and valid instruments. These included adapting instruments proven reliable and valid in evaluating other justice and safety training programs and assessing reliability and validity of items with data collected to date.

Informed Consent and Confidentiality

Participants were briefed about the training evaluation at the inception of their training. A form was administered by NIC trainers to obtain participant's informed consent. Participants were free to decline to participate in the study and were informed that standard precautions would be taken to preserve confidentiality.

Findings

Participant Demographic and Background Profile

Data on the demographics and backgrounds of the 458 participants from the various trainings are presented in Tables 2 and 3. In the tables the data are presented for the adult and juvenile trainings combined as well as separately. Table 2 contains questionnaire items for which participants provided a categorical response (e.g., male or female), while Table 3 contains items for which they provided numerical responses.

Table 2 indicates that the majority of persons in the adult trainings (64.1%) were male, while the majority in the juvenile trainings were female (65.4%). This difference between adult and juvenile trainings is depicted graphically in Figure 1. Al-

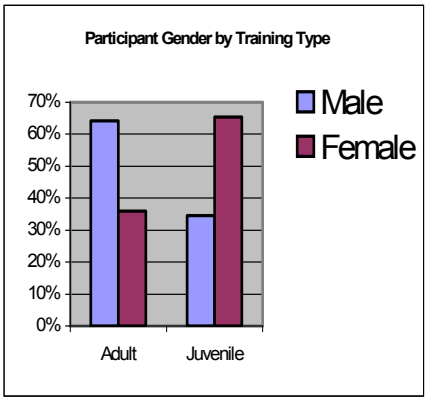

Figure 1

Table 2: Participant Demographics – Categorical Variables

Variable	Adult & Juvenile Trainings (N=458)		Adult Trainings Only (N= 103)		Juvenile Trainings Only (N=355)	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Gender						
Male	185	41.4	66	64.1	119	34.6
Female	262	58.6	37	35.9	225	65.4
Missing Data [a]	11	---	0	---	11	---
Race						
White/Caucasian	233	63.8	15	68.2	218	63.6
African American	106	29.0	6	27.3	100	29.2
American Indian	2	0.5	0	0.0	2	0.6
Hispanic/Latino	21	5.8	1	4.5	20	5.8
Asian	1	0.3	0	0.0	1	0.3
Other	2	0.5	0	0.0	2	0.6
Missing Data [a]	93	---	81	---	12	---
Highest Education						
High School / GED	43	9.7	26	25.2	17	5.0
Associate Degree	22	4.9	12	11.7	10	2.9
Bachelor's Degree	211	47.4	36	35.0	175	51.2
Master's Degree	155	34.8	25	24.3	130	38.0
Doctorate Degree	6	1.3	0	0.0	6	1.8
Law Degree	5	1.1	3	2.9	2	0.6
Other	3	0.7	1	1.0	2	0.6
Missing Data [a]	13	---	0	---	13	---
Area of Employment						
Adult Prison	52	11.7	52	50.5	0	0.0
Adult Jail	21	4.7	21	20.4	0	0.0
Adult Probation	24	5.4	21	20.4	3	0.9
Adult Parole	2	0.4	2	1.9	0	0.0
Juvenile Detention	84	18.8	0	0.0	84	24.5
Juvenile Community	97	21.7	0	0.0	97	28.3
Juvenile Residential	82	18.4	0	0.0	82	23.9
Central Administration	11	2.5	3	2.9	8	2.3
Training	27	6.1	4	3.9	23	6.7
Other	46	10.3	0	0.0	46	13.4
Missing Data [a]	12	---	0	---	12	---
Type of Agency in Which Employed						
Federal BOP	9	2.0	8	7.8	1	0.3
State Level	184	41.8	64	62.7	120	35.3
Indian Country	2	0.5	0	0.0	2	0.6
Regional	6	1.4	2	2.0	4	1.2
County Level	191	43.4	23	22.5	168	49.7
Municipal	4	0.9	2	2.0	2	0.6
Private	36	8.2	1	1.0	35	10.4
Other	8	1.8	2	2.0	6	1.8
Missing Data [a]	18	---	1	---	17	---
Current Annual Salary						
20,001– 40,000	108	24.8	14	13.7	94	28.1
40,001 – 60,000	190	43.6	52	51.0	138	41.3
60,001 – 80,000	99	22.7	21	20.6	78	23.4
80,001 – 100,000	31	7.1	9	8.8	22	6.6
Greater	8	1.8	6	5.9	2	0.6
Missing Data [a]	22	---	1	---	21	---

[a] Note that missing data above were either not requested on surveys, as in the case of "race" for several trainings, or was not provided by respondents, i.e., skipped questions.

though there were minimal differences between the adult and juvenile trainings on the race variable, a substantial proportion of the 365 participants (over 31%) who responded to this item were ethnic minorities (see Figure 2).

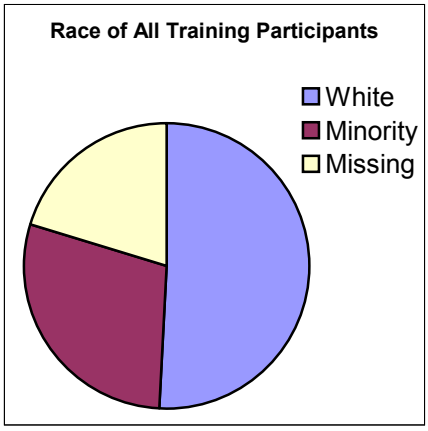

Figure 2

In terms of educational background, most participants held either a baccalaureate or master's degree, but lower proportions of participants in the adult trainings held such degrees. Half of the participants in the adult trainings were employed in adult prisons, whereas most of the rest were employed either in jails or probation agencies. By contrast, only about 24 percent of participants in the juvenile trainings worked in juvenile institutions; most of the remainder worked in juvenile detention or community agencies. This is depicted in Figures 3A and 3B. Likewise, the majority of adult training participants (nearly 63%) were employed in state level agencies, compared with just over 35 percent of those who took part in the juvenile trainings; over half of the latter were employed in county level (49.7%) or private (10.4%) agencies. These differences are shown in Figures 4A and 4B. Table 2 also indicates that two-thirds of participants in both the adult and juvenile trainings had annual salaries between $40,001 and $80,000. While only 13.7 percent of those attending adult trainings had salaries of $40,000 or less, just over 28 percent of those in juvenile trainings had salaries below this same figure.

