WORK EXPERIENCE AND CAREER EXPLORATION PROGRAM

2001 Evaluation Report

Prepared by

Data Analysis and Progress Reporting Division

Planning and Performance Center Illinois State Board of Education

May 2002

FOREWORD

This report was written by Dr. Lilibeth Q. Gumia, Principal Performance Consultant with the Data Analysis and Progress Reporting Division. The views expressed in this report are those of the author and do not necessarily reflect the views of the Illinois State Board of Education.

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EXECUTIVE SUMMARY

The Work Experience and Career Exploration Program (WECEP) was established to provide career related classroom instruction and cooperative work experience to 14 and 15 year old potential dropouts who are enrolled full time in the regular school. The explicit assumption of the law is that services provided by the program, such as basic education development and enrichment and career education, coupled with work training experiences provided by the private sector, would lead to improved self-image and/or would motivate students to continue in school not only after they turned 16 but until they graduate from high school. To what extent WECEP has met the intent of the law requires a collection of data which is student-based. In April 2001, with the support of the Illinois Student Information System (a comprehensive application for the collection of student data for the local/regional secondary career and technical education programs), individualized student data was collected for the program. Following are the major findings from the data:

- Some 1,098 students who could potentially drop-out of school because of their adverse economic or social conditions and/or low educational performance, participated in the program in 2001. Almost 90% of the students served were either academically or economically disadvantaged. Moreover, 145 of the students have disabilities and 42 are single parents. Among these students, blacks or Hispanics are more likely to be economically disadvantaged than whites or Asians. Moreover, a student with limited English proficiency is more likely a Hispanic, and students who are single parents are more likely black. Whites had the highest proportion of students with disabilities.
- Participation of male students was slightly higher than female students (52% vs. 48%).
- There were more minority students in the program than whites (57% vs. 43%). In particular, blacks constituted 72% of the minority group and 41% of all students. Hispanics constituted 15% of all students.
- WECEP services started prior to students' entry into the program where the students' skills, interests, academic strengths and weaknesses are assessed. The results of these assessments become the basis for the development of the students' academic and career portfolios. Services provided to a majority of students (with at least 60% of students participating) included assessment, career guidance/ development, transition from school to work and mentoring. In particular, career guidance/development, a service which includes planned activities that provide students opportunities to explore various career interest areas so they can make informed career decisions, was provided by the program to most of the students (92%).
- About 346 private employers participated in the program. The McDonalds conglomerate hired the majority of WECEP students, in effect making McDonalds a major partner of this initiative.
- A total of 1,092 students received paid-work experience. The total number of hours worked in the fall was 93,457 and the total amount of wages earned was \$472,610. In the spring, students worked for a total of 101,062 hours with the total amount of wages earned at \$512,422. The total number of hours worked for the whole year, therefore, was 194,519, and the total one-year wages received was \$985,032. Students were paid from \$4 to \$6 per hour.
- Hispanic students worked longer hours and made more wages than other racial groups. A Hispanic student worked 308 hours and earned \$1,678 on average for one year compared to a white student who worked 231 hours and earned \$1,269 on average for one year. Meanwhile, black students worked the least number of hours. A black student worked 175 hours and earned \$934 on average. The average hourly rate for all students was \$4.50. Hispanic students were paid a dollar more on average per hour than whites or blacks.

