2006 Pennsylvania Migrant Education Projected Graduation Rate Study

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INTRODUCTION

Statement of Purpose

In recent years those concerned with educational outcomes have begun to embrace a serious paradigm shift towards quantifiable rather than qualitative approaches as learning outcomes are continually measured for effectiveness. The cumulative results of this approach with regards to Pennsylvania's Migrant Education Program (MEP) laid the foundation for this current work. Jacqueline L. Young's 2005 analysis of the MEP in the effort entitled "Pennsylvania Migrant Education Graduation Rate Study," is used as the primary source for this document.

This enterprise begins by establishing the context for prior MEP data collection initiatives. Current methods of data collection are portrayed, and the goals for the overall project are systematically described. Data models have been constructed, and the aggregate data has been viewed and analyzed - the results are recounted within this document narrative. The work concludes with a recitation of pertinent recommendations obtained from past studies, as well as an offering of several fresh approaches as to how to how the MEP could proceed with future efforts in this area.

Context

The Pennsylvania Migrant Education Program (MEP) provides supplemental educational and support services to migratory children. The MEP assists local school districts with improving and coordinating the educational continuity for the children of migratory farm workers who have had their schooling interrupted. Working in close collaboration with school districts, intermediate units and community agencies, the MEP helps migratory children meet the same high standards expected of all children. A goal of the MEP is to support the secondary education of children and provide assistance to help them graduate with a high school diploma.

To measure the Migrant Education Program's success in helping students earn their high school diploma, a graduation rate study (GRS) was conducted in 2001 by L. Jack Reynolds and the Pennsylvania Department of Education. This study analyzed the graduation success of Pennsylvania's eligible migrant students that entered ninth grade in 1994-95, 1995-96 and 1996-97. The assessment concluded that the percentage of migrant students who graduated during these three years was 60, 67 and 49 percent, respectively. These figures do not control for those students who dropped out, left Pennsylvania, were unfound or did not graduate for other reasons such as imprisonment, death or GED acquisition.

In 2005 a new GRS was conducted by Jacqueline L. Young in an attempt to build on Reynolds' initial research and to make comparisons for an additional three year period. This study included eligible students that entered ninth grade during the years 1999-00, 2000-01 and 2001-02.

This current document, compiled during February of 2006, is an endeavor to both expand upon and to further develop Ms. Young's 2005 study. Several of Ms. Young's recommendations for future revisions have been incorporated into this undertaking, and an overall foundation for

sustained and continuous quantitative analysis relating to the MEP has been established with this most recent extension of the 2005 study.

PENNSYLVANIA MIGRANT EDUCATION PROJECTED GRADUATION RATE STUDY

Overview

The current study enlarges the pool of MEP students being evaluated by examining eligible students who entered the ninth grade during the year 2002-03. This effort adds the most recent group of students who are nearing the end of a typical four-year graduation cycle to the existing data pool. Additionally, it builds on previous research as it follows the final group examined in the 2005 GRS (2001-2002) through the following two academic years (2002-2003, 2003-2004). This augmentation to the original data allows for more precise examination of the characteristics of the individual students within that explicit cohort of learners, i.e. those students who entered the ninth grade in 2001-02.

Utilizing a successful technique from the 2005 project, the current revision employs a cohort graduation rate, which compares the number of twelfth grade graduates who earned a standard diploma with the number of students enrolled as ninth-graders four years earlier. Research shows that this method provides the most precise graduation rate when tracking individual students.

In February 2006, Student Support Specialists (SSS) consisting of MEP field staff that work in five state-wide regions were directed to collect graduation data for the following students:

- Migrant students who entered ninth grade during the school years 2002-2003, and who were projected to graduate before the end of calendar year 2006.
- Migrant students that entered the tenth grade in the year 2002-2003 and who graduated during calendar year 2005.
- Migrant students that entered the eleventh grade in the year 2003-2004 and who also graduated during calendar year 2005.

The SSS designated a status code for each student; this code categorized each student in one of the following six areas:

1. (Y) - Expected to graduate during 2006
2. (D) - Dropped out
3. (L) - Left Pennsylvania
4. (I) - In school but not currently in grade 12
5. (U) – Unknown
6. (O) - Other

For the (Y), (D), and (L) classifications the corresponding date was provided. If a student was classified as (I), (U), or (O) the staff provided a short description explaining the reason for assigning that status code. The Pennsylvania MEP office staff reviewed the student data to eliminate duplicate entries.

