

DEVELOPMENT OF COMPETENCIES IN CRIMINAL JUSTICE, 1998 - 2001

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November 2001

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INTRODUCTION

In the 1998-99 academic year, the College of Liberal Arts requested that departments focus some of their energies on thinking about competencies that were being developed within programs and majors. Responding to this initiative, under the direction of the Undergraduate committee, headed by Pat Jenkins, a list of twenty-four specific competencies, divided in to four competency areas (*Critical Thinking, Effective Communication, Understanding Human and Cultural Diversity, and Problem Solving*) was generated with the input of the full Criminal Justice department faculty. In the Fall of 1999, Criminal Justice faculty members M. Kay Harris, Ralph Taylor, and Peter Jones began work on the development of a strategy to assess competencies in the department's introductory core course, CJ 50. Out of this work, a survey was developed that was designed to assess improvement in each of the twenty-four identified competency areas resulting from the students' experiences in CJ 50. The survey consisted of a pre- and post-test, design, in which students were asked to rate their own level of development on each of the twenty-four competencies at the beginning and at the end of the semester. The survey was administered to two sections of CJ 50 in Spring 2000. In the Fall 2000 semester, the competencies committee was reconvened. The new competencies committee consisted of Criminal Justice faculty members Wayne Welsh (Chair), Nikos Passas, Ralph Taylor, and Kathleen Auerhahn, as well as Karima Zedan, a graduate student. Additional assistance with survey administration and data processing was provided by graduate students Caroline Ruck and Patrick McConnell. In the Fall 2000 semester, the committee continued work on developing and refining the survey, including piloting the design with a focus group of student volunteers. Due to agreement of

committee members that the survey would benefit from revisions, there was no pre-test administration to the Fall 2000 sections of CJ 50. Instead, a slightly modified version of the post-test (modified as needed to reflect that there was no pre-test administration) was administered to four CJ 50 classes at the end of the Fall 2000 semester. In Spring 2001, both pre-and post-test survey results were obtained for seven sections of CJ 50.

SUMMARY FINDINGS

All of the survey results point to the same general conclusion. Psychometric analyses of the instrument indicate that the indices designed to represent the four competency areas (*Critical Thinking, Effective Communication, Understanding Human and Cultural Diversity, and Problem Solving*) are well constructed and reliable. In all semesters studied, students demonstrate significant improvement in these four competency areas after their work in CJ 50. In most cases, these improvements do not show significant variability according to student characteristics, but sometimes exhibit variability by course section.

THE SURVEY

Self-report data are used to measure improvement in individual competencies. Specifically, students are asked in the pre-test to rate their level of development on each of the twenty-four competencies using a five point Likert scale ranging from “not at all developed” to “very well-developed.” During the post-test administration, students are asked to rate their improvement on the same 24 competencies on a comparable five point scale ranging from “not at all improved” to “improved very much.” In the revised survey, (Fall 2000 and Spring 2001), some open-ended questions were added to the survey.

Specifically, these were designed to elicit more detailed feedback from the students about their perceptions of improvement. Students were asked to name the competency that improved the most as a result of the class, and to describe and give an example of how the class helped them to improve that skill. Students were also asked to identify the competency that they felt had improved the least in CJ 50, and to offer suggestions of what types of activities or assignments would help them to better develop that particular skill. Survey completion took students approximately 10 minutes.

ANALYSIS

The competencies corresponding to each of the four general areas were combined to form four additive indices assessing these competency areas. The *Critical Thinking* index is composed of eight items; the *Effective Communication* index is made up of four competency items; the *Understanding Human and Cultural Diversity* index includes seven items; and the *Problem Solving* index contains five items.

Analyses were conducted to determine the reliability of these Indices, and the appropriateness of the indicators included. Cronbach's alpha was calculated for each of the four scales. The Cronbach's alpha statistic is based on the average strength of the correlation coefficients between each of the items comprising the scale. Cronbach's alpha ranges from 0 to 1, with 1 representing perfect reliability. While there is no significance test criterion associated with Cronbach's alpha, values of .70 or higher are generally considered an acceptable level of reliability. As shown in the tables below, all four Indices perform well in this regard across all three semesters studied.