- On average, female students worked more hours and earned higher wages than male students. The female students were also paid slightly more per hour than male students
- 941 students in grades 7th through 10th who completed WECEP earned a total of 812.5 academic credits. More specifically, the 168 eighth grade students who completed the program for one or two semesters earned a total of 161.5 academic credits. Attendance in the WECEP is an advantage, particularly for 8th graders who will have advanced credits applied to their high school transcripts.
- Approximately 84% of students continued in school, 2% transferred to another school and 14% dropped out of school. Of the 155 students that dropped out or withdrew from school, 92 were black, 47 were white, 15 were Hispanic and one was American Indian.
- For the cohort of students included in the regular school attendance analysis, only a 0.2% change in attendance was shown between fall and spring semesters. The correlation coefficient, though significant, is very small (r=.198, p=.000). This result however, may indicate that students who demonstrated high attendance in the fall semester would probably exhibit better if not similar attendance patterns in the spring semester.
- For students who persisted (attended the program for two consecutive semesters), attendance rates of Hispanic and blacks were higher than that of whites. In the fall, Hispanics' and blacks' mean attendance rates were 93% and 91% respectively, whereas with that of whites, 86%. In the spring, the attendance rates of Hispanics and blacks stayed at higher levels to that of whites 92% and 90% respectively, with whites at 88%. However, both Hispanics and blacks decreased attendance by about 1% while whites increased attendance by 2%.
- While the increase in regular school attendance was very low, a similar correlation analysis indicated no relationship between school attendance and hours worked. This would indicate that the students' school attendance is not affected by the number of hours the students worked.

I. INTRODUCTION

The Work Experience and Career Exploration Program (WECEP) was established under Section 3.66a of the School Code to provide career related classroom instruction and cooperative work experience to 14 and 15 year old potential dropouts who are enrolled full-time in the regular school. The implicit expectation of this law is that services provided by the program, such as basic education development and enrichment and career education, coupled with work training experiences provided by the private sector, would lead to improved self-image and/or would motivate students to continue in school not only after they turned 16 but until they graduate from high school.

Funding of the Program

WECEP funds are distributed by the Illinois State Board of Education through a competitive process with priority to school districts which have annual dropout rates and unemployment rates higher than the state average. The number of "academically disadvantaged" students in the school district and the school district's ability to pay for specific services are used as factors in determining which school district should receive funds. In FY 01, \$2,280,173 was appropriated by the legislature to support the program, and 21 school districts received funding representing 38 schools (See Appendix A).

Private Employer Partnership – A Keystone of the Program

Since student work training experience from private employment is a service required by law, school districts who received funding are required to develop private sector training sites. Specifically, this entails scouting for potential employers for these students to derive their paid-work experiences. This is one of the most challenging areas for programs – finding employers to provide their students the work experience they need. Despite Child Labor Law waivers, local employers are hesitant to hire these students given their ages and the risk and responsibility involved at work and at school. However, if a private employer agrees to hire these students, a training memorandum (Appendix B) is written spelling out the obligations of all parties involved. This training memorandum is signed by the employer, the teacher coordinator, the student and the parent. In 2001, 346 private employers participated in the program. The McDonalds conglomerate normally hires the majority of WECEP students, making McDonalds in effect, a major partner of this initiative.

II. COLLECTING INDIVIDUAL STUDENT DATA - A RESULT OF WECEP-ISIS CONNECTION

To what extent WECEP has met the intent of the law and/or to what extent services impact student achievement, requires the collection of individualized student data rather than aggregated reporting by programs. When collecting individualized data was conceptualized, the division that housed WECEP did not have the capability to enter data into a database system. In 2000, the division administrator sought the assistance of the Illinois Student Information System (ISIS). ISIS is a software package that enables reporting of local/regional secondary career and technical education programs. The database resulting from this application is a statewide collection of comprehensive student data. An agreement was reached between WECEP and ISIS in late 2000, paving the way for collecting of individual student data. Specifically, the partnership involves ISIS personnel keying-in data into the system and downloading this file for WECEP's use and analysis. An additional advantage of having WECEP data in the ISIS database is that it allows a convenient follow-up of students' educational movement and achievement. For instance, WECEP students normally include 8th to 10th grade students (with very few in 7th or 11th grade). Since the ISIS database includes most of the high school students in the Illinois public school system, WECEP could track specifically its 10th grade students if they continued to 11th grade, 12th grade and/or graduated. In April 2001, WECEP teacher coordinators submitted their individualized student reports to their ISIS local representative. Results of analyses of the data start on page 5.