The goal of this data collection effort was two-fold: first, the 2005 study was expanded with a predictive assessment of MEP students who were expected to graduate during the 2006 calendar year. Secondly, using guidance from earlier recommendations a longitudinal drop out rate was developed for MEP students for the academic years 2001-2002 and 2002-2003. Whereas the 2005 investigation constructed a valuable profile of the characteristic MEP graduate, this study examines a profile of the representative student who drops out of the migrant education program. When combined with the outcomes from 2005 report the results of this study can be used as a tool to assist local administrators as they assess the continued development and overall effectiveness of their regional programs.

Analysis

Data-models developed for this project have supported the following results:

Chart A provides a comparison among the seven years of graduation data available for the nine Pennsylvania MEP project areas. The graduation rates displayed are aggregated for each year. Although the ninth grade entry year of 1999-2000 shows an overall peak in graduation (73%), the data indicate a decline over the next two ensuing years in graduation rates among secondary migrant education students (66% for 2000-01, and 63% for 2001-02). Students who entered the ninth grade in 2002-2003 revealed a solid upturn in graduation rates (68%) with an even better showing for students who have either graduated or who have returned to school following an interruption in their classes (78% displayed in Table A). Chart A has been expanded here using linear regression techniques to predict a small but steady continuing upturn in MEP graduates over the next two years.

Table A shows the graduation rates for the 2002-2003 cohort. These rates are calculated using the same methods developed during the previous study:

1. Column G shows the graduation rate as a percentage of students from the initial graduating class.
2. Column H controls for the number of students who left Pennsylvania during the four-year period. This method removes from the calculation those students who left Pennsylvania to move to another state or country. It is based on the understanding that a student leaving the state is not a function of Pennsylvania service delivery.
3. Column I controls for the number of students who were unfound or categorized as “other” during the data collection period. This percentage provides a calculation that includes only those students whose whereabouts are definitively known.
4. Column J controls for the number of students who left Pennsylvania, were unfound, or were categorized as “other” and demonstrates the percentage of students who graduated, compared to the number that dropped out.

Several columns (coded in yellow) have been added to the original table to account for those students who have returned to school after a period of absence. This additional data allows for a broader profile of the migrant student than was previously developed in addition to providing a better indicator as to the effectiveness of each regional program. Using Column K as a basis for analysis, this study shows that for those students who were in the ninth grade in 2002-2003

Project Areas 8 and 2 have the highest rates for graduating and/or for preventing students to drop out permanently with rates of 91% and 87%, respectively. Project Areas 9 and 7 have the lowest graduation and/or retention rates, listed correspondingly at 73% and 76%.

A recommendation proposed in the 2005 study was listed as follows:

> "Consider determining longitudinal (four year) graduation and drop-out rates, in addition to an annual drop-out rate... The annual dropout rate measures dropping out of school as a single event during a given year. If a student drops out of school at one point during the four years, he/she will be counted in the annual dropout rate. However, if the student returns to school before the end of the four years, he/she will not be counted as a dropout in the longitudinal rate."
>
> (Young, 2005)

Table B accomplishes the above directive through observation of the 2001-2002 groups and also by comparing that same bloc to the 2002-2003 MEP grouping. Focused analysis of Table B provides a striking look into the year-to-year accuracy of data reporting methods performed by each Project Area. Additionally, it establishes an excellent comparison between both the drop out rates and the longitudinal drop out rates between the various project areas and also within each cohort (2001-02, 2002-03). The final column to the right on Table B compares the percentage change from the normal drop out rate to the longitudinal drop out rate. The higher this percentage change is, the better job which that particular Project Area is doing at replacing its drop out students, either by bringing back previous drop out learners or by enrolling other new students. One exception that can exist here (which is proved by Project Areas 8 and 2) is if the rate of normal drop out students is a smaller figure, the margin of opportunity becomes less for that Project Area to replace its drop out students.

