



**The University of California
Undergraduate Experiences Survey:
General Education Objectives**

By Steve Chatman



EXECUTIVE SUMMARY

Undergraduates report the importance they place on general education skills and the progress they have made in acquiring them

UCUES outcomes allow comparisons between campuses

This is the third in a series of publications describing outcomes of the 2003 University of California Survey of Undergraduate Students (UCUES). This report describes student responses to the survey's general educational objectives items, items that broadly describe skills considered to be important by most educators.

Because UCUES was constructed to be appropriate for use by all University of California campuses, the mapping of UCUES items to UC Davis' educational objectives is incomplete. Several of UC Davis' seven objectives were addressed reasonably well: communication skills, cognitive skills, disciplinary expertise and leadership; but many others were not: virtues, global perspective, and lifelong learning. In sum, although UCUES was an incomplete assessment of UC Davis' educational objectives, it does offer valid comparative data about the importance that UC undergraduates ascribe to general education skills and their self-reported progress made in acquiring them.

In this report UCUES general education skills results are described in four sections: student rating of importance of skills, self-reported progress made in acquiring skills, the cross-tabulation of importance and progress, and detailed comparison of skills outcomes across UC campuses.



TABLE OF CONTENTS

Executive Summary	i
Table of Contents	ii
Results and Discussion	
Importance of General Education Skills	1
Table 1: Importance of Educational Objectives as Ascribed by Undergraduates	1
Figure 1: General Education Outcomes Sorted by Importance	2
Progress Made in Developing General Education Skills	3
Table 2: Self-Reported Progress Made by Undergraduates	3
Figure 2: General Education Outcomes Sorted by Progress Made	4
Agreement Between Importance and Progress Made in Skills Acquisition	4
Figure 3: Importance by Progress Made	5
Comparison with UC Sister Campuses	5
Criticism of Self-Reported Survey Data for Assessment of Skills Attainment	6
Appendix 1	
A Series of Figures Comparing Campus-by-Campus Results	7
Appendix 2	
Background	12
Questionnaire Content	12
Response Rates	12
Survey Methodology	13
Appendix 3	
Topics and Instrument Items: Content Mapping	14

