BUSD Student Assignment Advisory Committee

Experimental Student Assignment Runs; Kindergarten Populations
Report, May 7, 2001; Bruce Wicinas

The description of several student assignment "methods" are listed here. The outcomes of these methods are in the table following.

1. **LL** This is the method suggested by Lloyd Lee, a guest at the committee several weeks ago. It operates as follows. All student who register before a "late date" are assigned according to their choices, without regard to race. Through this date all schools are allowed to fill to only a fraction of their capacity, leaving the same fraction of unfilled capacity at each school. All students who register after this late date are evenly distributed among all schools, without regard to race OR to choices submitted. The specific "late date" used was June 1. Admittedly this is not extremely "late." The number of students who registered after that date was about 1000. [student file 2000\0828].

2. **2000-SocEc** The "Soc Ec" run is similar in procedure to that furnished the committee earlier in the year. But this time it was applied to the previous year's population, at the time when the entering student population at it's maximum size, late August. At this time the population actually exceeds the available kindergarten capacity of the schools. The excess is corrected by attrition which occurred from August through early September. Because this population had to be squeezed into tight space, a lot of people could not get their first choice.

3. **8/28/2000** This is the **actual** state of student assignments at this date, furnish for sake of comparison.

4. **1999-SocEc** Another Socio-Economic run, this time applied to data of two years ago.

5. **9/14/1999** The actual state of student assignments at this date.

6. **2001-SocEc** A Socio-Economic run, applied to the population of March of this year. This is an "incomplete" population.

7. **3/3/2001** The actual state of student assignments at this date.

		Method (See above)	Tot	Wh	Bl	Oth	% Wh	% Bl	% Oth
John Mui		LL	55	21	17	17	38.2%	30.9%	30.9%
John Mui	2000	2000-SocEc	46	12	20	14	26.1%	43.5%	30.4%
John Mui		8/28/2000	61	21	16	24	34.4%	26.2%	39.3%
John Mui	1999	1999-SocEc	40	11	8	21	27.5%	20.0%	52.5%
John Mui		9/14/1999	31	4	10	17	12.9%	32.3%	54.8%
John Mui	2001	2001-SocEc	17	5	2	10	29.4%	11.8%	58.8%
John Mui		3/3/2001	24	12	6	6	50.0%	25.0%	25.0%

School	Year	Run						
Emerson		LL	53	24	8	21	45.3%	15.1%	39.6%
Emerson	2000	2000-SocEc	44	13	10	21	29.5%	22.7%	47.7%
Emerson		8/28/2000	70	18	23	29	25.7%	32.9%	41.4%
Emerson	1999	1999-SocEc	73	20	16	37	27.4%	21.9%	50.7%
Emerson		9/14/1999	48	16	13	19	33.3%	27.1%	39.6%
Emerson	2001	2001-SocEc	37	17	9	11	45.9%	24.3%	29.7%
Emerson		3/3/2001	32	12	8	12	37.5%	25.0%	37.5%
LeConte		LL	67	17	23	27	25.4%	34.3%	40.3%
LeConte	2000	2000-SocEc	60	21	16	23	35.0%	26.7%	38.3%
LeConte		8/28/2000	67	20	23	24	29.9%	34.3%	35.8%
LeConte	1999	1999-SocEc	69	18	24	27	26.1%	34.8%	39.1%
LeConte		9/14/1999	57	12	21	24	21.1%	36.8%	42.1%
LeConte	2001	2001-SocEc	25	9	5	11	36.0%	20.0%	44.0%
LeConte		3/3/2001	31	9	6	16	29.0%	19.4%	51.6%
Malcolm		LL	98	33	29	36	33.7%	29.6%	36.7%
Malcolm	2000	2000-SocEc	88	27	32	29	30.7%	36.4%	33.0%
Malcolm		8/28/2000	95	26	34	35	27.4%	35.8%	36.8%
Malcolm	1999	1999-SocEc	73	22	20	31	30.1%	27.4%	42.5%
Malcolm		9/14/1999	68	21	23	24	30.9%	33.8%	35.3%
Malcolm	2001	2001-SocEc	67	21	12	34	31.3%	17.9%	50.7%
Malcolm		3/3/2001	58	21	10	27	36.2%	17.2%	46.6%
Washingt		LL	67	11	19	37	16.4%	28.4%	55.2%
Washingt	2000	2000-SocEc	62	16	14	32	25.8%	22.6%	51.6%
Washingt		8/28/2000	78	27	14	37	34.6%	17.9%	47.4%
Washingt	1999	1999-SocEc	57	11	20	26	19.3%	35.1%	45.6%
Washingt		9/14/1999	61	17	20	24	27.9%	32.8%	39.3%
Washingt	2001	2001-SocEc	52	20	8	24	38.5%	15.4%	46.2%
Washingt		3/3/2001	53	26	12	15	49.1%	22.6%	28.3%
Whittier		LL	81	27	29	25	33.3%	35.8%	30.9%
Whittier	2000	2000-SocEc	69	31	14	24	44.9%	20.3%	34.8%
Whittier		8/28/2000	83	20	24	39	24.1%	28.9%	47.0%
Whittier	1999	1999-SocEc	59	14	20	25	23.7%	33.9%	42.4%
Whittier		9/14/1999	50	16	14	20	32.0%	28.0%	40.0%
Whittier	2001	2001-SocEc	57	28	7	22	49.1%	12.3%	38.6%
Whittier		3/3/2001	52	21	7	24	40.4%	13.5%	46.2%
Franklin		LL	39	6	25	8	15.4%	64.1%	20.5%
Franklin	2000	2000-SocEc	34	5	17	12	14.7%	50.0%	35.3%
Franklin		8/28/2000	43	6	22	15	14.0%	51.2%	34.9%