It should be duly noted, however, that for a more accurate comparison of the recorded drop out rates from the group of students entering the ninth grade in 2001-2002 additional data must be collected for the ninth and for the twelfth graders. The omission of the ninth and twelfth grade data causes the final total in the "Total in School Not Grade 12" column to be lower than it is in reality. Because that same final value is utilized as part of the numerator for the formula which governs the final percentage of the "Longitudinal Drop Out Rate" column, the ending result of column E is a higher percentage than it normally would be if all the required data were present (the above concern is explained in further detail in Note 1 following the table on page 10 of this document).

The above circumstance, however, does not affect the data collected for the ninth graders from 2002-2003. Thus, based on the available data collected for this study it can be said with statistical confidence that MEP ninth graders who entered school during the year 2002-2003 have a normal drop out rate of 29%, whereas the longitudinal drop out rate for that same group has been determined to be 15% (see totals for 2002-2003 at the end of Table B).

The more accurate 2002-2003 data that comprises the longitudinal rates is used as the basis for Table C. This table offers the rankings for each Project Area based upon the calculated rate. Project Areas 4 and 6 have the highest drop out rates, while Project Areas 3 and 7 have the

lowest drop out rates. These findings concerning the latter Project Areas agree with the 2005 conclusion that these same areas had the lowest graduation rates corresponding to the data being assessed at that time (Young, 2005). The second part of Table C compares the percentage change in the drop out rate from the normal determination to the longitudinal rate. Project Areas 4 and 6 again rank first and second here, with Project Areas 8 and 2 having the lowest percentage changes overall (most likely due to Project Areas 8 and 2 each having low normal drop out rate statistics).

Lastly, a brief description of the representative MEP drop out is compiled. The findings here confirm earlier reports stating that almost half (48 percent) of all drop outs are aged either 16 or 17 (Chart D), and that six out of 10 drop outs are likely to be male (Chart E).

RECOMMENDATIONS FOR FUTURE REVISIONS

There are opportunities for further analysis identified in the 2005 MEP report that are beyond the scope of this current examination. Such prospects include the following:

- Determining the completion rates for those students who earned alternative completion credentials such as a GED.
- Determining the completion rates for those who did not complete their high school education within a standard four-year period.
- Evaluating graduation and drop out rates in relation to additional contextual and school-related factors, identifying which factors may best contribute to high school graduation.
- Evaluating graduation and drop-out rates according to county and school district.

Continuing the graduation rate study on an annual basis will provide even further depth and additional detail regarding graduation trends among Pennsylvania's migrant students. Additional recommendations proposed in the 2005 study for future consideration include the following:

1. *Develop a system to store migrant information together with school data (i.e. assessment results, grades, graduation information) that will span across all Pennsylvania counties.* Or, build a component into the school system to allow sorting by migrant status. The inability to link migrant, assessment and academic databases is the greatest barrier to evaluating migrant student achievements.
2. *Consider expanding the study beyond the four-year period.* Some research suggests that migrant students frequently drop out between seventh and eighth or eighth and ninth grades. If the study started tracking students in seventh grade, it might offer additional insight into the grades during which migrant students drop out.
3. *Incorporate a graduation status field in MIS-2000.* Student Support Specialist staff would still need to collect data for the appropriate students; however, upon completion of the data collection period, the graduation status data could be inputted directly into the database by regional data specialists. Having these data incorporated into MIS-2000

would allow reports to be generated that link graduation statistics with other data collected on the students, including both demographic and academic factors.

Additional opportunities to broaden the Commonwealth's institutional knowledge with regards to a general profile of both drop outs and more successful MEP students include the following:

- Collect data from ninth graders entering school in 2001-02 and from twelfth graders in 2005-06 in order to complete Table B and to have a more robust data set. This will more accurately determine both the normal and longitudinal drop out rates amongst the various Project Areas.
- Compiling a catalog of post-graduate learning and/or career choices made by MEP participants. This would indicate how successful students perceive their ongoing educational development and give valuable insight to migrant educational staff.
- Tracking drop out migrant workers' continuing learning tendencies in areas other than the more traditional educational formats (such as GED programs), e.g. following a student who has left the migrant educational program in order to work full-time but who also registers for night classes from a non-traditional institution. Students of this type who demonstrate continued concern for their personal educational development should be viewed as programmatic successes (continuing learners) rather than failures (MEP drop outs).
- Analyzing the perceived benefits and/or disadvantages that student involvement in specific community, civic, or faith-based activities holds for the MEP learner. It would be of significant value to be able to make correlations and to determine the comprehensive effects that such involvement has upon the MEP student profile. Upon the conclusion of this analysis field personnel will be able to better direct students towards positive activities in which previous successful migrant students have participated.
- A comprehensive review of the GRS data collection system ought to be undertaken by the PA Department of Education. PDE goals in this area should include methods to standardize all data collection activity performed by the project areas as well as the data reporting methods performed by research analysts. This issue is relevant due to several inconsistencies that were discovered during the data collection period for this study.