As Table 3 indicates (Panels B and C), participants in adult and juvenile trainings had been in their current jobs for comparable periods (medians of 4 and 3 years respectively), but adult training participants tended to have more total years experience in corrections (see Figures 5A and 5B). Persons attending adult trainings also were more likely to work at facilities and agencies with more staff and offenders, and be responsible for supervising slightly more staff.

Figure 3A

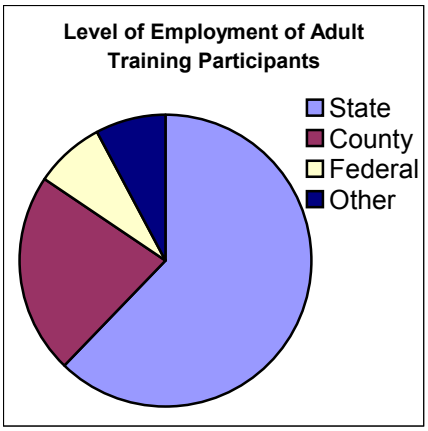

Figure 4A

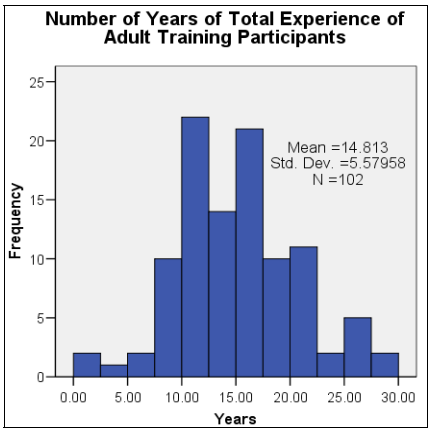

Figure 5A

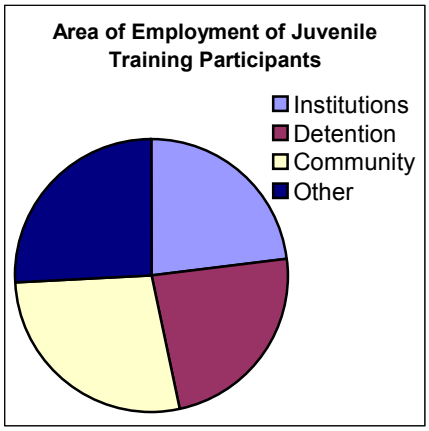

Figure 3B

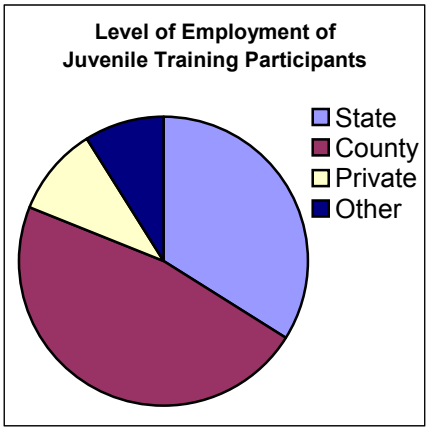

Figure 4B

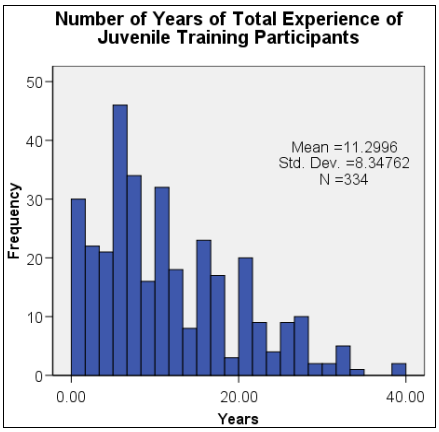

Figure 5B

Participants' Overall Evaluations of Training

Participants in all trainings were asked to rate a series of 20 statements dealing with their perceptions of the training overall. These statements were common to all trainings, and ratings were made on a scale of 1 to 5, with higher ratings indicating more favorable perceptions. Average (mean) ratings for each item are presented in Table 4, along with standard deviations (SD) to indicate the average amount of variation in a distribution of scores. The means in Table 4 indicate that participants' evaluations were generally favorable. For the combined juvenile and adult trainings, the three lowest averages were found on items dealing with time and the pace of training, while the two highest were found on items pertaining to the novelty of what was learned.

For each respondent, individual item ratings were summed and divided by 20 (the number of items) to yield mean index scores. The scale showed a very high degree of internal reliability or consistency among items (Alpha = .95); this suggests some de-

Table 3: Participant Demographics – Continuous Variables

Panel A: Adult & Juvenile Trainings Combined (N=458)

Variable	Missing Data	Median	Range
Years in Current Job	18	3.00 [a]	0 - 34.0
Total Years Experience in Corrections	22	10.75 [b]	0 – 40.0
Size of Offender Population at Participant's Office/Facility	62	153.5	0 - 4000
Number of Staff at Participant's Office/Facility	39	45.0	0 - 5000
Size of Offender Population for Agency in which Participant's Office/Facility is Located	131	1200.0	0 - 225000
Number of Staff in Agency in which Participant's Office/Facility is Located	132	155.5	0 - 3500
Number of Staff Participant Directly Supervises	50	7.0	0 - 1000
Number of Staff for whom Participant is Responsible	130	15.0	0 - 3000

[a] Mean = 5.40 (SD = 5.83)
[b] Mean = 12.12 (SD = 7.92)

Panel B: Adult Trainings Only (N=103)

Variable	Missing Data	Median	Range
Years in Current Job	1	4.00 [a]	0 - 20.0
Total Years Experience in Corrections	1	14.50 [b]	0 - 28.0
Size of Offender Population at Participant's Office/Facility	2	744.0	0 - 3000.0
Number of Staff at Participant's Office/Facility	3	100.0	3.0 - 3800
Size of Offender Population for Agency in which Participant's Office/Facility is Located	12	5200.0	0 - 225000
Number of Staff in Agency in which Participant's Office/Facility is Located	15	500.0	0 - 3500
Number of Staff Participant Directly Supervises	3	10.0	0 - 1000
Number of Staff for whom Participant is Responsible	82	15.1	5 - 250