School	Year	Run							
Franklin	1999	1999-SocEc	45	12	14	19	26.7%	31.1%	42.2%
Franklin		9/14/1999	32	7	12	13	21.9%	37.5%	40.6%
Franklin	2001	2001-SocEc	30	12	5	13	40.0%	16.7%	43.3%
Franklin		3/3/2001	27	3	10	14	11.1%	37.0%	51.9%
Oxford		LL	70	36	8	26	51.4%	11.4%	37.1%
Oxford	2000	2000-SocEc	60	16	21	23	26.7%	35.0%	38.3%
Oxford		8/28/2000	68	20	23	25	29.4%	33.8%	36.8%
Oxford	1999	1999-SocEc	56	14	20	22	25.0%	35.7%	39.3%
Oxford		9/14/1999	33	10	5	18	30.3%	15.2%	54.5%
Oxford	2001	2001-SocEc	35	16	3	16	45.7%	8.6%	45.7%
Oxford		3/3/2001	35	15	3	17	42.9%	8.6%	48.6%
Cragmont		LL	84	29	15	40	34.5%	17.9%	47.6%
Cragmont	2000	2000-SocEc	72	19	14	39	26.4%	19.4%	54.2%
Cragmont		8/28/2000	70	23	11	36	32.9%	15.7%	51.4%
Cragmont	1999	1999-SocEc	63	16	16	31	25.4%	25.4%	49.2%
Cragmont		9/14/1999	57	20	9	28	35.1%	15.8%	49.1%
Cragmont	2001	2001-SocEc	46	19	8	19	41.3%	17.4%	41.3%
Cragmont		3/3/2001	48	16	9	23	33.3%	18.8%	47.9%
Thousand		LL	69	22	7	40	31.9%	10.1%	58.0%
Thousand	2000	2000-SocEc	60	19	4	37	31.7%	6.7%	61.7%
Thousand		8/28/2000	76	25	13	38	32.9%	17.1%	50.0%
Thousand	1999	1999-SocEc	76	24	16	36	31.6%	21.1%	47.4%
Thousand		9/14/1999	65	11	18	36	16.9%	27.7%	55.4%
Thousand	2001	2001-SocEc	54	19	9	26	35.2%	16.7%	48.1%
Thousand		3/3/2001	56	30	4	22	53.6%	7.1%	39.3%
Rosa Par		LL	78	22	18	38	28.2%	23.1%	48.7%
Rosa Par	2000	2000-SocEc	64	19	17	28	29.7%	26.6%	43.8%
Rosa Par		8/28/2000	68	16	15	37	23.5%	22.1%	54.4%
Rosa Par	1999	1999-SocEc	83	20	25	38	24.1%	30.1%	45.8%
Rosa Par		9/14/1999	56	13	16	27	23.2%	28.6%	48.2%
Rosa Par	2001	2001-SocEc	43	16	10	17	37.2%	23.3%	39.5%
Rosa Par		3/3/2001	61	18	8	35	29.5%	13.1%	57.4%
Jefferso		LL	77	36	8	33	46.8%	10.4%	42.9%
Jefferso	2000	2000-SocEc	68	23	13	32	33.8%	19.1%	47.1%
Jefferso		8/28/2000	81	26	16	39	32.1%	19.8%	48.1%
Jefferso	1999	1999-SocEc	71	16	17	38	22.5%	23.9%	53.5%
Jefferso		9/14/1999	38	11	7	20	28.9%	18.4%	52.6%