III. THE STUDENT DATA - EVALUATION QUESTIONS AND FINDINGS

There are several evaluation questions that this report attempts to address apart from asking the broader impact of program services to student achievement. Some questions, however, such as appropriateness of work experience to career interest area, could not be answered by the data. Therefore, evaluation questions that could be answered by the data are limited to the following:

- 1. How many students participated in the program in 2001? What are the primary reasons (or atrisk status) for their participation in the program? What are their grade levels? What is the student ethnic distribution?
- 2. Is there a relationship between students' ethnicity and their at-risk status?
- 3. What was the students' program attendance?
- 4. What services were provided and activities conducted for these students?
- 5. What are the students' career interest areas (CAI)? How do CAIs differ by students' ethnicity and gender?
- 6. How many hours did the students work? What wages did they receive? How different are the wages by ethnic group? by gender?
- 7. What are the educational outcomes achieved by these students?
- 8. How is spring attendance different from fall attendance for students who were in the program for one year?
- 9. What is the relationship between hours worked and students' school attendance?

Before presenting the answers to the above questions, there are caveats to this report namely, that the two variables "at-risk status" and "services received" involve multiple responses, i.e., more than one category is reported for a student. It would appear that the total count is more than 1,098 and the percent of cases more than 100%. The totals indicated in the tables of these variables are based on duplicated counts. The readers are advised to consider this when interpreting the data. In addition, data are self-reported. This method of data collection may create possibilities for some data to be erroneous. It is necessary, therefore, to conduct edit checks to ensure reliability and validity of data. Even with this effort, there is still a chance that the data are not completely accurate.

FINDINGS

Evaluation Question 1:

How many students participated in the program in 2001? What are the primary reasons (or atrisk status) for their participation in the program? What are their grade levels? What is the student ethnic distribution?

About 1,098 students who could potentially drop-out of school, because of their adverse economic or social conditions and/or low educational performance, participated in the program in 2001. The data in Table 1 indicates that almost 90% of the students served by WECEP were either academically or economically disadvantaged. Moreover, 145 of the students have disabilities and 42 are single parents. Of the single parents, 14 were male and 28 female.

Table 1. At-Risk Status of WECEP Students: 2001

At-Risk Status	Number of	Percent of
	Students	Students
Academically disadvantaged	869	89.5
Economically disadvantaged	643	66.2
Limited English proficient	25	2.6
Individuals with disabilities	145	14.9
Single parent	42	4.3
Duplicated Count	1,724	177.5

Grade Levels

The majority of students were in 9th grade (56%). The program also enrolled 8th grade students (17%) and 10th grade students (27%). One student was reported in 7th grade and another student in 11th grade (Table 2).

Table 2. Grade Levels of WECEP Students: 2001

Grade Level	Level Number Pero	
7 th	1	0.1%
8 th	183	16.7%
9 th	613	55.8%
10 th	300	27.3%
11 th	1	0.1%
Total	1,098	100.0%

Gender and Ethnicity

The proportion of male students was slightly higher than female students (52% vs. 48%). (Table 3). Further, there were more minority students in the program than whites (57% vs. 43%). In particular, blacks constituted 72% of the minority group and 41% of all students. (Table 3).

Table 3. Ethnicity of WECEP Students: 2001

Race	Number	Percent
Alaskan Native/American		
Indian	3	0.3%
Asian/Pacific Islander	11	1.0%
Black, Not Hispanic	447	40.7%
Hispanic	161	14.7%
White, Not Hispanic	476	43.4%
Total	1,098	100.0%

Evaluation Question 2:

Is there a relationship between students' ethnicity and their at-risk status?

Data in Table 4 indicates that students in WECEP have two common disadvantages: that of being economically poor or at the lower stratum of academic achievement levels. While the majority of students are disadvantaged, blacks or Hispanics are more likely to be economically disadvantaged than whites or

Asians. Moreover, a student with limited English proficiency is more likely a Hispanic, and students who are single parents are more likely black. Whites had the highest proportion of students with disabilities.