In order to address the question of student improvement, where we had sufficient cases (Spring 2001) multivariate analyses of variance (MANOVAs) were conducted, blocking on section, and controlling for within-student background factors. For these data, and for the Spring 2000 data, paired-samples t-tests were calculated for the change in the pre-and post- test Indices. Paired-samples t-tests were also calculated for the individual competency items. For the Fall 2000 data we had only post test data and so just did one sample tests.

With the Spring 2000 and Spring 2001 data we also examined the influence of student characteristics (such as age, gender, class standing, major and the like) to determine whether different types of students showed different levels of improvement in the four competency areas. Differences between pre- and post-test scores on each of the four indices were computed, and group means were compared using one-way Analysis of Variance.

Responses to the open-ended items included in the Fall 2000 and Spring 2001 versions of the survey were analyzed for content and themes.

RESULTS

SPRING 2000

Sample

The Spring 2000 sample consisted of 46 students enrolled in two sections of CJ 50. Nearly half (44%) were freshmen, 24% were sophomores, 11% were juniors, and 22% were seniors (numbers do not equal 100% due to rounding). The mean age of the sample was 21 years (standard deviation 4.2 years); the youngest respondent was 17 years

old, and the oldest was 39 years old. Approximately 61% of the respondents were female. Only 17.4% identified Criminal Justice as their major. Only 11% had previously worked in the criminal justice system. About equal proportions expressed interest in future employment in the criminal justice system (36%) and in attending law school (37%).

The data file appears to only include paired cases, so no comparison of cases with only pre- or post-test data with paired cases is possible to gauge for bias. The paired cases represented XXXXX percent of all the cases.

Results

Table 1. Reliability Analyses of Competencies Indices: Spring 2000.

Index	Cronbach's Alpha	
	Pre-test	Post-test
Critical Thinking Skills	.90	.82
Effective Communication	.88	.80
Understanding Human and Cultural Diversity	.87	.90
Problem Solving	.96	.91

Table 1 demonstrates that the four competency area Indices exhibit acceptable levels of reliability. Table 2 shows the mean pre vs post means on the four indices. Although there were too few cases here to conduct a rigorous MANOVA (see Spring 2001), we can do a Bonferonni adjustment to the alpha level; given four outcomes the adjusted alpha level should be .0125. As the results in Table 2 indicate, the students demonstrated significant improvement on three of the four competencies areas, with the

largest gain in improvement observed in the area of *Problem Solving* (an increase of 52%) followed by *Effective Communication* (34% improvement) and *Critical Learning Skills* (26%); nonsignificant at the Bonferonnie adjusted alpha level, and with the least amount of improvement (a 12% increase over the course of the semester) was *Understanding Human and Cultural Diversity*.

Table 3 shows the changes in individual competencies, as measured by individual survey items. (Here, given the large number of items, the significant levels are purely descriptive.) Although overall, the students reported significant improvement in all competency areas, there was a great deal of variability in the level of student improvement. Within the area of *Critical Learning Skills*, students reported significant improvement in all competencies except item *CL9*, “question personal beliefs in light of information” (29% improvement, n.s.). Within the *Critical Learning Skills* competency area, students reported the greatest amount of improvement (51% improvement, $p < .01$) as a result of their CJ 50 class in competency *CL2*, “think critically through oral argument.”

Within the area of *Effective Communication*, students indicated significant improvement in all measured competencies. The greatest improvement was measured in *EC1*, the ability to “speak clearly in front of a group.” Students reported 67% improvement in this area ($p < .01$). The least amount of improvement in the area of *Effective Communication* was reported for item *EC4*, the ability to “make a persuasive presentation” (15% improvement, n.s.).

Overall, students showed the least amount of improvement in the area of *Human and Cultural Diversity* as a result of their CJ 50 experiences (12% improvement overall,

$p < .05$).¹ Within this competency area, students reported the greatest improvement in item HCD7, “understand backgrounds different from yours (19%, $p < .05$), and the least improvement in HCD6 “understand opinions different from yours” (3% improvement, n.s.).

Finally, students demonstrated the greatest overall improvement in the area of *Problem Solving* (52% improvement overall, $p < .01$). Within this competency area, students reported the greatest amount of improvement in item PS1, “identify and weigh

¹ This section of the survey was substantially modified by 2000-01 Competencies Committee members for the Spring 2001 administration (changes included simplifying language, such as changing the phrase “communities of color” to “minority communities”); these changes may allow us to better measure change in this area.

