

**ADDENDUM TO  
“CHOICE VOTING: ONE YEAR LATER”**

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1. INTRODUCTION

This addendum completes our analysis of ASUCD’s 2003-2004 Choice Voting elections, using the ballot data recently released by the ASUCD Elections Committee. ASUCD has a policy outlined in its Constitution to provide the election ballot rankings to the public upon request.

As described in our original report, Choice Voting rests on the belief that every voter should have the right to be represented by someone that she or he supports. We measure this in Section 2 by showing how many voters had one of their top choices elected. In Section 3 we show how many candidates each voter ranked. Appendix A contains the raw statistics used for our analysis. Appendix B collects together basic information about UC Berkeley’s use of Choice Voting, for comparison.

2. VOTER REPRESENTATION IN ASUCD’S CHOICE VOTING ELECTIONS

To see how well voters were represented in the first two ASUCD Choice Voting elections, we ask ourselves the following question. In each election, how many voters had one of their top choices elected to the ASUCD Senate? The statistical reports in Appendix A answer this question. We summarize the information below.

The Fall 2003-2004 ASUCD Senate election saw about 2500 voters choosing from a field of 16 candidates. In this election, 61% of voters elected their top choice, 82% elected one of their top two choices, and 88% one of their top three. Only 9% of voters did not elect any of their top four choices. We illustrate this in Figure 1.

The Winter 2003-2004 ASUCD Senate election had a much higher turnout. Over 4000 voters participated, and 14 candidates ran. In this election, 55% of voters elected their top choice, 78% elected one of their top two choices, and 90% one of their top

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Voter satisfaction - Fall election

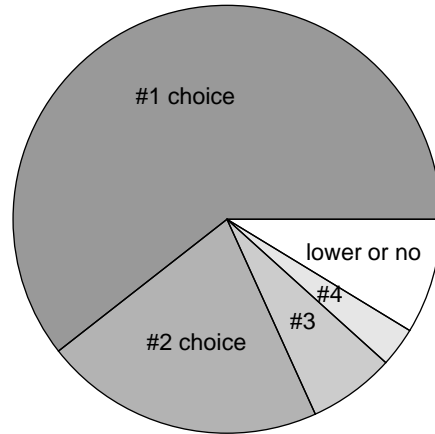


FIGURE 1. This chart shows how many voters had one of their top choices elected as a representative, in the Fall 2003-2004 ASUCD Senate election. We count only the top elected choice. For instance, if a voter’s #2 and #3 choice were both elected, we count the voter only in the #2 category. The “lower or no” category includes all voters that had none of their top four choices elected.

Voter satisfaction - Winter election

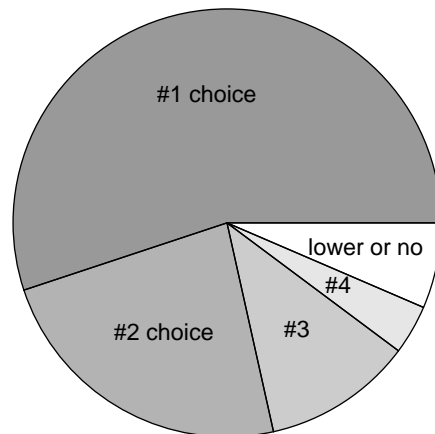


FIGURE 2. This chart shows how many voters had one of their top choices elected as a representative, in the Winter 2003-2004 ASUCD Senate election. We count only the top elected choice. For instance, if a voter’s #2 and #3 choice were both elected, we count the voter only in the #2 category. The “lower or no” category includes all voters that had none of their top four choices elected.

three. Only 7% of voters did not elect any of their top four choices. We illustrate this in Figure 2.

Compare this to a situation that arose under the old plurality system. In the Winter 2000-2001 ASUCD Senate election, there were three slates of Senate candidates: LEAD, Student Action, and Students 4 Students. We can gauge the level of support for the

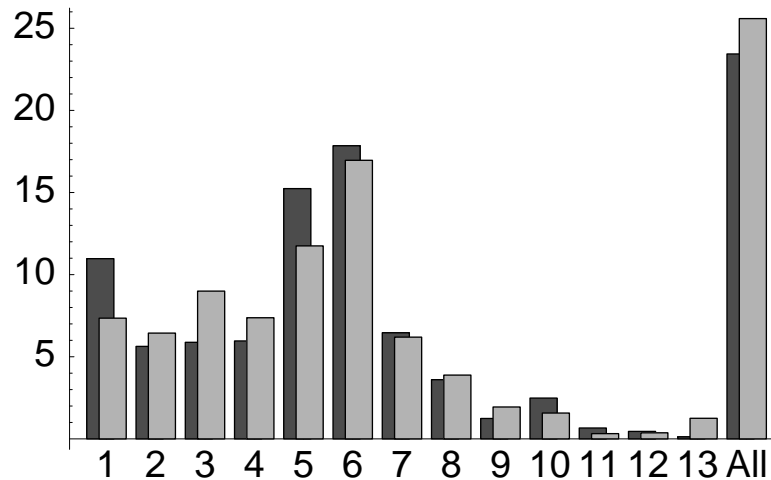


FIGURE 3. This chart shows the percent of voters that ranked  $n$  candidates in the 2003-2004 ASUCD Choice Voting Senate elections, where  $n$  is the number shown beneath. The Fall election is behind in dark gray, and the Winter election is in front in light gray. The Fall election had 16 candidates, and the Winter election had 14. For illustration purposes, we did not include 14 and 15 for the Fall election. These two percentages were under 1%. The last column shows the percent of voters that ranked all candidates.

