

Projections 2004-05

Comparison of Methodologies
Past and Present

Past Methodology

- 5 yrs of membership data was used excluding non-traditional campuses and Grade EE.
- Trend and Growth functions from Microsoft Excel were applied to Excel data sheets.
- The average of Trend and Growth predicted values were calculated.
- A variance cap of 5-10% was applied on all projected values.

Concerns With Past Methodology

- Principals felt that using linear trends across years did not capture the mobility from grade to grade.

Example 1: Predicting Grade 4 using a linear trend across years

	1999	2000	2001	2002	2003	2004	2005 proj
Grade 3	60	55	54	55	54	60	
Grade 4	60	57	57	55	54	52	51



This method utilizes only Grade 4 data and predicts a loss of 9 students from Grade 3 to Grade 4.

Concerns With Past Methodology

- Campuses/Grade Levels without previous history were not included in projections

Example: Predicting Grade 6 for campuses converting to PK-8.

- Campuses/Grade Levels with an unstable history were not included in projections and thus the projected District membership was incomplete.

Example: All non-traditional campuses and Grades EE.

Present Methodology for 2004-05

- 6 years of membership data was used including non-traditional campuses and Grade EE.
- A database was utilized which has the ability to control for each grade:
 - Projection Methodology
 - Unit adjustments
 - Percentage adjustments
 - Variance cap
- Three Projection methodologies were used:
 - Cohort Ratio Model**
 - Diagonal Analysis (DI)
 - Year Before (YB)

Cohort Ratio Model

- The Cohort ratio model was the primary method for predicting membership. The model calculates a survival rate (SR) for each grade in order to determine the percentage of students predicted to proceed to the next grade.

The following example will illustrate the model.

Cohort Ratio Model (cont.)

Example 1) Predicting Grade 4 using the Cohort Ratio Model .

	1999	2000	2001	2002	2003	2004		2005
Grade 3	60	55	54	55	54	60		
Grade 4	60	57	57	55	54	52		51
Calculation of		57/60	57/55	55/54	54/55	52/54	Survival Rate	60*.99
Cohort Ratios		.95	1.04	1.02	.98	.96	.99	59

Old Method
(Trend line)

Cohort Ratio Model Prediction

Cohort Ratio Model (cont.)

- For Grades 6 and 9, a survival rate was calculated based on the number of 5th and 8th grade students received the previous year.

The following example will illustrate this.

Cohort Ratio Model (cont.)

Example 2) Predicting Grade 9 using the Cohort Ratio Model.

	1999	2000	2001	2002	2003	2004		2005
<i>(grade 8)</i>	594	486	503	476	448	448		
Grade 09		742	622	641	584	572		
Calculation of		742/594	622/486	641/503	584/476	572/448	Survival Rate	1.26*448
Cohort Ratio		1.2	1.3	1.3	1.2	1.3	1.26	564

Out of the 742 Grade 9 students for year 2000, 594 were in the District in 1999. Similarly, out of 642 Grade 9, 486 were District Grade 8 students in 2000. Grade 8 students for each high school were found in this manner. To predict 2005 we assume that 448 students will be sent to this campus next year and apply the calculated survival rate.

Diagonal Analysis

- A Diagonal Analysis (DI) was used for all campuses without previous history.

Example:

Miller Elementary will have Grade 7 next year so current Grade 6 students (37) are projected for 2004-05 Grade 7.

- This method was used to project for the campuses as they convert to PK-8.

Note: Projections for these campuses are incomplete until the conversion to PK-8 is finalized and new boundaries are determined

Use of Previous Year Data

- Membership from the previous year (Year Before, YB) was used for campuses/grades with an unstable history of data.

Example:

All 2005 projections for nontraditional campuses and Grades EE and PK will equal membership on 2003-04 PEIMS.

While both the diagonal and previous year methods are rudimentary, at this point it allows for a preliminary projection for these campuses. More statistical methods are being researched in order to fine-tune the process.

Unit and Percentage Adjustments

- Unit and Percentage adjustments were made when known variables were likely to increase/decrease projections.

Example 1: New Developments increasing 2005 Projections

Example 2: Elementary schools converting to PK-8 will decrease membership at the feeder Middle Schools. (Wheatley, Twain and Tafolla all were given a negative unit adjustments due to the conversion of Austin and Hawthorn)

- Projection adjustments are summarized on the following page.