Table 2. Change in Competency Areas: Spring 2000.

Index	Means ²		t	P <	% change
	Pre-test	Post-test			
Critical Thinking Skills	19.0	24.4	-5.1	.001	+ 26%
Effective Communication	6.98	9.37	-3.8	.001	+ 34%
Understanding Human and Cultural Diversity	16.4	18.3	-2.2	.05	+ 12%
Problem Solving	8.2	12.5	-6.2	.001	+ 52%

alternative courses of action” (64% improvement, $p < .01$), and the least – yet substantial – amount of improvement in the ability to “connect what is learned in the classroom with real world experiences” (42% improvement, $p < .01$).

Level of improvement did not vary in any of the four competency areas according to student age, gender, number of semesters at Temple, class standing, major, or whether they had prior experience in the criminal justice system. However, several differences in mean level of improvement were observed. Significant differences were found in improvement on *Understanding Human and Cultural Diversity* ($p = .039$), *Effective Communication* ($p = .012$), and *Problem Solving* ($p = .027$) according to course section. Students in one of the two sections recorded greater improvement in each of these areas. Students who indicated that they planned to attend law school after graduation showed significantly greater improvement in *Critical Thinking* ($p = .015$). Students who had

² It should be recalled that each index contains a different number of items, each weighted equally. For that reason, the scales have different maximum possible values, as follows: *Critical Learning Skills* has a maximum value of 45; *Effective Communication*, 20; *Understanding Human and Cultural Diversity*, 35; and *Problem Solving* has a maximum possible value of 25.

previously worked in the criminal justice system also showed significantly greater improvement in *Critical Thinking* ($p = .019$).

Table 3: Change in Individual Competencies: Spring 2000.

Item	Pre	Post	T	Sig.	%
CT1 <i>Think critically through written argument</i>	1.76	2.41	-3.9	<.001	+37%
CT2 <i>Think critically through oral argument</i>	1.62	2.44	-4.2	<.001	+51%
CT3 <i>Critically evaluate criminal justice policies</i>	2.60	3.36	-3.9	<.001	+29%
CT4 <i>Understand fundamentals of legal reasoning</i>	2.46	3.28	-4.4	<.001	+33%
CT5 <i>Know how a theory relates to a specific situation</i>	2.07	2.87	-4.9	<.001	+39%
CT6 <i>Distinguish between opinion and fact</i>	1.83	2.24	-2.1	n.s.	+22%
CT7 <i>Reason by analogy</i>	2.09	2.63	-3.5	<.001	+26%
CT8 <i>Question personal beliefs in light of information</i>	2.43	2.59	-.96	n.s.	+ 7%
CT9 <i>Critically evaluate arguments even when you agree with them</i>	2.02	2.60	-4.6	<.001	+29%
EC1 <i>Speak clearly and effectively in front of a group</i>	1.65	2.76	-4.5	<.001	+67%
EC2 <i>Write clearly and effectively</i>	1.65	2.06	-2.3	n.s.	+27%
EC3 <i>Good listening skills</i>	1.63	2.17	-3.6	<.001	+33%
EC4 <i>Make a persuasive presentation</i>	2.04	2.35	-1.9	n.s.	+15%
HCD1 <i>Understand significance and impact of race on criminal justice</i>	2.33	2.74	-2.2	n.s.	+18%
HCD2 <i>Understand significance and impact of gender on criminal justice</i>	2.37	2.78	-2.1	n.s.	+17%
HCD3 <i>Understand impact of criminal justice system on communities of color</i>	2.54	2.72	-.92	n.s.	+ 7%
HCD4 <i>Understand impact of criminal justice system on lower income communities</i>	2.47	2.76	-1.4	n.s.	+12%
HCD5 <i>Understand</i>	2.47	2.80	-1.6	n.s.	+13%
HCD6 <i>Opinions different from yours</i>	2.16	2.22	-.23	n.s.	+ 3%

HCD7 <i>Backgrounds Different from yours</i>	2.00	2.38	-2.1	n.s.	+19%
PS1 <i>Alternative courses of action</i>	1.46	2.39	-5.9	<.001	+64%
PS2 <i>Consequences of options</i>	1.59	2.41	-5.5	<.001	+52%
PS3 <i>Ask good questions of someone offering a solution to a problem</i>	1.67	2.52	-5.3	<.001	+51%
PS4 <i>Identify various interest groups whose perspectives need to be taken into account</i>	1.76	2.71	-5.9	<.001	+54%
PS5 <i>Connect classroom learning with real world experiences</i>	1.76	2.50	-4.4	<.001	+42%

* Significance levels are adjusted using the Bonferroni method to reduce the likelihood of experimentwise error. Alpha is effectively equal to .05; the adjustment requires the use of $\alpha=.002$ for rejection of the null hypothesis.