February 2006

APPENDICES

CHART A: GRADUATION RATES, 1994-2003

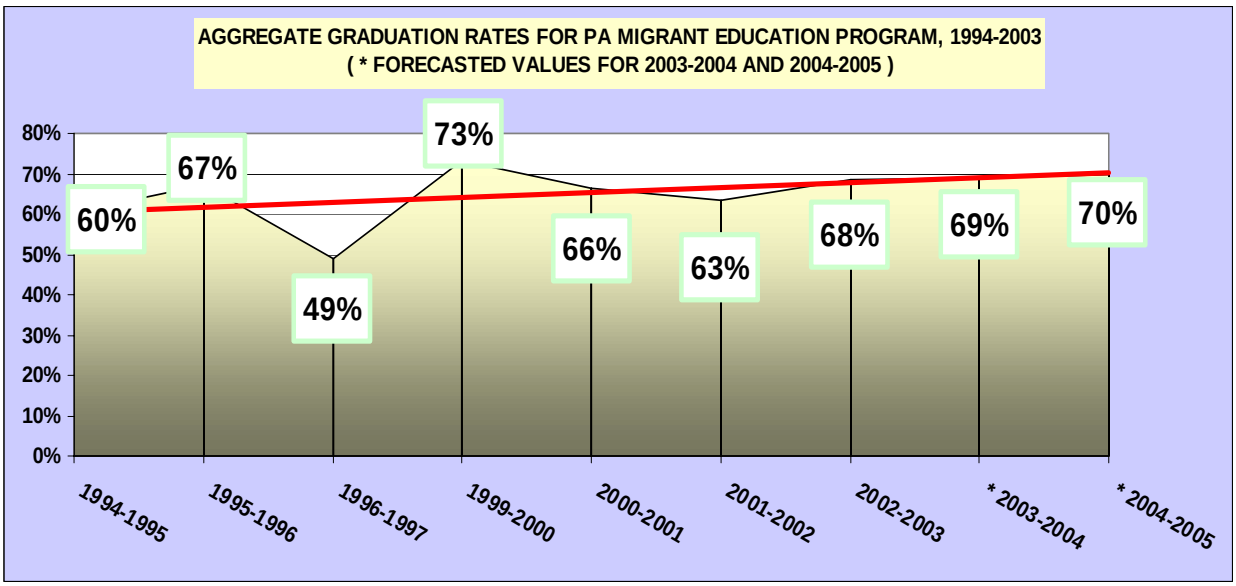

TABLE A: INTERMEDIARY UNIT PROJECT AREA SURVEY DATA, NINTH GRADERS 2002-2003

	A	B	C	D	E	F	F1	F2	H	J	K
PROJ. AREA	NINTH GRADERS	GRADU-ATES	DROP OUTS	LEFT PA	UN-FOUND	OTHER	IN SCHOOL, NOT YET GRADE 12	% GRAD. OR STILL IN SCHOOL ((B+F1)/A)	% GRAD-UATED (B/A-D)	% GRADUATED (B/((A-(D+E+F)))	% GRADUATED OR STILL IN SCHOOL (B+F1)/((A-(D+E+F)))
1	101	61	18	11	1	0	10	70%	68%	69%	80%
2	33	19	3	8	2	0	1	61%	76%	83%	87%
3	102	59	18	14	5	3	3	61%	67%	74%	78%
4	98	39	10	24	10	3	12	52%	53%	64%	84%
5	85	42	13	19	3	2	6	56%	64%	69%	79%
6	58	29	8	10	0	4	7	62%	60%	66%	82%
7	103	55	19	20	0	4	5	58%	66%	70%	76%
8	63	38	4	16	1	3	1	62%	81%	88%	91%
9	93	37	17	18	8	4	9	49%	49%	59%	73%
TOTALS	921	435	147	203	38	44	54	53%	61%	68%	77%