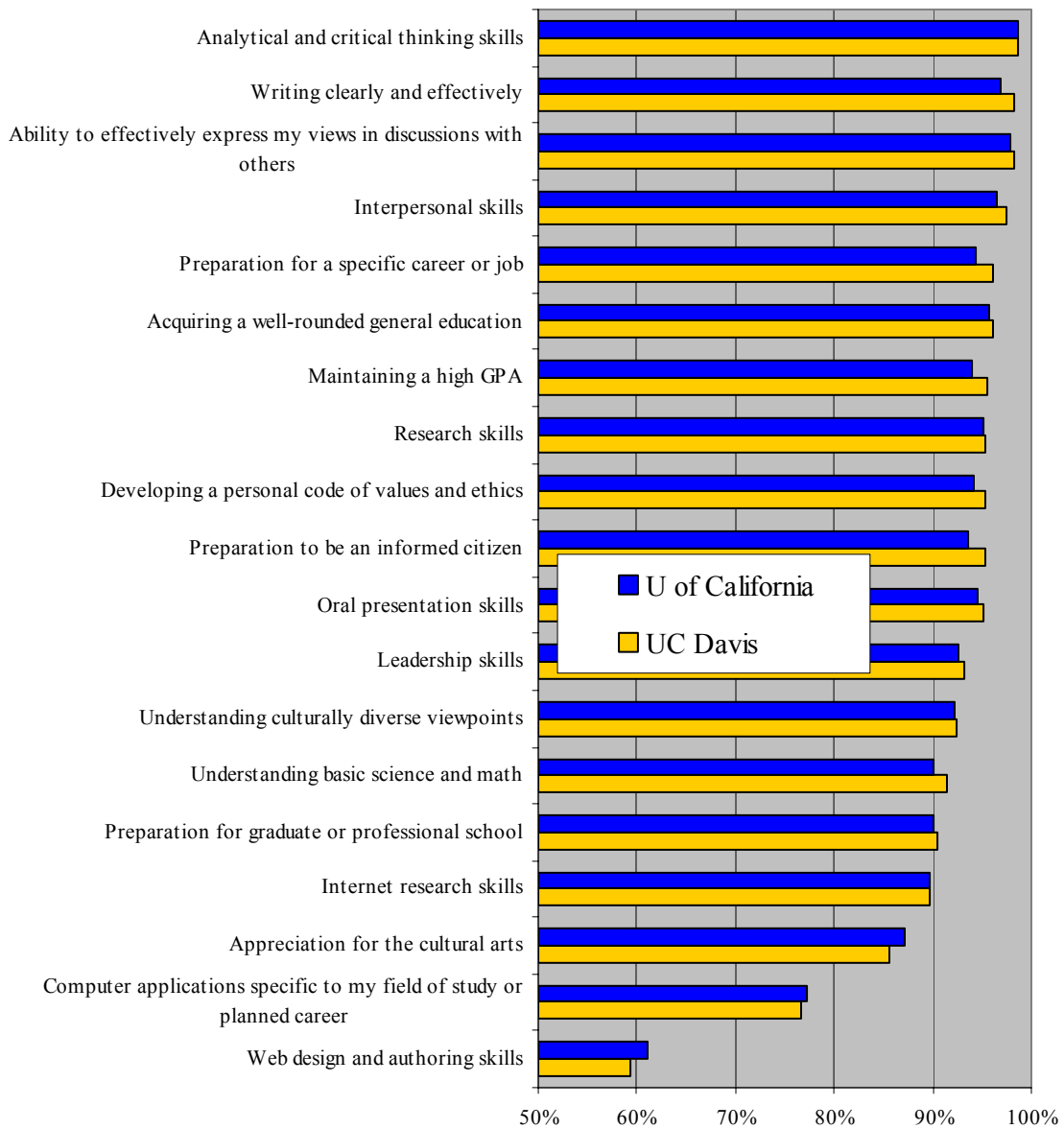
RESULTS AND DISCUSSION

Importance of General Education Skills

The most notable finding regarding student ratings of the importance of general education outcomes is that there was near universal support for them. With only three exceptions, at least nine of every ten students rated the listed skills as important and more than 95% supported the importance of analytical and critical thinking skills, writing clearly and effectively, ability to effectively express views in discussions, interpersonal skills, preparation for a specific career, and acquiring a well-rounded general education. The only skill area with marginal support (59% important) was web design and authoring. Somewhat surprising was the high importance assigned to verbal expression in discussions (3rd) and interpersonal skills (4th). Perhaps faculty could encourage new opportunities for these student experiences in class discussions, project teams, and other instructional method choices. Table 1 and Figure 1 show importance in rank order for UC Davis students compared to UC overall outcomes. There were no instances where the two differed by more than 2%.

Table 1: Importance of Educational Objectives as Ascribed by Undergraduates			
Educational Objective	UCD	UC	Difference
Analytical and critical thinking skills	99%	99%	0.1%
Ability to effectively express my views in discussions with others	98%	98%	0.3%
Writing clearly and effectively	98%	97%	1.4%
Interpersonal skills	97%	97%	0.8%
Maintaining a high GPA	96%	94%	1.7%
Acquiring a well-rounded general education	96%	96%	0.4%
Preparation for a specific career or job	96%	94%	1.8%
Oral presentation skills	95%	95%	0.6%
Preparation to be an informed citizen	95%	94%	1.6%
Developing a personal code of values and ethics	95%	94%	1.1%
Research skills	95%	95%	0.3%
Leadership skills	93%	93%	0.5%
Understanding culturally diverse viewpoints	92%	92%	0.1%
Understanding basic science and math	91%	90%	1.3%
Internet research skills	90%	90%	0.0%
Preparation for graduate or professional school	90%	90%	0.3%
Appreciation for the cultural arts	86%	87%	-1.6%
Computer applications specific to my field of study or planned career	77%	77%	-0.6%
Web design and authoring skills	59%	61%	-1.9%
Overall	92%	91%	0.4%
<i>Source: SARI Report #317</i>			