three slates by looking at the vote totals for the corresponding Presidential tickets. The Presidential tickets won 52%, 27%, and 21% of the vote, respectively. However, all six winning Senate candidates came from the first ticket’s slate. Thus about 48% of the voters did not elect anyone from their preferred slate and so were not represented.

### 3. NUMBER OF CANDIDATES RANKED IN ASUCD’S CHOICE VOTING ELECTIONS

Figure 3 shows how many candidates each voter ranked in ASUCD’s 2003-2004 Choice Voting elections. In both elections, a majority of voters ranked six or fewer candidates. We call this the “6-and-under group.” In the fall, 61% of the voters were in the 6-and-under group. In the winter, 59% were. This may be because slates have six or fewer candidates, and voters tend to support candidates along slate lines.

Roughly half of the 6-and-under voters ranked either five or six candidates, with more ranking six than five. In the fall, 54% of the 6-and-under group ranked five or six candidates. In the winter, 49% ranked five or six. The voters ranking four or fewer candidates are distributed roughly evenly. The one exception is the group of voters ranking one candidate in the fall election. At 11%, this percentage rose somewhat higher for some reason.

In both elections, approximately one fourth of all the voters ranked all the candidates. In the fall this percentage was 23%, while in the winter it was 26%. These voters may have thought it was necessary to rank all the candidates.

Despite the variability in the number of candidates ranked, Section 2 shows that Choice Voting still gave representation to nearly all voters. A high percentage of voters elected their most-preferred candidates, so lower rankings were usually not necessary.

ASUCD can educate voters about the following facts. It is not necessary to rank all the candidates to have your vote count fully. Also, you do not hurt your higher choice candidates by ranking more. This is because your lower choices don't count until your higher choices have been either elected or eliminated. In other words, strategic voting cannot help voters elect their top preference. ASUCD can help by instructing voters to rank the candidates according to the measure of *how well they feel each candidate will represent them in the ASUCD Senate*.

#### 4. ACKNOWLEDGMENTS

We would like to thank Steve Willett for generating the statistics printed in Appendix A. Steve co-founded Voting Solutions ([www.votingsolutions.com](http://www.votingsolutions.com)), the company that makes and distributes ChoicePlus™Pro. ChoicePlus Pro is the software used by ASUCD to tally its Choice Voting elections.

We also thank Caleb Kleppner and Dave Robinson for their assistance. Caleb is a senior analyst with the Center for Voting Democracy ([www.fairvote.org](http://www.fairvote.org)). Dave is a board member of Californians for Electoral Reform. He is also the maker of DemoChoice ([www.demochoice.org](http://www.demochoice.org)), an open-source program for tallying Choice Voting elections. We also thank Dave for his comments on an early draft of our original report, "Choice Voting: One Year Later."

#### APPENDIX A: STATISTICAL REPORTS FOR THE 2003-2004 ASUCD ELECTIONS

Choice Plus™Pro generated the statistics in this section from the ballot data supplied by the ASUCD Elections Committee. Steve Willett ran the software.

The Voting Depth reports show how many candidates each voter ranked on his or her ballot. The Voting Success reports show how many voters had their first choice elected, their second choice (but not their first) elected, their third choice (but not their first or second) elected, etc.

#### Fall 2003-2004 ASUCD Senate Election.

##### VOTING DEPTH

265.0 voters ranked 1 candidates	-- 10.829587249693502%.
136.0 voters ranked 2 candidates	-- 5.557825909276666%.
142.0 voters ranked 3 candidates	-- 5.803024111156518%.
144.0 voters ranked 4 candidates	-- 5.88475684511647%.
368.0 voters ranked 5 candidates	-- 15.038823048630976%.
431.0 voters ranked 6 candidates	-- 17.61340416836943%.
156.0 voters ranked 7 candidates	-- 6.375153248876176%.
87.0 voters ranked 8 candidates	-- 3.555373927257867%.
30.0 voters ranked 9 candidates	-- 1.2259910093992643%.
60.0 voters ranked 10 candidates	-- 2.4519820187985286%.
16.0 voters ranked 11 candidates	-- 0.6538618716796076%.
11.0 voters ranked 12 candidates	-- 0.4495300367797303%.
3.0 voters ranked 13 candidates	-- 0.12259910093992644%.
12.0 voters ranked 14 candidates	-- 0.4903964037597058%.
20.0 voters ranked 15 candidates	-- 0.8173273395995097%.

566.0 voters ranked 16 candidates -- 23.13036371066612%.

#### VOTING SUCCESS

2447.0 votes.

1482.0 voters elected their #1 choice -- 60.56395586432366%.