TABLE B: DROP OUT RATE AND LONGITUDINAL DROP OUT RATE BY MEP PROJECT AREA, 2001-02, 2003-04

			A	B	C		D	E	F
PROJECT AREA	CLASS YEAR	GRADE DATA WAS OBTAINED	TOTAL GRAD-UATED	TOTAL DROP OUTS	TOTAL IN SCHOOL NOT GRADE 12		DROP OUT RATE (B/A)	LONGITUDINAL DROP OUT RATE ((B-C)/A)	% △ IN LONGITUDINAL DROP OUT RATE (D-E)
1	2001-2002	9th	60	17	*N/A*		28%	*N/A*	
		10th	64	10	6		16%	6%	
		11th	45	3	3		7%	0%	
		12th	*N/A*	*N/A*	*N/A*		*N/A*	*N/A*	
	2002-2003	9th	61	18	10		30%	13%	17%
	MEAN PERCENTAGE, 2001-2003						**20%**	**6%**	**14%**
2	2001-2002	9th	13	3	*N/A*		23%	*N/A*	
		10th	16	6	2		38%	25%	
		11th	16	6	-		38%	38%	
		12th	*N/A*	*N/A*	*N/A*		*N/A*	*N/A*	
	2002-2003	9th	19	3	1		16%	11%	5%
	MEAN PERCENTAGE, 2001-2003						**28%**	**24%**	**4%**
3	2001-2002	9th	28	27	*N/A*		96%	*N/A*	
		10th	39	15	-		38%	38%	
		11th	31	5	-		16%	16%	
		12th	*N/A*	*N/A*	*N/A*		*N/A*	*N/A*	
	2002-2003	9th	59	18	3		31%	25%	6%
	MEAN PERCENTAGE, 2001-2003						**45%**	**27%**	**18%**
4	2001-2002	9th	24	16	*N/A*		67%	*N/A*	
		10th	29	15	4		52%	38%	
		11th	29	11	2		38%	31%	
		12th	*N/A*	*N/A*	*N/A*		*N/A*	*N/A*	
	2002-2003	9th	39	10	12		26%	-5%	31%
	MEAN PERCENTAGE, 2001-2003						**45%**	**21%**	**24%**
5	2001-2002	9th	19	19	*N/A*		100%	*N/A*	
		10th	45	16	2		36%	31%	
		11th	39	9	-		23%	23%	
		12th	*N/A*	*N/A*	*N/A*		*N/A*	*N/A*	
	2002-2003	9th	42	13	6		31%	17%	14%
	MEAN PERCENTAGE, 2001-2003						**47%**	**24%**	**23%**
6	2001-2002	9th	20	14	*N/A*		70%	*N/A*	
		10th	29	10	4		34%	21%	
		11th	40	10	4		25%	15%	
		12th	*N/A*	*N/A*	*N/A*		*N/A*	*N/A*	
	2002-2003	9th	29	8	7		28%	3%	25%

	MEAN PERCENTAGE, 2001-2003						**39%**	**13%**	**16%**
7	2001-2002	9th	39	31	*N/A*		79%	*N/A*	
		10th	48	22	9		46%	27%	
		11th	40	11	-		28%	28%	
		12th	*N/A*	*N/A*	*N/A*		*N/A*	*N/A*	
	2002-2003	9th	55	19	5		35%	25%	10%
	MEAN PERCENTAGE, 2001-2003						**47%**	**27%**	**20%**
8	2001-2002	9th	28	4	*N/A*		14%	*N/A*	
		10th	39	3	1		8%	5%	
		11th	38	3	-		8%	8%	
		12th	*N/A*	*N/A*	*N/A*		*N/A*	*N/A*	
	2002-2003	9th	38	4	1		11%	8%	3%
	MEAN PERCENTAGE, 2001-2003						**10%**	**7%**	**3%**
9	2001-2002	9th	20	15	*N/A*		75%	*N/A*	
		10th	28	16	1		57%	54%	
		11th	23	13	-		57%	57%	
		12th	*N/A*	*N/A*	*N/A*		*N/A*	*N/A*	
	2002-2003	9th	37	17	9		46%	22%	24%
	MEAN PERCENTAGE, 2001-2003						**59%**	**44%**	**15%**
TOTALS	2001-2002	9th	251	146	*N/A*		58%	*N/A*	
		10th	337	113	29		34%	25%	
		11th	301	71	9		24%	21%	
		12th	*N/A*	*N/A*	*N/A*		*N/A*	*N/A*	
	2002-2003	9th	379	110	54		29%	15%	14%
	TOTALS 2001-2003		**1,268**	**440**	**92**		**35%**	**27%**	**8%**