**Figure 1: General Education Outcomes Sorted by Importance
(Percentage Who Say it is Important)**

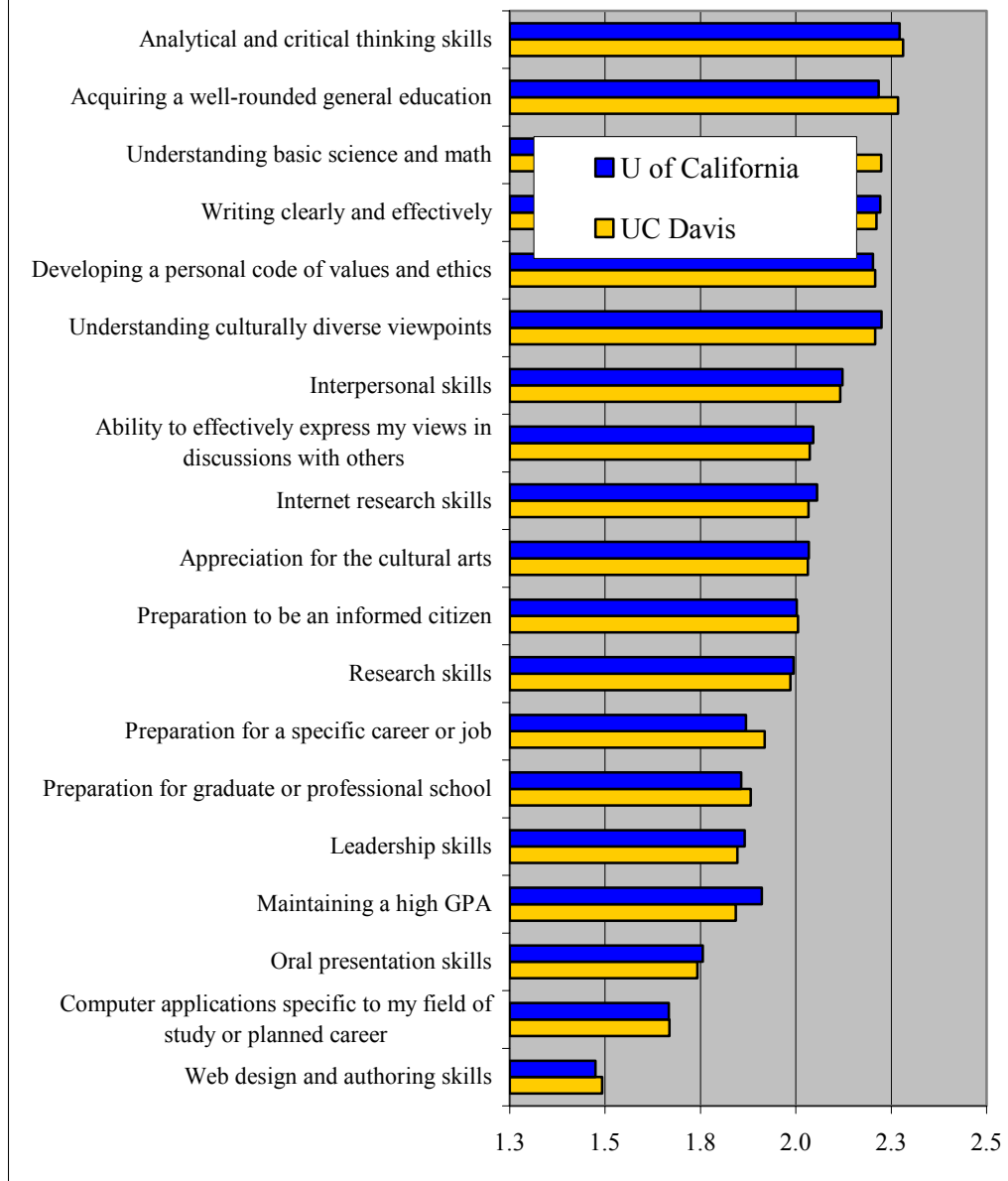


Progress Made in Developing General Education Skills

Using a scale where 3 was a great deal of progress and 1 was very little if any progress, the overage self-assessment of progress made was 2.0 for both UC Davis and UC students overall. At the top of the students' list were analytical and critical thinking skills, acquiring a well-rounded general education, understanding basic science and math, writing clearly and effectively, developing a personal code of values and ethics and understanding culturally diverse viewpoints. (Table 2 and Figure 2) It was a laudable listing, consistent with UC Davis' objectives. Skills ranked near the bottom were Web design and authoring skills, computer applications, and oral presentation skills.

Table 2: Self-Reported Progress Made by Undergraduates				
Educational Objective	UCD	UC	Difference	
Analytical and critical thinking skills	2.3	2.3	0.01	
Acquiring a well-rounded general education	2.3	2.2	0.05	
Understanding culturally diverse viewpoints	2.2	2.2	-0.02	
Developing a personal code of values and ethics	2.2	2.2	0.01	
Writing clearly and effectively	2.2	2.2	-0.01	
Understanding basic science and math	2.2	2.1	0.09	
Interpersonal skills	2.1	2.1	-0.01	
Internet research skills	2.0	2.1	-0.02	
Research skills	2.0	2.0	-0.01	
Preparation to be an informed citizen	2.0	2.0	0.00	
Appreciation for the cultural arts	2.0	2.0	0.00	
Ability to effectively express my views in discussions with others	2.0	2.0	-0.01	
Preparation for graduate or professional school	1.9	1.9	0.03	
Preparation for a specific career or job	1.9	1.9	0.05	
Maintaining a high GPA	1.8	1.9	-0.07	
Leadership skills	1.8	1.9	-0.02	
Oral presentation skills	1.7	1.8	-0.01	
Computer applications specific to my field of study or planned career	1.7	1.7	0.00	
Web design and authoring skills	1.5	1.5	0.02	
Overall	2.0	2.0	0.00	