FALL 2000³

Sample

The Fall 2000 sample consisted of 108 students enrolled in four sections of CJ 50. The majority (79%) were freshmen; 15% were sophomores, 8% were juniors, and 4% were seniors. Nearly three-quarters (74%) were attending their first semester at Temple. Mean age was 19 years (standard deviation 1.3 years). The oldest student was 23 years old, and the youngest was 18. Sixty-four percent of the students were female. Only 31.5% of the respondents were declared Criminal Justice majors. Only ten students (9.3%) had ever worked in the criminal justice system, although 45% stated that they planned to seek employment in the criminal justice system in the future. Sixteen percent of the students expressed an interest in attending law school.

Results

The analytic strategy employed with the Fall 2000 data was slightly different than that for the other semesters. Since no pre-test data were collected, improvement could not be measured in conventional fashion. Instead, one-sample t-tests were conducted, in which the minimum scale value for each index was used as the test value (minimum score would indicate “not at all improved”). The same strategy was used to evaluate the respondents’ assessment of their improvement on the individual items. These results are given in Tables 5 and 6. Table 5 shows significant differences from “no improvement” in each of the four competency Indices. Table 6 shows the results of the one-sample t-tests calculated using the item means, tested against a value of 1 (indicating no improvement). The respondents showed significant improvement on each of the twenty-four competencies.

Additionally, one-way analysis of variance was used to compare mean scores each of the four competency indices by student characteristics and course section. There were significant differences by course section on scores for *Critical Thinking* ($p < .01$), *Effective Communication* ($p < .01$), and *Understanding Human and Cultural Diversity* ($p < .01$). Further examination of the data revealed that students from one of the four sections reported lower levels of improvement on all four scales. No significant differences were observed with respect to student characteristics

Qualitative Data⁴

The Fall 2000 post-test introduced the open-ended items. These solicited comments from students on the skill they felt was most improved due to this class and on the skill they thought improved the least. Students were also asked to offer an illustration

³ This section relies heavily on a report prepared by Wayne Welsh in March, 2001.

of the ways in which this class assisted them with respect to the former and to suggest what might be done to boost the latter in future classes. Generally, students expressed a high degree of satisfaction with their CJ50 classes. The main message conveyed was that students were happiest with their progress in *Critical Thinking* and in *Understanding Human and Cultural Diversity*. With respect to specific competencies cited, there was marked consistency in students' identification of the skills most and least improved upon, which suggests that their responses reflect more than sheer subjective perceptions.

Students generally liked the use of lectures, concrete examples and cases, videos and class discussions that connected theory and practice and allowed them to explore class and race issues in criminal justice on the basis of empirical evidence and reasoned analysis. They particularly enjoyed debates on controversies such as the death penalty and plea bargaining.

In responding to the question about which skill improved least, students commonly cited written communication. Students encouraged the use of in-class projects, open debates, invitations to all students to articulate their opinion, and more short writing assignments.

Table 4. Reliability Analyses of Competencies Indices: Fall 2000.

Index	Cronbach's Alpha	
	Pre-test	Post-test
Critical Thinking Skills	---	.83.
Effective Communication	---	.73

⁴ This section relies heavily on a report prepared by Nikos Passas in March, 2001.

Understanding Human and Cultural Diversity	---	.92
Problem Solving	---	.87

Table 5. Change in Competency Areas: Fall 2000.

Index	Minimum	Mean	t	P <
Critical Thinking Skills	16	28.4	26.5	<.05
Effective Communication	4	11.6	25.7	<.05
Understanding Human and Cultural Diversity	13	26.9	30.6	<.05
Problem Solving	8	16.8	25.4	<.05

Table 6. Change in Individual Competencies. Fall 2000.