[a] Mean = 5.61 (SD = 5.30)
[b] Mean = 14.81 (SD = 5.58)

Panel C: Juvenile Trainings Only (N=355)

Variable	Missing Data	Median	Range
Years in Current Job	17	3.00 [a]	0 - 34.0
Total Years Experience in Corrections	21	9.00 [b]	0 - 40.0
Size of Offender Population at Participant's Office/Facility	60	100.0	0 - 4000
Number of Staff at Participant's Office/Facility	36	36.0	3.0 - 5000
Size of Offender Population for Agency in which Participant's Office/Facility is Located	119	750.0	8.0 - 75000
Number of Staff in Agency in which Participant's Office/Facility is Located	117	100.0	0 - 8000
Number of Staff Participant Directly Supervises	47	7.0	0 - 125
Number of Staff for whom Participant is Responsible	48	11.18	0 - 3000

[a] Mean = 5.33 (SD = 5.99)
[b] Mean = 11.30 (SD = 8.35)

Table 4: Average Item Ratings for Participants' Overall Evaluations of Training

Survey Item	Adult & Juvenile Trainings (N ranges from 494 to 497)[a]		Adult Trainings Only (N ranges from 148 to 150)		Juvenile Trainings Only (N ranges from 344 to 347)	
	Mean	Standard Deviation (SD)	Mean	Standard Deviation (SD)	Mean	Standard Deviation (SD)
Objectives were clear at the beginning of training.	4.31	0.83	4.27	0.84	4.32	0.84
Focus was maintained on the objectives throughout training.	4.37	0.68	4.29	0.74	4.41	0.65
Objectives were accomplished by the end of training.	4.41	0.67	4.35	0.72	4.44	0.64
Content was clear and understandable.	4.16	0.80	4.09	0.81	4.20	0.80
Content was interesting and stimulating.	4.21	0.78	4.28	0.78	4.19	0.77
Content was presented at a level appropriate to my background and experience.	4.24	0.87	4.32	0.81	4.21	0.89
The training program was well organized.	4.45	0.74	4.38	0.77	4.48	0.72
There as sufficient time to practice or demonstrate knowledge/skills during the program.	3.93	1.04	3.81	1.08	3.99	1.02
There was enough time to adequately cover the topic.	3.90	1.00	3.57	1.05	4.04	0.94
The pace of the training was conducive to learning.	3.97	0.86	3.90	0.90	4.00	0.85
The training met or exceeded my expectations for learning.	4.21	0.86	4.21	0.89	4.21	0.86
The training materials added value to the training.	4.40	0.69	4.41	0.73	4.40	0.68
The instructional setting and accommodations added value to the training.	4.22	0.75	4.25	0.79	4.20	0.73
Trainer-participant interaction was appropriate for promoting learning.	4.47	0.68	4.52	0.67	4.44	0.68
Participant-participant interaction was appropriate for promoting learning.	4.47	0.66	4.51	0.63	4.46	0.67
I learned new things from the training that I did not know before.	4.54	0.67	4.64	0.59	4.50	0.69
I learned new ways of doings things from the training.	4.54	0.65	4.60	0.64	4.52	0.66
As a result of completing this training, I am more positive toward my job.	4.24	0.82	4.32	0.78	4.21	0.84
Given the content, I had a strong desire to complete this training program.	4.35	0.80	4.38	0.77	4.34	0.77
I would recommend this training to others who have jobs similar to mine.	4.45	0.81	4.47	0.79	4.45	0.79

[a] The number of respondents (N) in this table is greater than the number of respondents in the previous demographics tables due to the same MDF participants being surveyed in each of three phases of the training.

gree of redundancy across items. The average of the mean index scores for the combined adult and juvenile trainings was 4.30 (N=481, SD=0.55). The average mean index score for the juvenile trainings (Mean=4.32, N=335, SD=0.54) was not significantly different than that for the adult trainings (Mean=4.28, N=146, SD=0.58). Also, there were minimal differences across the individual trainings in average scores (see Figure 6).[7]

Participants' Evaluations of Training Applicability

All training participants were also asked to rate a series of 10 statements pertaining to their perception of the applicability of training. These statements were common to all trainings, and ratings were made on a scale of 1 to 5, with higher ratings indicating more favorable perceptions. Average ratings for each item are presented in Table 5. Perceptions of the applicability of training were generally favorable. The lowest ratings were found on items regarding the broadness and abstraction of content.

As with participants' overall evaluations, mean index scores were calculated. Internal consistency among items was again quite high (Alpha=.87). The average of the mean index scores for the combined adult and juvenile trainings was 4.22 (N=459, SD=0.56). The average mean index score for the juvenile trainings (Mean=4.22, N=317, SD=0.57) was not significantly different from than that for the adult trainings (Mean=4.22, N=142, SD=0.55).[8]

There was a moderate to strong positive relationship between participants' overall evaluations and their evaluations of applicability (r=.57). This indicates that participants who were more favorable toward the training overall also tended to see training as having more applicability.

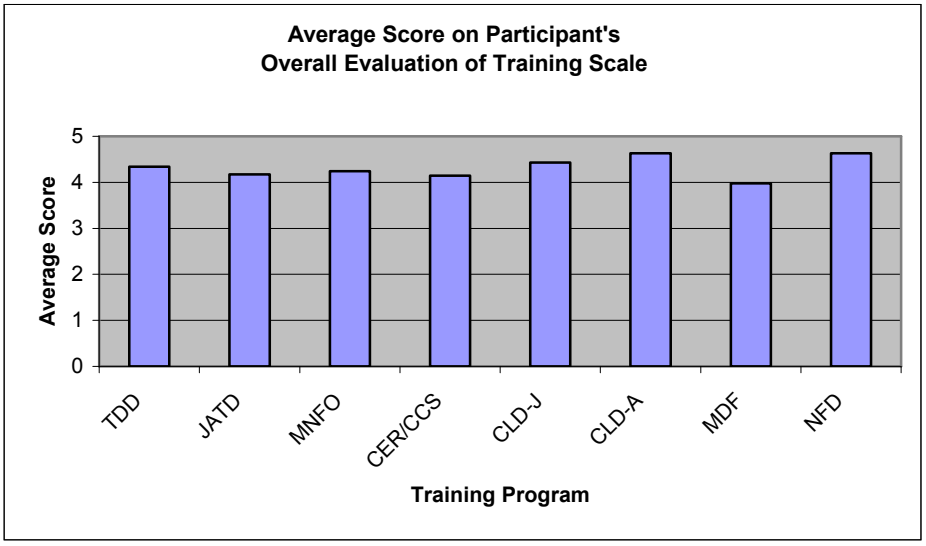

Figure 6

Table 5: Average Item Ratings for Participants' Evaluations of Training Applicability