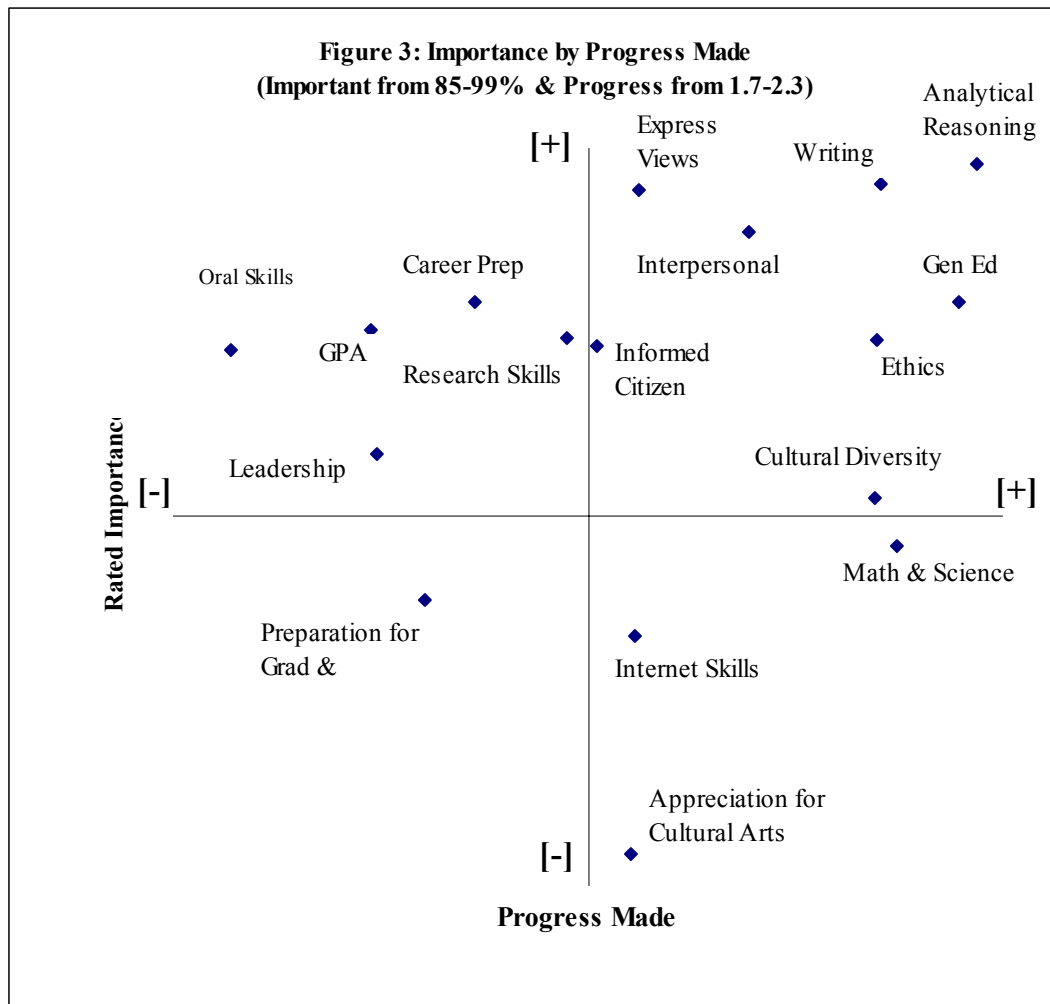
**Figure 2: General Education Outcomes Sorted by Progress Made
(3=A Great Deal to 1=Little or No Progress)**



Agreement Between Importance and Progress Made in Skills Acquisition

Do UC Davis students perceive that they are acquiring the skills that they consider to be most important? By plotting mean importance by progress-made, it is possible to answer this question using a scatter-plot. More precisely, a four-region grid was formed by bisecting the importance and progress-made ranges. The four quadrants describe two in agreement: importance and progress high and importance and progress low, and two that show a relative mismatch: importance high and progress low or the reverse. In addition, the degree of misfit can be measured by the distance from the intersection of the two bisecting axes. With very few exceptions, there was a great deal of agreement between

importance and progress ratings. (Figure 3) Areas where agreement was especially strong were analytical reasoning, writing, general education, interpersonal skills and ethical development.



There were also a few areas of misfit. Student responses suggested that more attention should be placed on supporting their acquisition of leadership skills and especially oral skills. The importance that student assigned to oral and leadership skills was higher than self-rated progress. A skill area that students would deemphasize was appreciation for cultural arts where they were making relatively more progress in an area they considered to be of lesser importance.

Comparison with UC Sister Campuses

The final section of this report extends the analysis shown in Figure 3, importance by progress-made, to campus-by-campus comparison for each of the 19 skills. (Appendix 1) In each case, the X axis is progress-made and the Y axis is importance. Along each axis are a pair of lines identifying the high and low points of a range of equivalency adopted by a committee of UC institutional researchers. The range is from the average across campuses plus and minus one-fifth of the population standard deviation. (It is similar to

an effect size computation in meta-analysis.) All point values between the lines are equivalent for practical purposes. The equivalency range for progress is between the green lines. The similar range for importance is defined by blue lines. When the high and low point lines for both axes are combined (blue and green), a rectangle is formed. All data points within the rectangle are highly similar because they are equivalent on both progress made and importance.

The data points show the point of intersection of each UC campus's progress and importance score for each skill. In all, there was only once instance where a campus value fell outside the range of equivalency. That was for GPA where the students at one campus considered it to be less important even though they were making good progress toward maintaining a high GPA. There were no other recognizable differences.

Criticism of Self-Reported Survey Data for Assessment of Skills Attainment

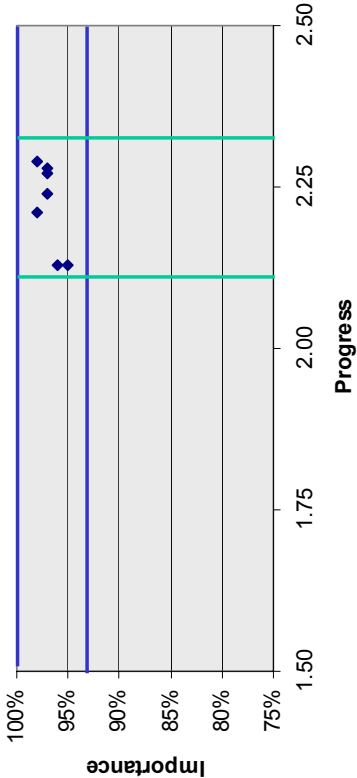
It is ironic that UC campuses have recently been acquiring reliable, comparative general education outcomes survey data when WASC is stating that survey data are insufficient evidence. Until recently, student survey data were recognized as a sufficient and primary source of feedback about general education skills attainment, and the UCUES project bettered those data by providing valid comparisons. But perhaps the true irony from a campus perspective is that the availability of reliable comparative information calls into question their validity as evidence.