Item	Mean	T	Sig.
CT1 <i>Think critically through written argument</i>	2.82	19.6	<.001
CT2 <i>Think critically through oral argument</i>	3.16	21.9	<.001
CT3 <i>Critically evaluate criminal justice policies</i>	3.85	37.3	<.001
CT4 <i>Understand fundamentals of legal reasoning</i>	4.04	43.7	<.001
CT5 <i>Know how a theory relates to a specific situation</i>	3.80	34.5	<.001
CT6 <i>Distinguish between opinion and fact</i>	3.66	31.1	<.001
CT7 <i>Question personal beliefs in light of information</i>	3.72	32.8	<.001
CT8 <i>Critically evaluate arguments even when you agree with them</i>	3.33	23.5	<.001
EC1 <i>Speak clearly and effectively in front of a group</i>	2.59	15.9	<.001

EC2 <i>Write clearly and effectively</i>	2.54	15.9	<.001
EC3 <i>Good listening skills</i>	3.44	25.1	<.001
EC4 <i>Make a persuasive presentation</i>	3.02	19.8	<.001
HCD1 <i>Understand significance and impact of race on criminal justice</i>	3.93	38.9	<.001
HCD2 <i>Understand significance and impact of gender on criminal justice</i>	3.81	32.6	<.001
HCD3 <i>Understand impact of economic or social class differences in criminal justice</i>	4.03	41.7	<.001
HCD4 <i>Understand impact of criminal justice system on racial minorities</i>	4.00	43.1	<.001
HCD5 <i>Understand impact of criminal justice system on lower income communities</i>	3.92	39.1	<.001
HCD6 <i>Opinions different from yours</i>	3.65	30.9	<.001
HCD7 <i>Backgrounds Different from yours</i>	3.59	28.4	<.001
PS1 <i>Alternative courses of action</i>	3.08	26.0	<.001
PS2 <i>Consequences of options</i>	3.39	32.1	<.001
PS3 <i>Ask good questions of someone offering a solution to a problem</i>	3.22	26.0	<.001
PS4 <i>Identify various interest groups whose perspectives need to be taken into account</i>	3.13	22.0	<.001
PS5 <i>Connect classroom learning with real world experiences</i>	3.94	33.5	<.001

* Significance levels are adjusted using the Bonferroni method to reduce the likelihood of experimentwise error. Alpha is effectively equal to .05; the adjustment requires the use of $\alpha=.002$ for rejection of the null hypothesis.

SPRING 2001

Sample

The questionnaire was administered to 381 students enrolled in seven sections of Criminal Justice 50 in the Spring 2001 semester. Of these, 176, or 46.2% of students responded to both the pre-and post- test versions of the questionnaire. One-way ANOVAs were conducted to determine whether subjects with matching pre-and post-test data were significantly different from subjects who took only the pre- or post-test. Subjects with only pre- or post test data were compared on the four competencies Indices and on student characteristics. With respect to competencies, no significant differences between groups were observed; in terms of demographic/background variables, two significant differences were detected between students with both pre- and post-test results, and students missing one of the survey administrations. Students who expressed a preference for law school were significantly less likely to have responded to both surveys. There was also significant variation by section numbers (sections ranged from a high of 64% matches to a low of 27% matched cases). It is unlikely that these differences bias the findings in a meaningful way.

Of the 176 cases with matched pre- and post-test results, 40% were freshmen, 29% were sophomores, 19% were juniors, and 13% were seniors. The mean age of the sample was 20 years (standard deviation 3 years). The youngest respondent was 17, the oldest 42. Approximately 59% were female. Only 12.5% were declared Criminal Justice majors. The overwhelming majority (93%) had not previously worked in the criminal justice system; 27% expressed an interest in seeking employment in the criminal justice system in the future. Fourteen percent of respondents indicated that they plan to attend law school after graduation.

Results⁵

The reliability analysis indicates that all the competencies Indices exhibit good psychometric properties (Table 7). As in the prior survey administrations, students exhibited improvement in all four competency areas. As Table 8 shows, students reported the greatest amount of improvement in the areas of *Critical Thinking* and *Understanding Human and Cultural Diversity* (12% improvement on both). Students showed 7% improvement in the area of *Problem Solving*, and demonstrated the least amount of improvement (3%) in the area of *Effective Communication*.