Survey Item	Adult & Juvenile Trainings (N ranges from 471 to 479)		Adult Trainings Only (N ranges from 144 to 145)		Juvenile Trainings Only (N ranges from 327 to 334	
	Mean	Standard Deviation (SD)	Mean	Standard Deviation (SD)	Mean	Standard Deviation (SD)
This training was timely to problems or issues in my organization overall.	4.33	0.74	4.29	0.73	4.35	0.74
This training was relevant to problems or issues in my organization overall.	4.41	0.69	4.42	0.63	4.41	0.72
This training was timely to my job duties in particular.	4.25	0.79	4.21	0.77	4.26	0.80
This training was relevant to my job duties in particular.	4.31	0.79	4.30	0.72	4.31	0.81
The content of training was too broad to be of significant use to be my job.	3.88	1.07	3.86	1.12	3.89	1.05
The content of training was too narrow to be of significant use to my job.	4.02	0.98	4.03	0.93	4.01	1.00
The content of training was too abstract/ theoretical to be of significant use to my job.	3.90	1.08	3.81	1.12	3.93	1.07
This training will help me perform my job more effectively.	4.34	0.69	4.37	0.63	4.32	0.71
I expect to apply much of what I learned from this training to my work.	4.33	0.69	4.39	0.63	4.31	0.71
My organization will benefit from my having completed this training program.	4.48	0.65	4.51	0.63	4.46	0.66

Pre – Post Comparison of Perceived Applicability

The applications survey described above was re-administered to participants as a posttest three, six or 12 months following trainings (follow-ups varied by training). Posttest data were obtained from 307 (66.9%) of the 459 participants who provided pretest data.[9] The average posttest mean index score across adult and juvenile trainings was slightly lower (Mean=4.04, SD=0.56) than the pretest average of 4.22 presented above. This difference is depicted in Figure 7A and suggests that while perceived training applicability had

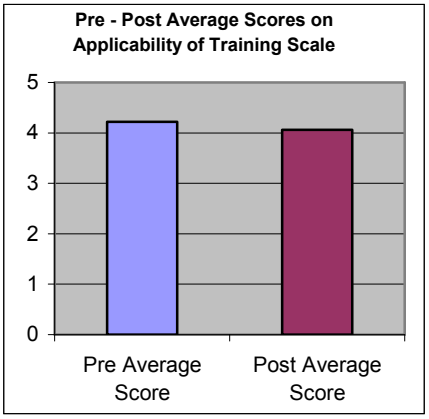

Figure 7A

slightly declined subsequent to training, applicability was still perceived as relatively high. Figure 7B shows pre – post differences by training program. There was a slight pre to post increase on only one training (TDD); the others showed slight decreases.

Expected Resources and Barriers.

Like training quality and applicability, the transfer of training content to the workplace is of key importance. Therefore participants were also asked to anticipate or estimate: (a) the available resources within their organizations that might help them apply training content on the job, and (b) barriers or impediments to application. As Figure 8A illustrates, by far the most frequently expected resource (182 or 43.5% of 418 responses) was personnel or staff in place who could facilitate the application of training content to the workplace. By the same token, however, the most frequently expected barrier (157 or 36.3% of 433 responses) was staff or organizational resistance (Figure 8B). The second most often expected barrier mentioned (27.3% of responses) was funding or infrastructure. By contrast, only about 17 percent expected funding/infrastructure might constitute a resource.

About 13 percent of all responses indicating expected resources did not clearly fit any category in Figure 8A. These responses, categorized as "other," are primarily: (a) responses that occurred only once or twice, such as: "time management," and "leadership," and (b) vague references to unspecified resources such as: "I believe I have the resources to apply what I've learned."

Likewise, the other category for expected barriers is comprised largely of infrequent responses such as "disorganization," and vague references to unspecified barriers such as "job issues coming up," and "all the normal barriers and impediments a government administrator faces" (Figure 8B).

Encountered Resources and Barriers.

While the pretest instrument asked training participants to anticipate resources and barriers, the posttest asked participants to describe those they had actually encountered. A total of 292 posttest respondents identified resources, and 291 identified barriers. This made it possible to compare the expected resources and bar-