A correlation analysisⁱⁱⁱ of low-income with ethnicity for all students who took the Illinois Standards Achievement Test (ISAT) supports the ethnic distribution of students participating in WECEP. This analysis showed that schools which have a high percentage of students from low-income families would more likely have a higher enrollment of black students. Enrollment of black students to these "low-income" schools would be more likely twice as high as that of Hispanic students and 3 to 4 times higher than other groups such as whites or Asians.

Table 4. At-Risk Status by Ethnicity: WECEP 2001

At-Risk Status	Am In/ Alaskan	Asian/ Pacific Is	Black, Not Hispanic	Hispanic	White, Not Hispanic	Duplicated Count
Academically disadvantaged	3	11	351	138	366	869
Economically disadvantaged	1	6	352	128	156	643
Limited English proficient	0	1	0	16	8	25
Individuals with disabilities	2	1	59	10	73	145
Single parent	0	0	36	5	1	42

Evaluation Question 3: What was the students' program attendance?

A majority of students (62%) attended the program for one year. Only 15% attended the fall semester and only 9% attended the spring semester. About 14% of students withdrew early in the program (Table 5).

Table 5. Semester Attendance in WECEP: 2001

Type of Semester Attendance	Number	Percent
Withdrew participation	157	14.3%
Fall semester only	162	14.8%
Spring semester only	95	8.7%
Both semesters	684	62.3%
Total	1,098	100.0%

Evaluation Question 4:

What services were provided and activities conducted for the students?

WECEP school staff conducted various activities and provided various services to assist students to succeed both in school and in the workplace. Their services started prior to the students' entry into the program where the students' skills, interests, academic strengths and weaknesses are assessed. The results of these assessments become the basis for the development of the students' academic and career portfolios. The importance of these types of activities and services is clearly shown by the number and percent of students receiving these types of services. As one might note in Table 6, services provided to a majority of students (with at least 60% of students participating) included assessment, career guidance/development, transition from school to work and mentoring. In particular, career guidance/development, a service which includes planned activities that provide students opportunities to explore various career interest areas so they can make informed career decisions, was provided to most of the students (92%) in the program.

Table 6. Number and Percent of Students Receiving a Specific Type of WECEP Service: 2001

	Number of	Pct of
Type of Service	Students	Students
Assessment	959	87.3
Career Guidance/Development	1,005	91.5
Transition	960	87.4
Mentoring	665	60.6
Support Groups	102	9.3
Tutoring	266	24.2
Note-taking/Interpreting	102	9.3
Teacher Aid/Paraprofessional	105	9.6
Special Instruction	480	43.7
Dependent Care	20	1.8
Transportation	550	50.1
Career Technical Ed Spec Pop	295	26.9
Other Support Services	57	5.2

Evaluation Question 5:

What are the students' career interest areas (CAI)? How do CAIs differ by students' ethnicity and gender?

Prior to starting in the program, a student is asked his/her career interests. The data showed that most students chose *business and/or administrative services*. When it comes to other career areas, however, more male students preferred *engineering/ industrial technology*, *agriculture* or *arts and communications* over *health care* or *human and family services*. In contrast, female students preferred the latter (Table 7). The choice of a career area is independent of students' ethnicity.

Table 7. Preferred Career Area by Gender: 2001

Career Area	Female	Pct	Male	Pct	CAI Total	Pct
Agriculture/Natural Resources	17	3.3%	36	6.3%	53	4.8%
Arts and Communications	37	7.1%	57	9.9%	94	8.6%
Business and Administrative Services	246	47.1%	255	44.4%	501	45.7%
Health Care	81	15.5%	26	4.5%	107	9.8%
Human and Family Services	129	24.7%	85	14.8%	214	19.5%
Engineering and Industrial Technology	12	2.3%	115	20.0%	127	11.6%
Gender Total	522	100.0%	574	100.0%	1,096	100.0%

Evaluation Question 6:

How many hours did the students work? What wages did they receive? How different are the wages by ethnic group? by gender?