NOTES:

1. The overall longitudinal drop out rate of 27% is skewed upward - this actual percentage should be a lower figure. Unavailable data regarding 9th and 12th grade statistics for year 2001-2002 reduces the final amount for "Total in School, Not Grade 12" column (value of 92).

   This condition, when factored into the formula governing the overall longitudinal drop out rate, makes the result of 27% higher than it would otherwise be. It is suggested earlier in this document that the missing data from 2001-02 be obtained to garner a more accurate result for the overall longitudinal drop out rate.

2. 2001-2002 dataset includes ninth grade data obtained from 2005 GRS. Some ninth and all twelfth grade data pertaining to ninth graders entering school in 2001-2002 was outside of the scope of both the 2005 and 2006 GRS projects and remains uncollected at this time.

TABLE C: PROJECT AREA RANKINGS, 2002-2003

Rankings by Longitudinal Drop out Rate	
Project Area 4	-5%
Project Area 6	3%
Project Area 8	8%
Project Area 2	11%
Project Area 1	13%
Project Area 5	17%
Project Area 9	22%
Project Area 3	25%
Project Area 7	25%

Rankings by % △ Between Normal Drop Out Rate and Longitudinal Drop Out Rate	
Project Area 4	31%
Project Area 6	25%
Project Area 9	24%
Project Area 1	17%
Project Area 5	14%
Project Area 7	10%
Project Area 3	6%
Project Area 2	5%
Project Area 8	3%