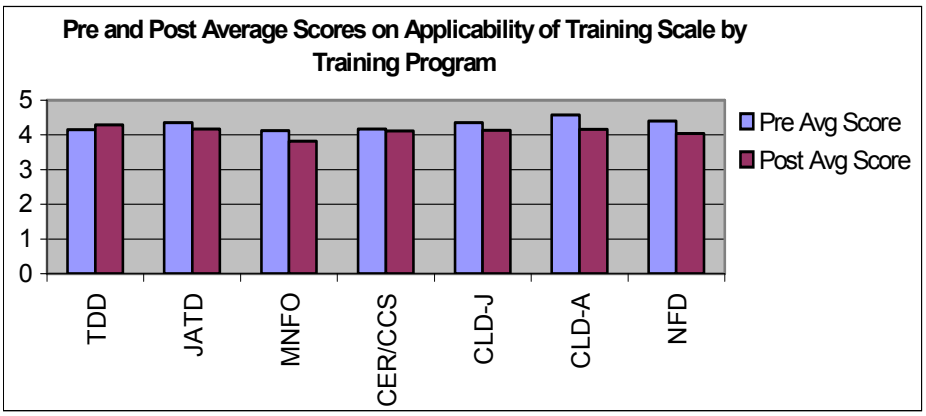

Figure 7B

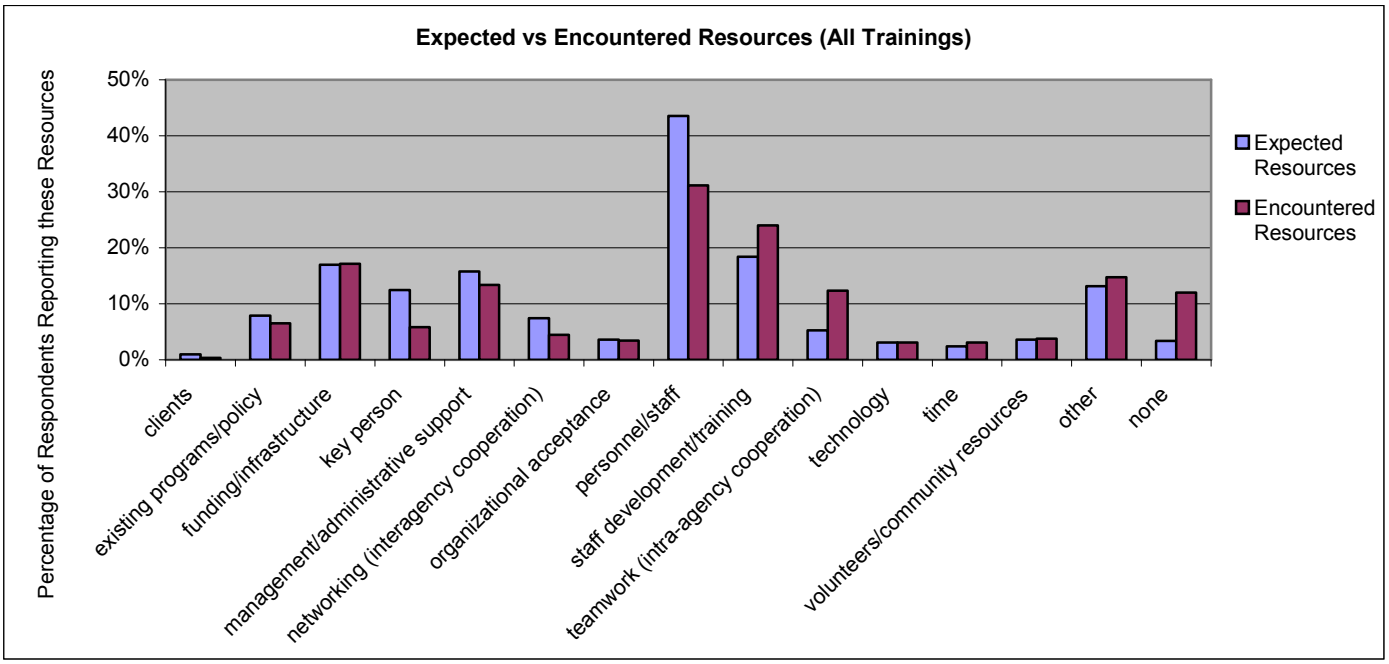

Figure 8A

riers described above with ones actually encountered on the job. These comparisons are shown in Figures 8A and 8B.

Figure 8A suggests that respondents generally overestimated the extent to which personnel/staff and certain "key persons" would constitute resources.

Conversely, it appears respondents generally underestimated the extent to which staff development/training and teamwork would constitute resources.

The data in Figure 8B suggest some respondents overestimated the extent to which staff/organizational resistance might represent a barrier, while some underestimated the barrier imposed by workload and time constraints.

A closer examination indicates that the differences between some expected and encountered resources are greater for juvenile training par-