A total of 1,092 students received paid-work experience. The total number of hours worked in the fall was 93,457, and the total amount of wages earned was \$472,610. In the spring, students worked for a total of 101,062 hours with total amount of wages earned at \$512,422. The hours worked for the whole year, therefore, was 194,519, and the total one-year wages received was \$985,032. Students were paid from \$4 to \$6 per hour.

a. Wages, work hours and hourly rate by ethnicity

Hispanic students worked longer hours and earned more wages than other racial groups (Table 8). A Hispanic student worked 308 hours and earned \$1,678 on average for one year compared to a white student who worked 231 hours and earned \$1,269 on average for one year. Meanwhile, black students worked the least number of hours among these three major groups. A black student worked 175 hours and earned \$934 on average. Average hourly rate for all students was \$4.50. Hispanic students are paid a dollar more on average per hour than whites or blacks. [Asian and American Indian students were not included in the analysis because of very small numbers.]

Table 8. Mean Hours Worked and Mean Wages Earned by Selected Ethnic Groups: 2001

_ Variable	Ethnicity	Number of Students	Annual Average
Total Work Hours	Black, Not Hispanic	346	175
	Hispanic	131	308
	White, Not Hispanic	397	231
	Total	874	220
Total Wages	Black, Not Hispanic	343	\$934
	Hispanic	131	\$1,678
	White, Not Hispanic	395	\$1,269
	Total	869	\$1,198

b. Wages and work hours by gender

On average, female students worked more hours and earned more wages than male students. The female students were also paid slightly more per hour than male students (Table 9).

Table 9. Average Hourly Rate, Total Wages and Total Hours Worked by Gender: 2001

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GENDER		Average Hourly Rate	Average Annual Total Wages	Average Annual Total Hours Worked
Female	Mean	\$4.40	\$1,232	224
	N	428	428	428
Male	Mean	\$4.25	\$1,164	216
	N	446	446	446

Evaluation Question 7:

What are the educational outcomes achieved by these students?

Positive educational outcomes achieved by students included earning high school credits to be applied toward high school completion or continuing in school.

a. Credits Earned

All students who completed a semester or a year of WECEP earned academic credit. A 0.5 credit was applied to one semester of attendance and 1.0 credit was applied to one year of attendance by completing the WECEP course. A total of 812.5 credits were earned by 941 students. More specifically, 257 students who attended either the fall or spring semester earned a total of 128.5 credits. Attendance in the WECEP is an advantage, particularly for 8th graders who will have advanced credits applied to their high school transcripts.

b. End-of-Year Status and Ethnicity

Approximately 84% of students continued in school, 2% transferred to another school and 14% dropped out from school (Table 10).

Table 10. School End-of-Year Status: 2001

Terminal Status	Number	Percent
Continued	918	83.6%
Transferred	22	2.0%
Withdrew/Dropped out	155	14.1%
Total	1,098	100.0%

Within each of the ethnic groups, 78% of blacks, 86% of Hispanics, 87% of whites and 100% of Asians, continued in school. Of the 155 students that dropped out or withdrew from school, 92 were black, 47 were white, 15 were Hispanic and one was American Indian (Table 11). It is not known from the data why this large number of black students decided to withdraw or drop out of school.

Table 11. School End-of-Year Status by Ethnicity: 2001

				Withdrew/	
				Dropped	
Race		Continuing	Transferred	Out	Total
Alaskan Native/Am Indian		2	0	1	3
	Percent	66.7	0.0	33.3	
Asian Am/Pacific Islander		11	0	0	11
	Percent	100.0	0.0	0.0	
Black, Not Hispanic		351	4	92	447
	Percent	78.5	0.9	20.6	
Hispanic		138	7	15	161
	Percent	85.7	4.3	9.3	
White, Not Hispanic		416	11	47	476
	Percent	83.6	2.3	9.9	
Total		918	22	155	1098
	Percent	83.6	2.0	14.1	

Evaluation Question 8:

How is spring attendance different from fall attendance for students who were in the program for one year?