Multivariate analyses of variance (MANOVAs) were carried out using three progressively more stringent designs. MANOVAs were required as a “lead in” to the more detailed analyses in order to control for multiple, correlated dependent variables, and to effectively model potentially correlated error terms within different course sections. The first MANOVA design was a repeated measures (within) design with just pretest vs. post test as the predictor. The second design added six dummy variables for the

⁵ Qualitative analyses of the Spring 2001 data were not available at the time of this writing.

seven course sections as between-subject blocking factors, thereby effectively controlling for between section average (pre plus post) differences and accurately reflecting the possibly correlated error terms within sections. The third design added a set of between-subject covariates (class in school, gender, strength of law school ambitions, whether planning a criminal justice career, work experience in criminal justice) . If pre- to post-test gains were conditioned not only by section, but also by varying student characteristics, this last design would be an even more adequate representation of impact patterns. Persistent mean (pre plus post) differences due to section cannot be due to variations in student composition after the latter is controlled, and so might be due to instructor or class size or the time of the offering.

Since pre vs. post- is already modeled, these between subject factors capture between student and between section **mean differences averaged across pre and post tests.**

As might be expected, the progressively more complex designs yielded somewhat smaller pre- to post- effects, but the effects that started out significant remained significant. We report below on the results for the third set of most stringent designs.

The pre- to post-test shift was significant when considering all four competencies indices together (Multivariate Wilks $F(4, 449)=11.68$; $p < .001$). We see significant self-reported improvement across the four domains as a group.

Three out of the four univariate F 's also proved significant: critical thinking skills ($F(1,452)=28.14$; $p < .001$), human cultural diversity ($F(1,452)=18.37$; $p < .001$); and problem solving skills ($F(1,452)=8.17$; $p < .01$). The change on communication skills was not significant ($F,1,452=1.18$); ns).

The multivariate F for all the between-subjects factor as a block influencing all four outcomes also proved significant (Multivariate Wilks $F(12,452)=1.92$; $p < .001$). The univariate F tests were significant for all four of the outcomes (critical thinking; $p < .05$; communication ($p < .01$), human cultural diversity ($p < .001$), and problem solving ($p < .01$). Turning to the individual predictors in the block of between-subject factors, the only two student-level factors proving consistent across at least two outcomes were class in school and strength of prelaw ambitions. Those more set on law school rated themselves higher, at both pre-test and post-test, on problem solving ($p < .05$), critical skills ($p < .05$), and communication ($p < .01$). Upper class students were likely to report higher mean scores on all four outcomes (all $ps < .05$). Only one section blocking variable proved significant; students in that section rated themselves higher than the reference string section, after controlling for section composition differences, on both critical thinking and communication skills ($p < .05$).

Having carefully controlled for overall Type I error rates and error structures through the MANOVAs, we now turn to the more detailed discussions of mean differences, reporting significance levels only for descriptive purposes.

Table 9 shows the level of improvement in each of the individual competencies. Within the area of *Critical Thinking*, students showed the greatest amount of improvement in their ability to “critically evaluate criminal justice policies” (32% improvement, $p = .000$). The competencies on which students improved the least were CT2, the ability to “think critically through oral argument” (1% improvement, n.s.) and the ability to “critically evaluate arguments even when you agree with them (1%, $p = .002$). *Effective Communication* was the area in which students showed the least

amount of improvement; only item *EC4* showed significant improvement across all students (6%, $p=.022$). Within the area of *Understanding Human and Cultural Diversity*, students showed significant improvement on all individual competencies. The greatest improvement was seen in *HCD3* “understand the impact of economic or social class differences in criminal justice” and *HCD4*, “understand the impact of the criminal justice system on racial minorities” (both 15% improvement, $p=.000$). Students reported significant improvement on all the items in the area of *Problem Solving*; the greatest amount of improvement registered on item *PS2*, the ability to “understand the consequences of options” (9%, $p=.000$).

One-way analysis of variance was used to compare mean differences pre- and post- test on each of the four competency indices according to student characteristics and course section. No significant differences were observed.

Table 7. Reliability Analyses of Competencies Indices. Spring 2001.