As Figures (a) – (s) in Appendix 1 clearly show, there were no important differences from one campus to another in the progress that students reported having made in acquiring general education skills or the importance they placed on those skills¹. That is an especially troubling outcome because students clearly differentiated among the general skills when assessing importance and progress made. In other words, there is less intercampus mean variation in skills ratings than variation in ratings between skills. Or to illustrate, paired importance and progress campus ratings for “(k) Acquiring a Well-Rounded General Education” are very closely clustered and are easily distinguished from other item clusters that are also closely packed. Figure (t) shows the first 10 skill areas plotted on a common axis. Notice that it is easy to differentiate the skill areas that appear clustered like 10 shotgun blasts from close range.

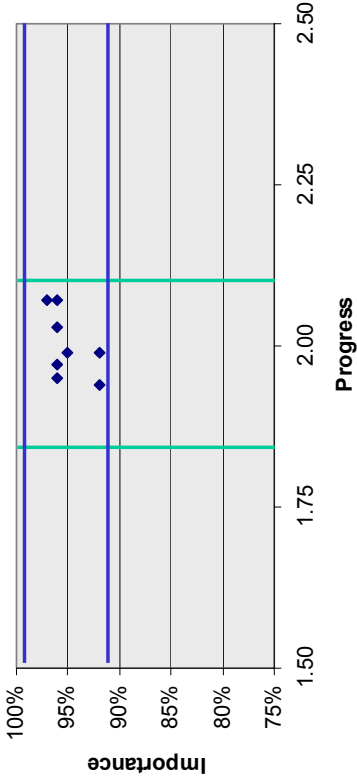
One explanation for the lack of campus variation would be that the undergraduate general education experience truly varies little from campus to campus across UC institutions. That is, that the skills are of equal importance to students from one campus to another and that they acquire those skills equally regardless of the campus attended. On its face, it might be the case that the students were similar enough that the importance ratings would agree, but the similarity in progress ratings seems unlikely. A rival hypothesis would be that student ratings reflect something more akin to maturational perceptions that transcend the unique qualities of a particular undergraduate education. The real problem is that whether one hypothesis or the other is correct, the data are not sensitive to campus variation and are therefore not particularly useful in evaluating institutional performance.

¹ The one “Maintaining a high GPA” exception was previously noted and is not considered “important” in this discussion of general education skills.