2004-05 Projection Adjustments

Schools Projected based on a PK-8 Track

Campus

179	Hawthorne	PK-8	
056	King	PK-8	
114	Cameron	PK-7	
109	Carroll	PK-7	
127	Gates	PK-7	
153	Miller	PK-7	
159	Pfeiffer	PK-7	
102	Austin	PK-7	
111	Brewer	PK-6	
119	Douglass	PK-6	
105	<i>Baskin</i>	<i>PK-6</i>	<i>(no change)</i>
112	<i>Briscoe</i>	<i>PK-6</i>	<i>(no change)</i>

Middle Schools with Decreased Projections Due to PK-8

Campus	UA	Reason	
042	Cooper	-53	Reduced due to Brewer keeping Grade 6
046	Wheatley	-33	Reduced by Austin and Hawthorne keeping their respective Grade 7 and Grade 8.
053	Page	-17	Reduced due to Douglass keeping Grade 6
054	Poe	-24	Reduced due to Douglass keeping Grade 6
058	Twain	-33	Reduced by Austin and Hawthorne keeping their respective Grade 7 and Grade 8.
061	Tafolla	-9	Reduced by Austin keeping Grade 7.

Schools with a Percentage Adjustment Due to Boundary Changes

Campus	PA	Reason	
043	Davis	0.85	Losing students to King (Davis will be at 85% of their projected membership)
057	Rogers	1.03	Stewart now feeds into Rogers
109	Carroll	0.80	Losing students to King M.S.
127	Gates	0.60	Losing students to King M.S. which becomes the new bilingual cluster
173	WW White	0.90	Losing students to King M.S.

Schools with Increased Projections Due to New Developments

Campus	UA	Reason	
005	Highlands	8	Mission Creek Subdivision, Phase I (S. Presa)
008	Lanier	16	Las Villas de Merida (S. Hamilton), Villa Veramandi, Phase II (off of Barclay)
041	Connell	9	Mission Creek Subdivision, Phase I (S. Presa)
042	Cooper	21	Las Villas de Merida (S. Hamilton)
111	Brewer	42	Las Villas de Merida (S. Hamilton)
115	Carvajal	21	Villa Veramandi, Phase II (off of Barclay)
125	Foster	14	Mission Creek Subdivision, Phase I (S. Presa)
055	Rhodes	9	Villa Veramandi, Phase II (off of Barclay)

Variance Cap

- A variance cap was only used if the survival rate was affected by either a negative or positive influx of new students.

Example:

Grade KG is the only grade which utilizes a 5% variance cap.

Projections for Special Populations

- All projections include Bilingual/ESL and Special education students.
- Special Education numbers were calculated as follows:
 - 1) PEIMS 2003-04 percent of students in self-contained Sp.Ed. classrooms was found for each campus, each grade.
 - 2) Percentage was applied to projected membership to determine the number of self-contained students for next year.
- Bilingual/ESL numbers were calculated as follows:
 - 1) For grades EE, PK, and KG numbers mirrored that which was reported to PEIMS for 2003-04.
 - 2) For grades 01, 02, 03, diagonal analysis was used.
 - 3) For grades 04, 05, 06 the 2003-04 percentage of Bilingual students was calculated and applied to predict next year.

Sample of Projection Layout

Grade	1999	2000	2001	2002	2003	2004	SR/Method	UA/PA	2005 Proj	BIL/ESL	SPED
09	739	742	622	641	584	572	1.26	5	569	36	12
10	520	568	616	517	529	484	0.82	5	474	28	9
11	517	440	499	483	440	435	0.84	5	412	36	10
12	455	469	410	470	449	407	0.93	5	410	14	12
Total	2231	2219	2147	2111	2002	1898	NA	20	1865	114	43

Historical
Membership



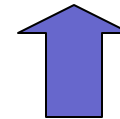
Survival Rate or
Methodology Used



Unit Adjustment/
Percentage Adjustment



2005
Membership
Projections



Number of Bilingual/ESL and Self-contained Special
Education Students Included in Projections



Preliminary Results

- Preliminary projections indicate an increase of 178 students at the Elementary level, a decrease of 199 at Middle School and a decrease of 232 at the High Schools. Overall, the District membership is projected to decreased by 253 students.

	2003	2004	(2005)	Diff.
Elementary (EE-5)	30,762	30,698	30,876	+178
Middle (6-8)	11,934	12,012	11,813	-199
High (9-12)	14,412	14,176	13,944	-232
Total	57,108	56,886	56,633	-253