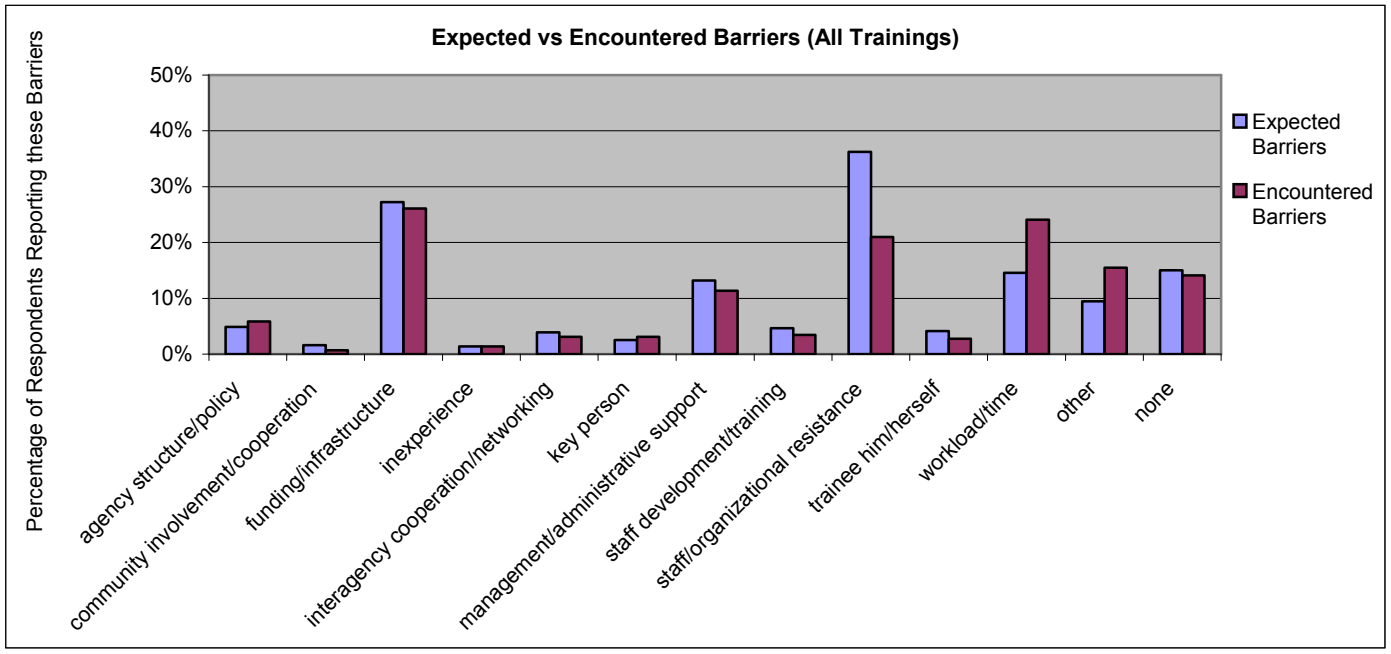

Figure 8B

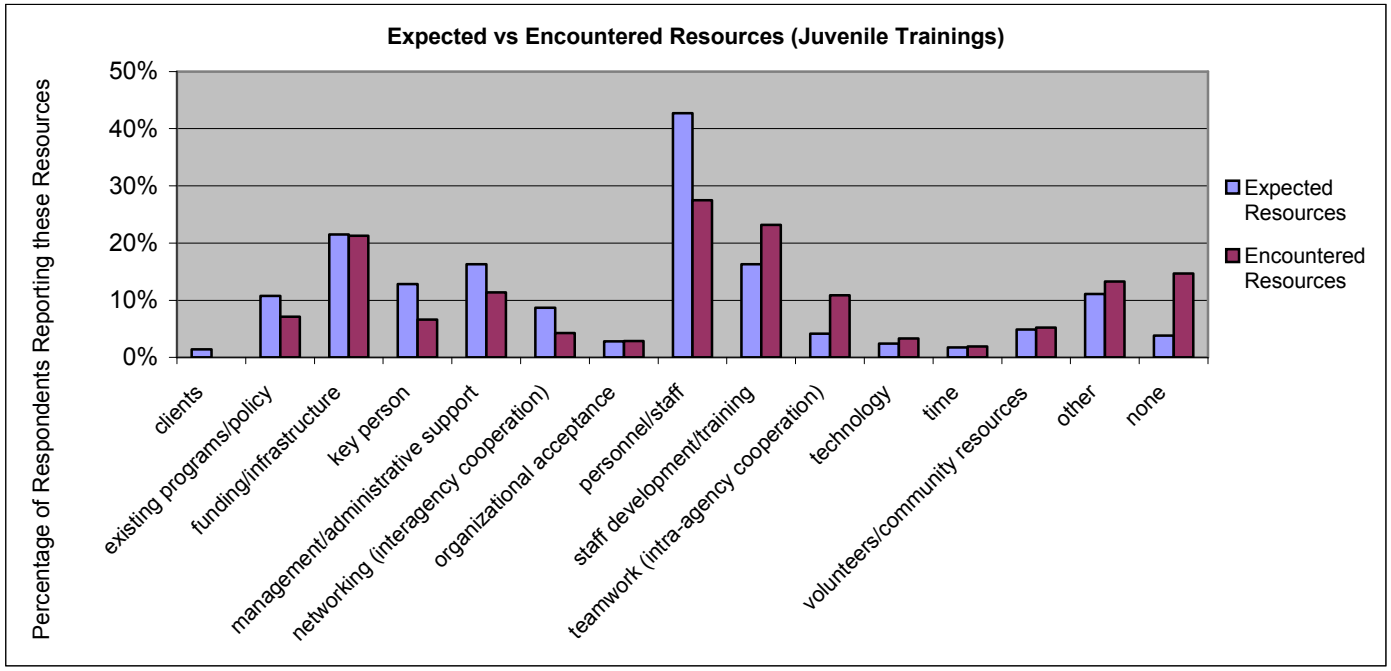

Figure 9A

ticipants (Figure 9A) than for adult training participants (Figure 9B). Although adult training participants slightly overestimated the extent to which certain "key persons" would act as resources, and underestimated the extent to which teamwork would be a resource, they were generally accurate in estimating the resources they would encounter. This appears to hold true for accurately anticipating barriers also (Figure 10B). On the other hand, juvenile training participants were somewhat more likely to overestimate or underestimate both resources (Figure 9A) and barriers (Figure 10A). In particular, juvenile participants were more likely than adult participants to overestimate personnel/staff as a resource while underestimating staff development/ training. Likewise, they were more likely to overestimate staff/ organizational resistance as a barrier while underestimating the extent to which workload/time would be a barrier.