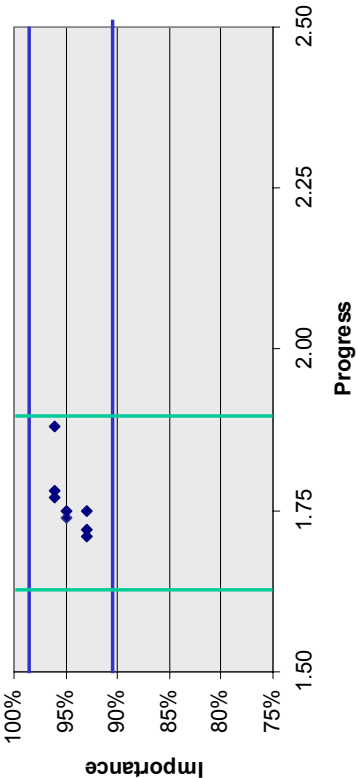
a) Writing Clearly and Effectively



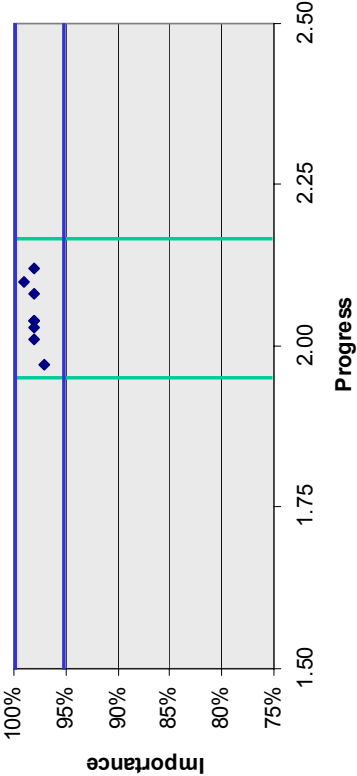
b) Research Skills



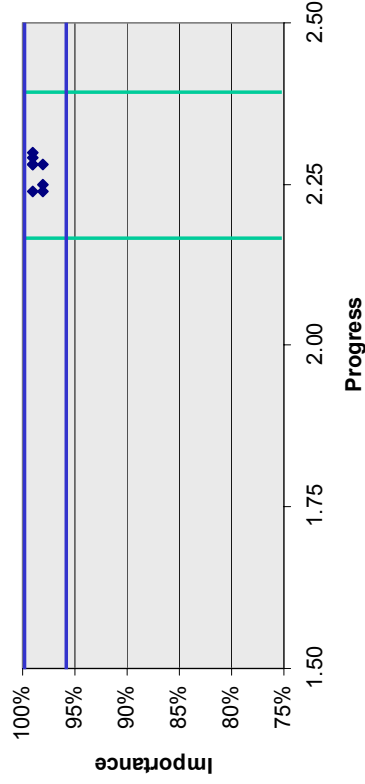
c) Oral Presentation Skills



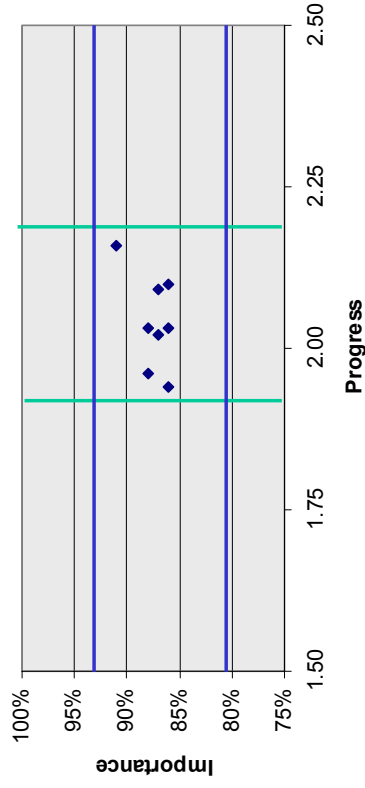
d) Ability to Express Views in Discussions



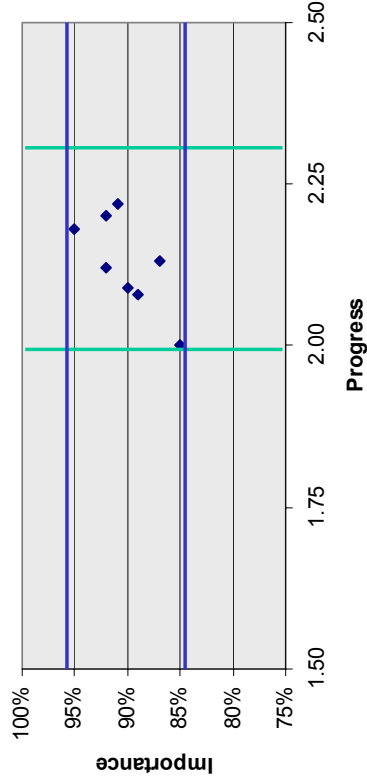
e) Analytical and Critical Thinking Skills