CHART B: NORMAL DROP OUT RATES, 2001-2003

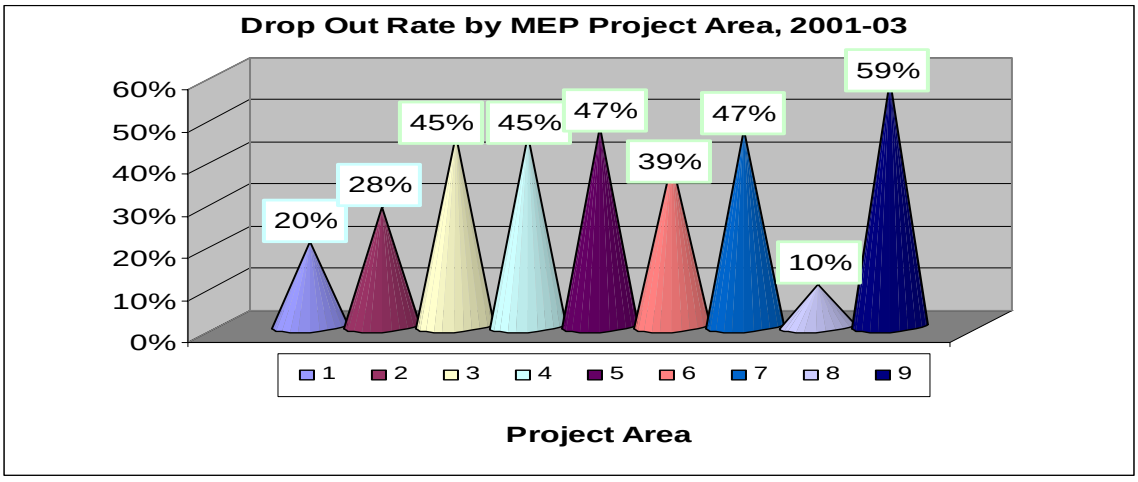

CHART C: LONGITUDINAL DROP OUT RATES, 2001-2003

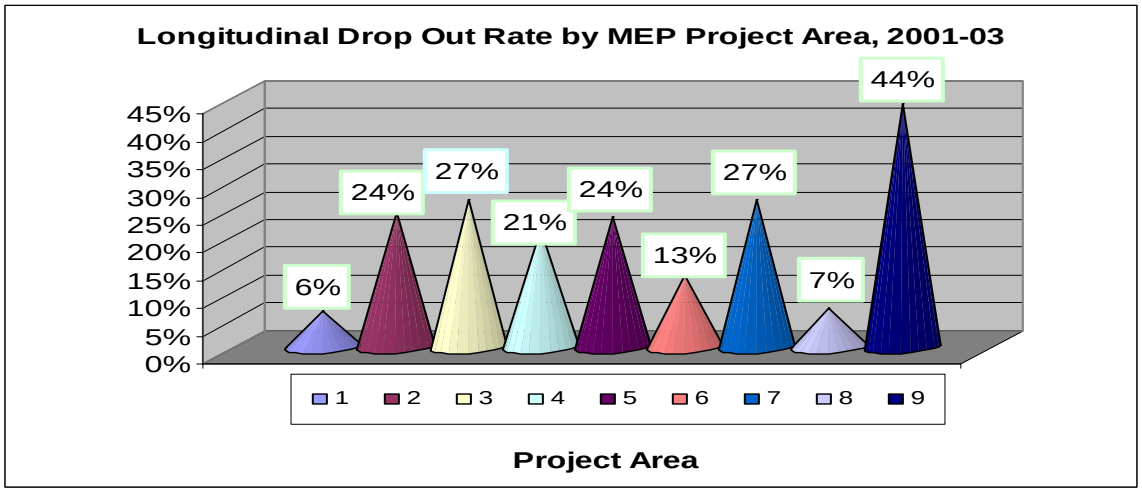

CHART D: AGES OF DROP OUTS, 1999-2003

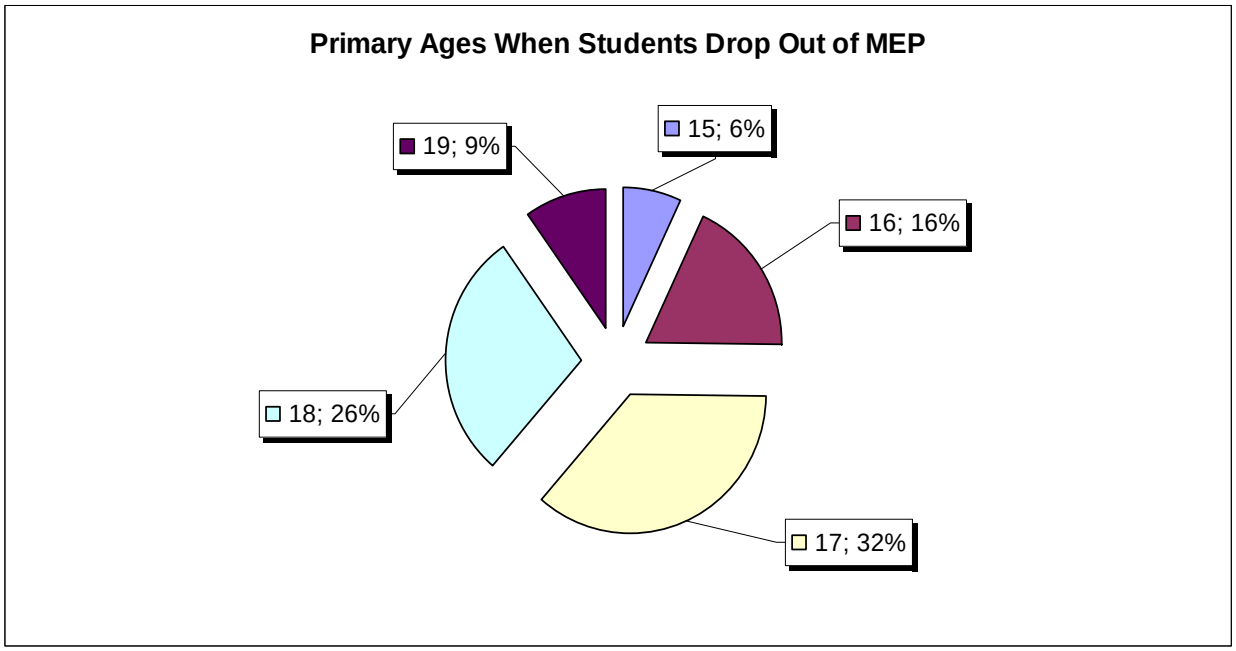

CHART E: CATEGORIES BY GENDER, 1999-2003