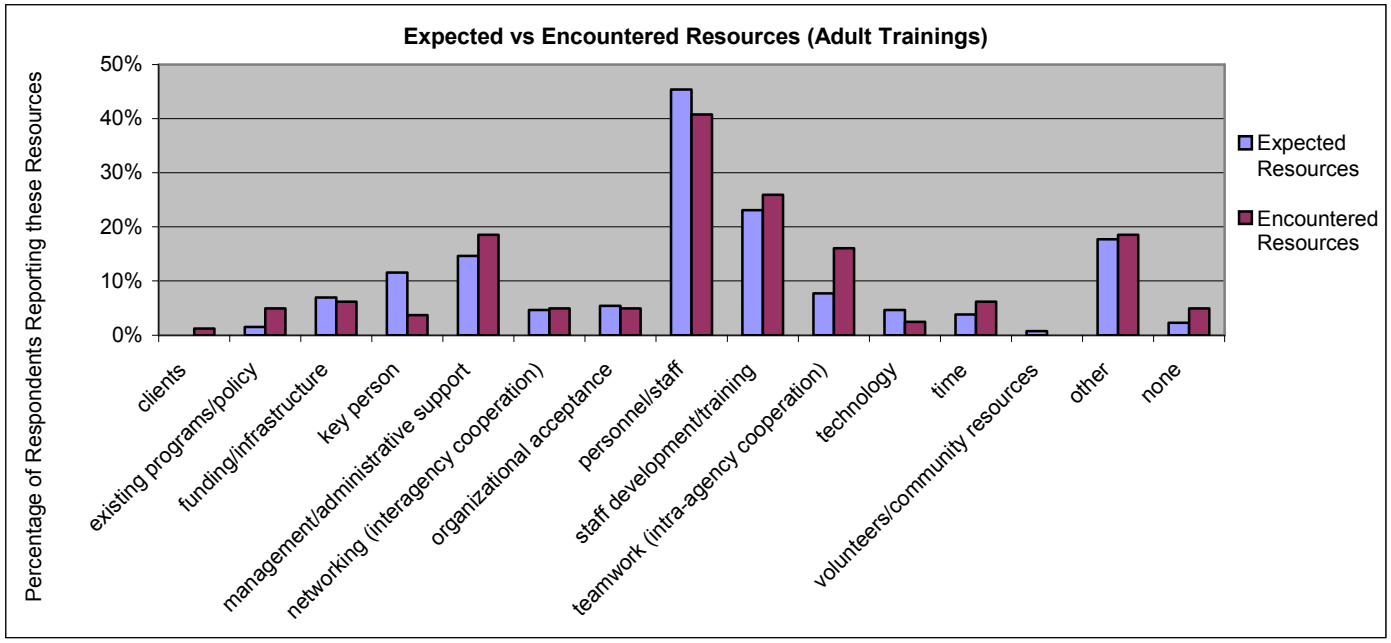

Figure 9B

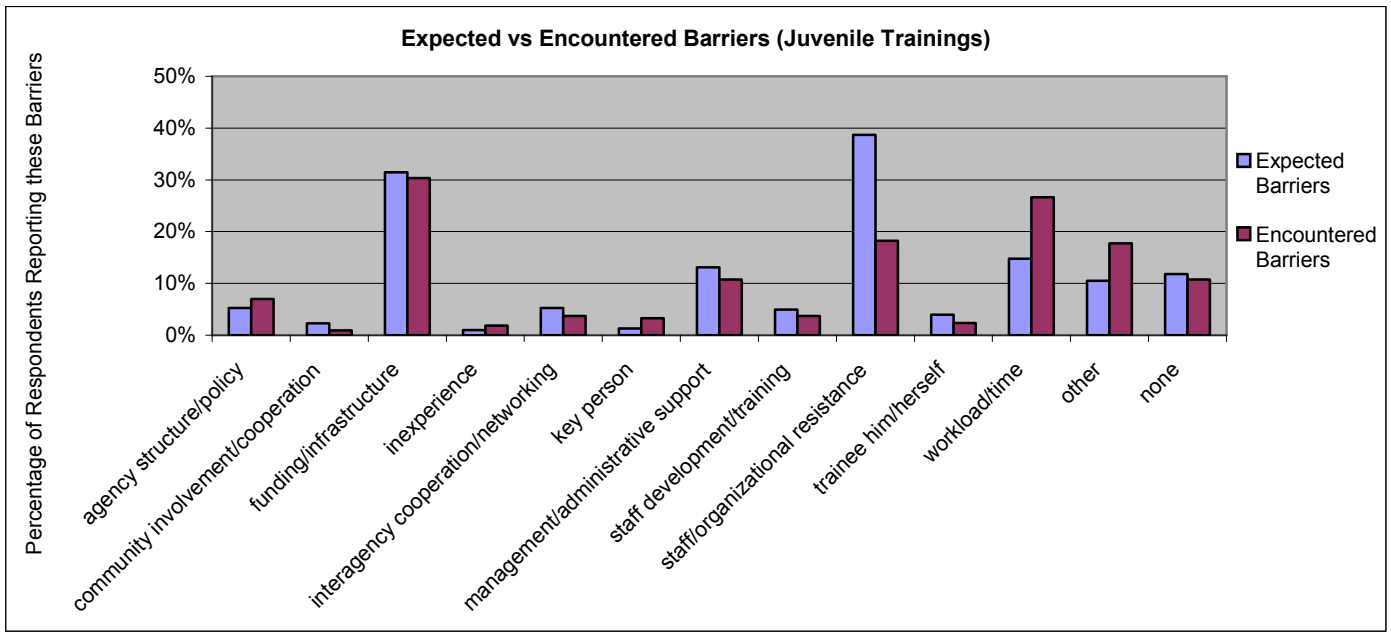

Figure 10A

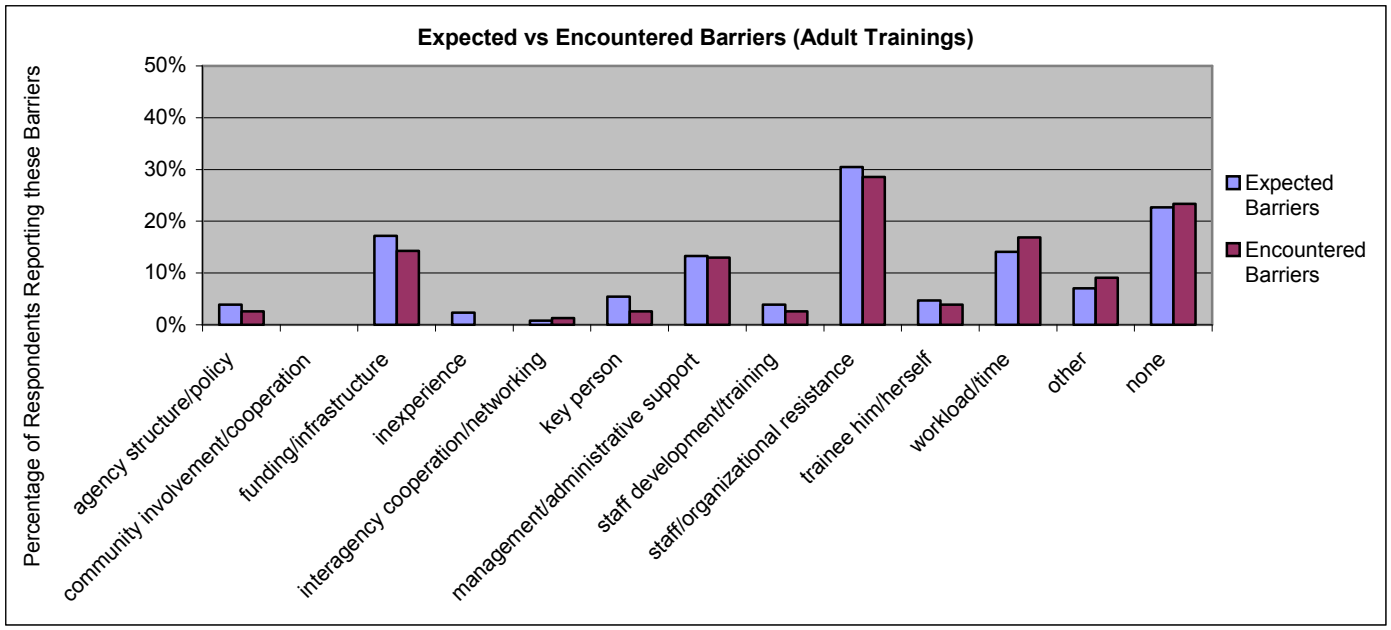

Figure 10B

Future Directions

CCJER's scope of services was purposely broad and exploratory during the first two years (2005-2006) of the evaluation. To illustrate, over three dozen training-specific evaluation reports were produced to provide feedback and guidance to the correctional program specialists in charge of trainings being evaluated. This approach facilitated determination of which evaluation methods were most appropriate, given specific trainings and associated research objectives. The approach also helped clarify which evaluation activities were and were not essential for a particular training. Results from the first two years of evaluation have helped clarify expectations of the following: how amenable a program is to evaluation, what a program can potentially do with regard to participant and organization change, what the results of the evaluation research can communicate, and how future evaluations can be improved and streamlined.