519.0 voters elected their #2 choice -- 21.209644462607276%.

160.0 voters elected their #3 choice -- 6.538618716796077%.

73.0 voters elected their #4 choice -- 2.98324478953821%.

31.0 voters elected their #5 choice -- 1.26685737637924%.

15.0 voters elected their #6 choice -- 0.6129955046996322%.

4.0 voters elected their #7 choice -- 0.1634654679199019%.

2.0 voters elected their #8 choice -- 0.08173273395995095%.

1.0 voters elected their #9 choice -- 0.04086636697997548%.

0.0 voters elected their #10 choice -- 0.0%.

0.0 voters elected their #11 choice -- 0.0%.

0.0 voters elected their #12 choice -- 0.0%.

0.0 voters elected their #13 choice -- 0.0%.

0.0 voters elected their #14 choice -- 0.0%.

0.0 voters elected their #15 choice -- 0.0%.

0.0 voters elected their #16 choice -- 0.0%.

160.0 voters did not elect any candidates -- 6.538618716796077%.

#### Winter 2003-2004 ASUCD Senate Election.

##### VOTING DEPTH

299.0 voters ranked 1 candidates -- 7.350049164208457%.

262.0 voters ranked 2 candidates -- 6.440511307767944%.

366.0 voters ranked 3 candidates -- 8.997050147492626%.

300.0 voters ranked 4 candidates -- 7.374631268436578%.

478.0 voters ranked 5 candidates -- 11.75024582104228%.

690.0 voters ranked 6 candidates -- 16.96165191740413%.

252.0 voters ranked 7 candidates -- 6.1946902654867255%.

158.0 voters ranked 8 candidates -- 3.8839724680432646%.

79.0 voters ranked 9 candidates -- 1.9419862340216323%.

64.0 voters ranked 10 candidates -- 1.5732546705998034%.

13.0 voters ranked 11 candidates -- 0.319567354965585%.

15.0 voters ranked 12 candidates -- 0.3687315634218289%.

51.0 voters ranked 13 candidates -- 1.2536873156342183%.

1041.0 voters ranked 14 candidates -- 25.58997050147493%.

##### VOTING SUCCESS

4068.0 votes.

2241.0 voters elected their #1 choice -- 55.088495575221245%.

952.0 voters elected their #2 choice -- 23.402163225172075%.

460.0 voters elected their #3 choice -- 11.307767944936087%.

152.0 voters elected their #4 choice -- 3.736479842674533%.

24.0 voters elected their #5 choice -- 0.5899705014749262%.  
 11.0 voters elected their #6 choice -- 0.2704031465093412%.  
 1.0 voters elected their #7 choice -- 0.024582104228121928%.  
 0.0 voters elected their #8 choice -- 0.0%.  
 0.0 voters elected their #9 choice -- 0.0%.  
 0.0 voters elected their #10 choice -- 0.0%.  
 0.0 voters elected their #11 choice -- 0.0%.  
 0.0 voters elected their #12 choice -- 0.0%.  
 0.0 voters elected their #13 choice -- 0.0%.  
 0.0 voters elected their #14 choice -- 0.0%.  
 227.0 voters did not elect any candidates -- 5.580137659783677%.

#### APPENDIX B: CHOICE VOTING IN UC BERKELEY'S ASUC ELECTIONS

UC Berkeley's ASUC student government ([www.asuc.org](http://www.asuc.org)) has been using Choice Voting for decades. Their Constitution states, "In each race, the single transferable vote system with fractional transfer of surplus votes shall be used. The voter shall list candidates on his/her ballot in order of preference, until s/he has no further preference between candidates or until s/he runs out of room on the ballot. The ASUC Senate may limit the number of candidates the voter may list; such a limit may not be less than thirteen (13)." (Article VII, Section 5, B) The single transferable vote (STV) with fractional transfer is the same algorithm used by ASUCD.

ASUC holds one election each year. In each election, five executive officers are elected using instant runoff voting. This includes a President, three Vice Presidents, and a Student Advocate. Also, twenty senators are elected using Choice Voting, giving a winning threshold of about 5% the total vote. Around 8,000-9,000 students vote out of a total of 36,000. Hence a candidate needs around 400 votes to win. This is comparable to the winning threshold in ASUCD's Senate elections.

In this year's election, over 100 candidates ran for ASUC Senate, coming from 15 registered parties. They also have independent candidates and unofficial parties. About four parties consistently run from year to year: CalSERVE, Student Action, the Defend Affirmative Action Party (DAAP), and the Berkeley College Republicans (BCR). Of these, there are two major parties that consistently win several seats: CalSERVE and Student Action.

For the past 7-8 years, the five single-winner executive offices were swept by either CalSERVE or Student Action. Note that a single-winner election is necessarily winner-take-all. In contrast, the Senate election had a balance of representation. For instance, last year's breakdown was as follows: 8 Student Action, 7 CalSERVE, 1 Apple Engineering, and 4 Independents. DAAP and BCR usually elect one or two candidates each year.

The information in this section was obtained from the ASUC web site and from conversations with ASUC members.