Index	Cronbach's Alpha	
	Pre-test	Post-test
Critical Thinking Skills	.79	.80
Effective Communication	.76	.76
Understanding Human and Cultural Diversity	.91	.91
Problem Solving	.85	.83

Table 8. Change in Competency Areas: Spring 2001.

Index	Means		t	sig.	% change
	Pre-test	Post-test			
Critical Thinking Skills	18.70	20.93	-7.80	.000	+ 12%
Effective Communication	10.99	11.34	-2.04	.043	+ 3%
Understanding Human and Cultural Diversity	20.33	22.82	-7.23	.000	+ 12%
Problem Solving	14.20	15.14	-4.12	.000	+ 7%

Table 9. Change in Individual Competencies. Spring 2001.

Item	Pre-test	Post-test	t	sig.	% change
CT1 <i>Think critically through written argument</i>	2.80	2.97	-2.8	n.s.	+ 6%
CT2 <i>Think critically through oral argument</i>	2.84	2.87	-.54	n.s.	+ 1%
CT3 <i>Critically evaluate criminal justice policies</i>	2.11	2.78	-8.7	<.001	+ 32%
CT4 <i>Understand fundamentals of legal reasoning</i>	2.24	2.82	-8.0	<.001	+ 26%
CT5 <i>Know how a theory relates to a specific situation</i>	2.40	2.93	-6.6	<.001	+ 22%
CT6 <i>Distinguish between opinion and fact</i>	3.39	3.47	-1.4	n.s.	+ 2%
CT7 <i>Question personal beliefs in light of information</i>	2.92	3.09	-2.7	n.s.	+ 6%
CT8 <i>Critically evaluate arguments even when you agree with them</i>	3.03	3.06	-3.1	<.002	+ 1%
EC1 <i>Speak clearly and effectively in front of a group</i>	2.81	2.99	-1.7	n.s.	+ 5%
EC2 <i>Write clearly and effectively</i>	3.03	3.06	-.55	n.s.	+ 1%
EC3 <i>Good listening skills</i>	3.02	3.07	-.90	n.s.	+ 2%
EC4 <i>Make a persuasive presentation</i>	2.61	2.76	-2.3	n.s.	+ 6%
HCD1 <i>Understand significance and impact of race on criminal justice</i>	2.88	3.29	-5.8	<.001	+ 14%
HCD2 <i>Understand significance and impact of gender on criminal justice</i>	2.78	3.18	-5.8	<.001	+ 14%
HCD3 <i>Understand impact of economic or social class differences in criminal justice</i>	2.87	3.30	-6.1	<.001	+ 15%
HCD4 <i>Understand impact of criminal justice system on racial minorities</i>	2.89	3.33	-6.9	<.001	+ 15%
HCD5 <i>Understand impact of criminal justice system on lower income communities</i>	2.78	3.30	-8.1	<.001	+ 19%
HCD6 <i>Opinions different from yours</i>	3.09	3.24	-2.5	n.s.	+ 5%
HCD7 <i>Backgrounds Different from yours</i>	3.05	3.17	-2.1	n.s.	+ 4%
PS1 <i>Alternative courses of action</i>	2.80	3.02	-3.7	<.001	+ 8%
PS2 <i>Consequences of options</i>	2.90	3.15	-3.8	<.001	+ 9%
PS3 <i>Ask good questions of someone offering a solution to a problem</i>	2.86	3.01	-2.1	n.s.	+ 5%

PS4 <i>Identify various interest groups whose perspectives need to be taken into account</i>	2.55	2.73	-2.5	n.s.	+ 7%
PS5 <i>Connect classroom learning with real world experiences</i>	3.07	3.24	-2.8	n.s.	+ 6%

* Significance levels are adjusted using the Bonferroni method to reduce the likelihood of experimentwise error. Alpha is effectively equal to .05; the adjustment requires the use of $\alpha=.002$ for rejection of the null hypothesis.

CONCLUSION

The work on competencies in the Criminal Justice department represents the hard work and commitment of a great many faculty, graduate students, and undergraduate students. The Competencies Committee has developed a useful instrument for measuring the development of student competencies in criminal justice. Although our work in CJ 50 demonstrates that students are indeed improving upon competencies that they find worthwhile, further work remains to be done. Future goals include the expansion of competencies investigation to other courses in criminal justice, an activity we expect to undertake over the next year.