Based on what has been learned to date, CCJER and NIC staff have mutually agreed to streamline the evaluation process and disseminate information about the evaluation more widely at NIC. (See Endnote 10 for one example of how the evaluation process is being streamlined.) In addition, rather than producing training-specific, individual evaluation reports designed primarily for program specialists in charge of a given training, the plan is to produce fewer, more concise bulletins designed for all of NIC's readership. Similar to this first bulletin, some future bulletins will present data across trainings, such as data on participants' evaluations of various trainers (in a manner that protects trainer identity) or data on trainee behavioral and organizational change across trainings. Other bulletins may address the full spectrum of evaluation activities associated with a training that was the subject of more in-depth study (e.g., CLD-A and/or MDF).

Additionally, a major by-product of the first two years of the TAEP is a modification and expansion of our evaluation model such that it incorporates a greater variety of evaluation types and rigor. This has resulted in the drafting of an Evaluation Matrix that, when employed in conjunction with training objectives, will assist NIC staff in identifying the proper level of evaluation rigor for a particular training situation, as well as the type of evaluation strategies required to answer the questions of interest.

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Notes

[1] Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). *Evaluating training programs: The four levels* (3rd ed.). San Francisco, CA: Berrett-Koehler.

[2] See Kirkpatrick and Kirkpatrick (2006) for a full discussion of the model and its development.

[3] Phillips, J. (1996). "ROI: The Fifth Level of Evaluation." *Technical Skills & Training.* April.

[4] Dillman, D. A. (2000). *Mail and telephone surveys: The total design method (2*nd ed.). New York: Wiley.

[5] In fact, response rates of less than 50 percent are common in mail surveys. [Singleton, R. A., & Straits, B. C. (2005). *Approaches to Social Research* (4th ed.). New York: Oxford University Press.] Response rates of 50 percent or higher are generally considered acceptable for analysis and reporting, while rates of 60 percent are considered good, and 70 percent are considered very good. More important than the response rate is evidence of lack of response bias. [Babbie, E. (2004). *The Practice of Social Research* (10th ed.). Belmont, CA: Wadsworth]

[6] Data from these two trainings may not be representative of all participants who attended the trainings. The research team is attempting to determine why response rates for these two trainings were substantially lower than for the other trainings undergoing evaluation. If feasible, an attrition analysis will be conducted to estimate the validity of the available follow-up data.

[7] The overall evaluation of training dataset was examined for significant differences by demographic and background variables using t-tests and analyses of variance (ANOVAs). (Because this required computing several separate statistical tests, Bonferroni critical values were used instead of conventional critical values in order to control for the number of tests performed and keep the likelihood of a Type 1 error at .05 across the set of tests, rather than for each test individually.) This procedure resulted in the following statistically significant findings. However, the mean differences are sufficiently low to be of minimal practical importance.

- Participants employed at the state level displayed significantly lower mean scores (Mean=4.26, SD=0.548) than those employed in "other" agencies (Mean=4.61, SD=0.373). (This result is based on the use of Tukey HSD follow-up to ANOVA to identify the locus of a significant overall F value.)
- Participants with 42 or less staff at their facilities/offices displayed significantly lower mean scores (Mean=4.24, SD=0.518) than those with more staff (Mean=4.43, SD=0.537). (This result is based on a t-test.)
- Participants responsible for 14 or fewer staff displayed significantly lower mean scores (Mean=4.19, SD=0.609) than those responsible for more staff (Mean=4.44, SD=0.456). (This result is based on a t-test.)

[8] The evaluation of applicability dataset was also examined for significant differences by demographic and background variables using t-tests and analyses of variance (ANOVAs). Here again, Bonferroni critical values were used instead of conventional critical values. No statistically significant mean differences were found.

[9] As of this writing, follow-up data collection is not yet scheduled for 27 remaining participants of MDF phase 3. Follow-up data collection for the 21 participants of 2006 CLD-A was completed too recently to be included in these results.

[10] Factor analysis was conducted to determine the structure of the 30 combined items used to measure *Participants' Overall Evaluation of Training* and *Participants' Evaluation of Training Applicability*. Standard diagnostics were performed prior to the factor analysis, as recommended by Tabachnick and Fidell [Tabachnick, B. G., & Fidell, L.S. (1996). *Using Multivariate Statistics*. New York: Harper Collins.] Since all 30 of the variables were moderately or substantially negatively skewed, they were reflexed prior to square root or natural log transformations. An oblique rotation was conducted that allowed factors to be correlated with each other.

Results of this factor analysis have tentatively identified six components. The first component accounted for 45.65 percent of the total variance in the variables, the second for 8.97 percent, the third for 5.59 percent, the fourth for 4.68 percent, the fifth for 3.50 percent, and the sixth for 3.0 percent. A total of 71.38 percent of the variability in the scale's variables was explained.

- Component one consisted of 5 items and was named *Personal Appraisal of Training Content and Training Context* (i.e., a subjective judgment of the training's content and the physical setting in which the training was delivered).
- The second component consisted of 3 items and was named *Pace of Training* (i.e., an appraisal of the pace and length of the training).
- The third component consisted of 3 items and was named *Scope and Content of Training's Applicability to Job* (i.e., an appraisal of how well the training content was useful to the participant's job).
- The fourth component consisted of 4 items and was named *Perceived Timeliness and Relevance of Training to Job and Organization* (i.e., a subjective judgment of the training's relevance to the participant making the rating).
- The fifth component consisted of 7 items and was named an *Objective Appraisal of the Training* (i.e., a more objective judgment of the training's value for participants in general).
- The last component consisted of 8 items and was named *Personal Appraisal of Usefulness of Training to Participant and Organization*.

Based on a comparison of factor correlation matrices (transformed variables and raw variables), it would not be advisable to pool the data across factors.

Future versions of the Participants' Overall Evaluation of Training and Training Applicability will contain a reduced number of items that measure these factors, thus streamlining and reducing the amount of time needed for evaluation activities. In addition, attempts will be made to build into the new instruments items that generate desirable levels of variability.