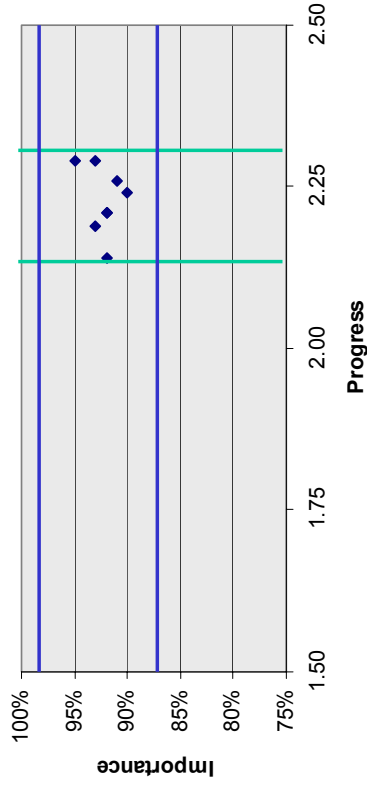
f) Appreciation for the Cultural Arts



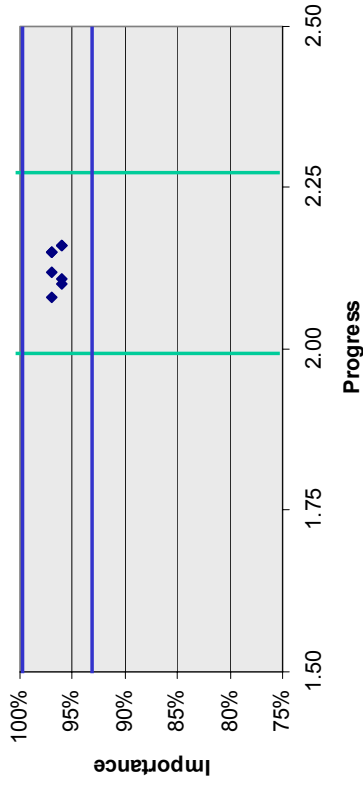
g) Understanding Basic Science and Math



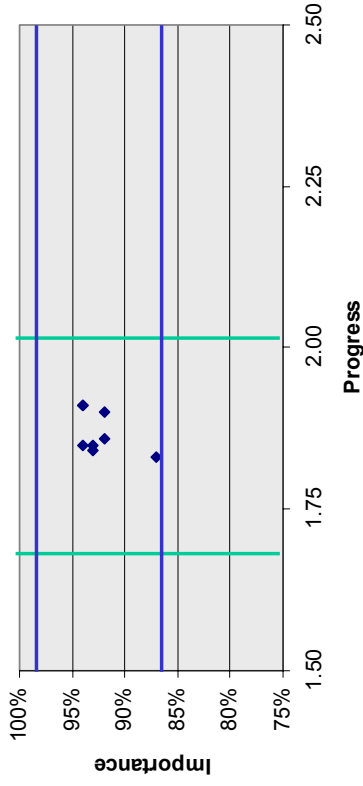
h) Understanding Culturally Diverse Viewpoints



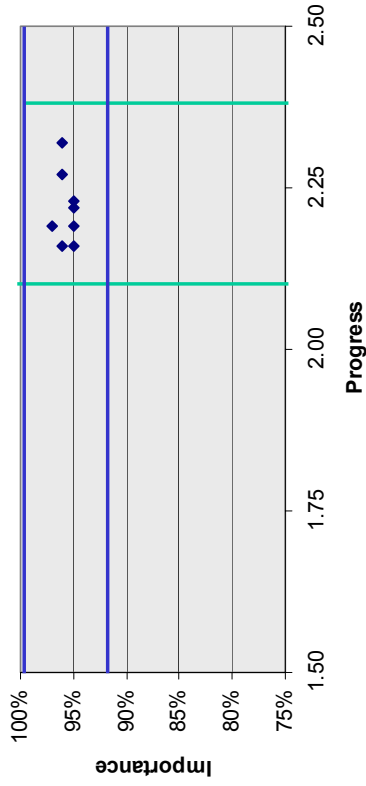
i) Interpersonal Skills



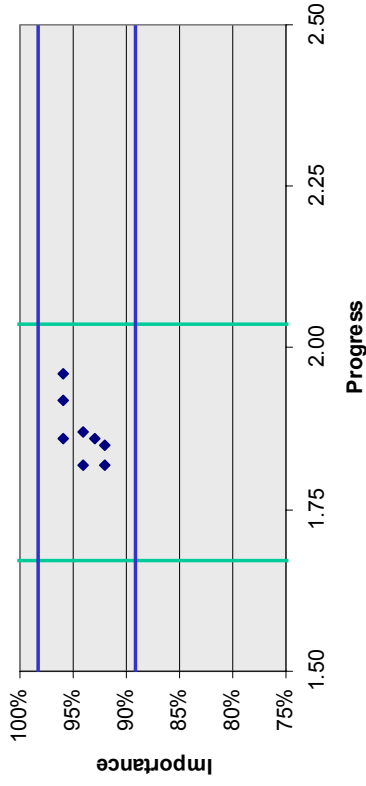
j) Leadership Skills



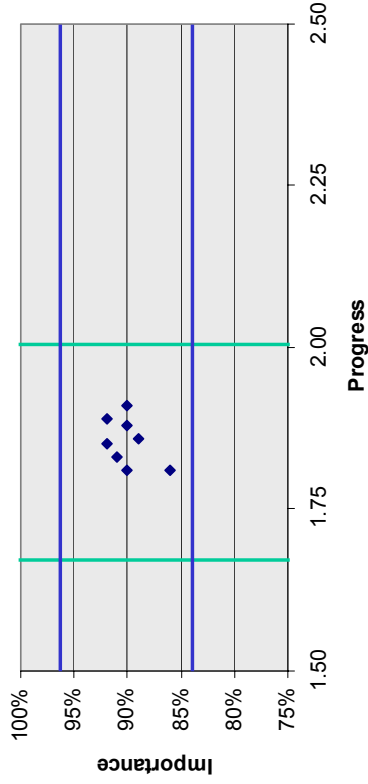
k) Acquiring a Well-Rounded Education



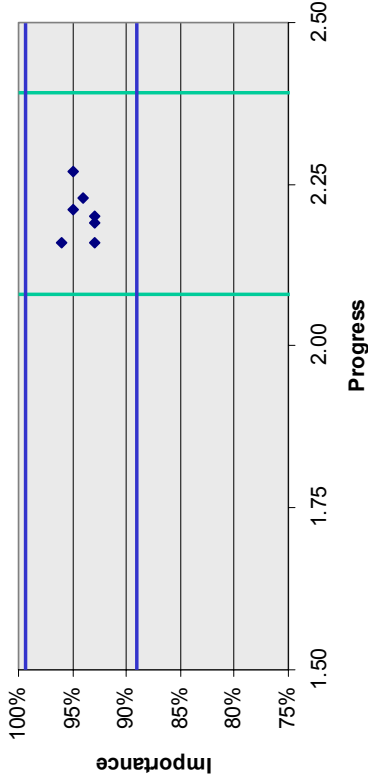
l) Preparation for a Specific Career or Job