| Jefferso | 2001 | 2001-SocEc | 57 | 25 | 7 | 25 | 43.9% | 12.3% | 43.9% |
| Jefferso | | 3/3/2001 | 51 | 25 | 7 | 19 | 49.0% | 13.7% | 37.3% |

"Apologies and Excuses" It requires multiple iterations and corrections to yield a "good" assignmenet run. The quotas can be refined only by running again and again. The runs above were performed multiple times, but not sufficiently to work out all the peculiarities. For example, the 1999-SocEc run for Jefferson shows a total of 71 students assigned. That capacity was actually not applicable to that year, as the "9/14/1999" line for Jefferson shows. There are some other aberrations such as this, pretty easy to pick out by comparing data. I think that there are enough valid numbers above to paint a picture.

Frequency of Choice Fulfillment

For two of the three Soc-Ec runs are computed matrices showing the fraction of people who received first, second and third choices as a function of Socio-Economic Zone. People who made *no* choices are not included in these numbers.

2001-SocEc (Control file 2001\0303B.stn, frac .83)

Soc-Ec Zone	got 1st ch	got 2nd ch	got 3rd ch	got none of choices
East	62.50%	14.58%	9.38%	13.54%
Middle	91.75%	1.03%	3.09%	4.12%
West	76.16%	14.24%	4.33%	5.26%

1999-SocEc (Control file \1999\0914.stn, frac 0.83)

Soc-Ec Zone	got 1st ch	got 2nd ch	got 3rd ch	got none of choices
East	69.51%	13.41%	4.88%	12.20%
Mid	89.26%	1.65%	0.00%	9.09%
West	81.54%	1.93%	0.83%	15.70%

Other analysis attempted but not shown.

- Downloaded U.S. Census 2000 data and began to examine it. It appears, however, that Income data has not yet been released. What is so far available is "redistricting" data, which consists of enormous detail regarding population and race.
- Tried a Socio-Ec assignment run employing *two zones* instead of three. To model this I combined the "middle" and "east" zone. This is of interest because under the three-zone model the "east" zone population is very small, and is strongly subject to being shunted to other than its first choice. The outcome was pretty bad and warranted no further trials.

Observations and Conclusions by the author

1. The "Lloyd Lee" method was not fruitful. Nonetheless we are grateful for this thoughtful addition to our spectrum of possibilities.

2. The Socio-Ec method continues to deliver outcomes which are uncannily close to what we seek. The method works best when imposed in realistic circumstances -- when the population closely matches the available space. The table above shows some instances where it's performance was somewhat out of bounds, such as "Whittier 2000-SocEc." These instances invite closer scrutiny. In most of these instance I

could take a guess at an explanation, and these conditions may give ideas for policy corrections.

3. The vulnerability of the Socio-Economic method, in my opinion, is demonstrated by the "Choice Fulfullment" tables above. Note that the East Zone people are disproportionately served by this system. That is, they are denied their first choices at a higher rate than people of other zones. In that the East Zone people are most apt to be intolerant of being denied their first choice, this scheme would be hard to sell to them. If the East Zone people who don't get their first choice opt out of the system, the schools have lost an important population component.