[Caveat: Analysis of "student attendance" is limited to students who attended the program for one year and comparisons are based on a two-semester attendance. Programs did not collect attendance prior to or after students' participation in the program. Moreover, the **cohort** only includes Hispanic, black and white students. Asians and American Indians are not included in the analysis because of very small numbers.]

For the cohort of students included in the analysis, the mean attendance rate in the fall semester was 89.08 and the mean attendance rate in the spring semester was 89.28, which represents only a 0.2% change in attendance between the two semesters. The correlation coefficient, though significant, is very small (r=.198, p=.000). This result, however, may indicate that students who demonstrated high attendance in the fall semester would probably exhibit better, if not similar attendance patterns in the spring semester.

Attendance Performance by Ethnicity

For students who persisted (attended the program for two consecutive semesters), attendance rates of Hispanic and blacks were higher than that of whites. In the fall, Hispanics' and blacks' mean attendance rates were 93% and 91% respectively, whereas with that of whites, 86%. In the spring, the attendance rates of Hispanics and blacks stayed at higher levels to that of whites – 92% and 90% respectively, with whites at 88%. However, both Hispanics and blacks decreased attendance by about 1% while whites increased attendance by 2%.

Evaluation Question 9:

What is the relationship between hours worked and students' school attendance?

A similar correlation analysis was conducted in determining the relationship between school attendance and hours worked to address concerns about whether "work" impedes student attendance. The statistical analysis showed **no** relationship between the two variables. This would indicate that the students' school attendance is not affected by the number of hours the student worked.

IV. CONCLUSION AND RECOMMENDATIONS

Given the results of the analysis of the 2001 data, WECEP has met the intent of the law in the following areas:

- 1. Practically all of the students served are economically and academically disadvantaged. In particular, minority students outnumbered whites in participation.
- 2. The programs provided the necessary services and training activities that would prepare these students for the "world of work."
- 3. The programs provided the students the work experience as required by the law.
- 4. The majority of students were promoted to the next grade and continued in their education.
- 5. All students who completed the program earned at least one-half credit toward high school completion.

On the other hand, the program has yet to show progress in the following performance indicators:

- 1. Improved attendance The attendance rates reported were associated with the students' participation in the program, i.e., these were the attendance rates of the students in the regular school while concurrently receiving services in the program. In this case, there is no way of knowing how the program validly affected students' attendance in the regular school. It is recommended that programs report pre- and post-program participation attendance rates as opposed to fall and spring attendance for the purpose of determining impact of program services to student attendance.
- 2. Performance of students at work Aside from the current student database, it would be valuable to know how students perform in the workplace. A study conducted by Pong and Post (2000)^{iv} indicated that school-to-work programs for middle school graders, such as the WECEP, effect behavioral change among its student participants. Though the study is silent about early employment to academic performance, nevertheless, Pong and Post indicated that early employment may teach many important values for adolescent development. Such values include responsibility, independence and effort or hard work.

3. Another issue that needs to be pursued is the alignment of student career interest areas to work experience. While this poses a major challenge to programs because of the dearth of private employers, particularly in the areas of engineering and technology, agriculture and natural resources and arts and communications, who could offer employment to these students, this issue would be worth pursuing. There is a plan to follow the students even after they complete high school. It would be good to know what types of work these students wind up with and how their job performances differ from that of students who have not had the WECEP experience. This is a long shot – but definitely a good measure of WECEP's enduring effect on its students.

The suggested areas for reporting other student performance indicators may be discussed by the WECEP statewide planning committee in terms of the data viability and accessibility.

End Notes:

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ⁱ Based on the written comments of program coordinators in planning discussions during the WECEP statewide planning meeting in October 2001 held in Springfield, IL.

ii Illinois State Board of Education reorganized in January 2002 which abolished the division that housed WECEP.

iii An analysis conducted by Dr. Shuwan Chiu of the Division of Data Analysis and Progress Reporting Division, ISBE.

Post D. and Pong, S. (2000). Employment During Middle School: The Effects on Academic Achievement in the US and Abroad. Educational Evaluation and Policy Analysis, Fall 2000, Vol. 22 No. 3, pp. 273-298.