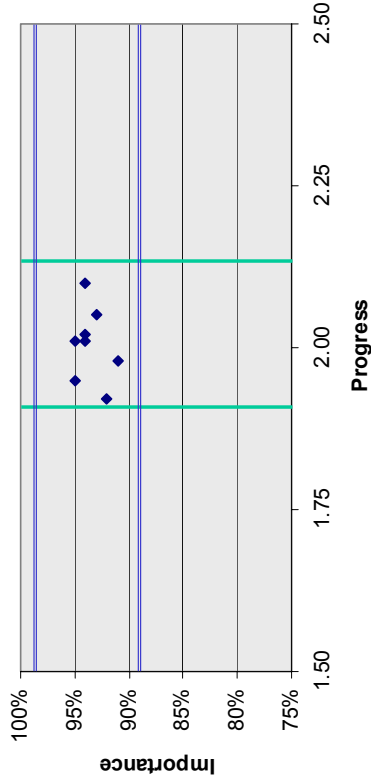
m) Preparation for Graduate or Professional School



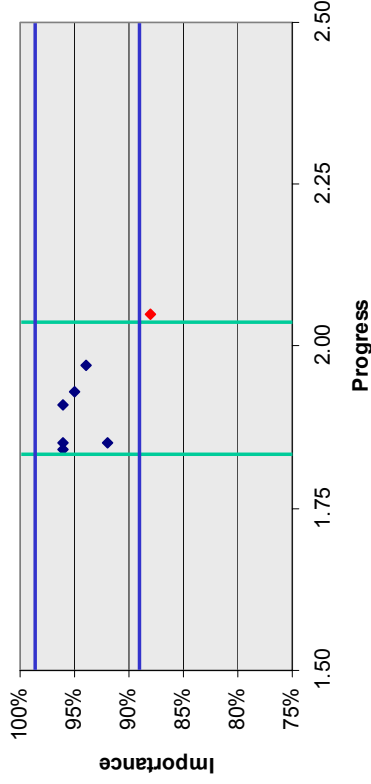
n) Developing a Personal Code of Values and Ethics



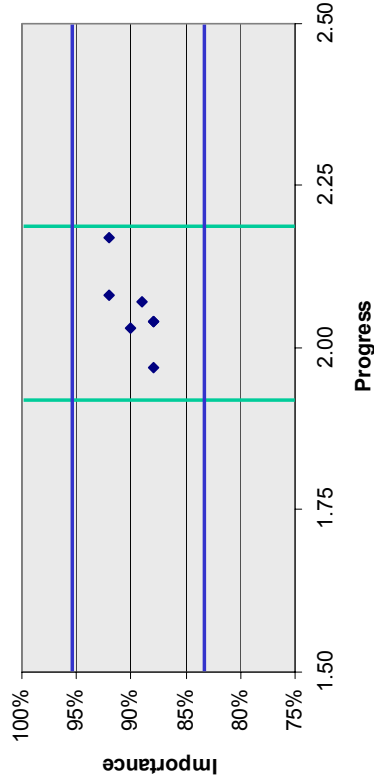
o) Preparation to be an Informed Citizen



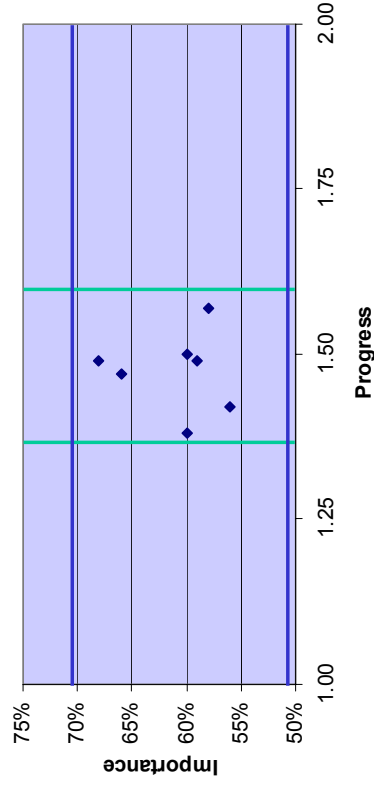
p) Maintaining a High GPA



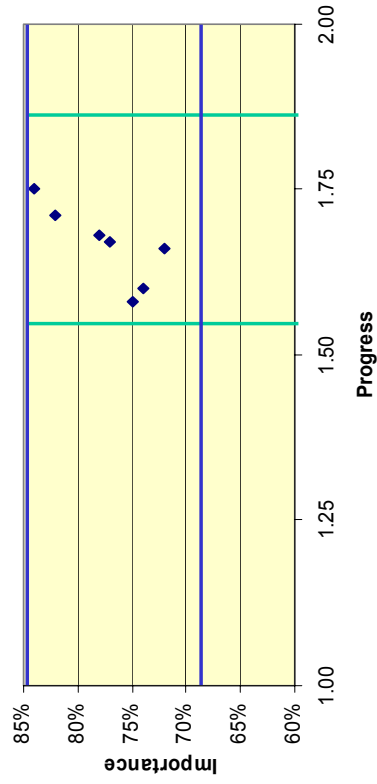
q) Internet Research Skills



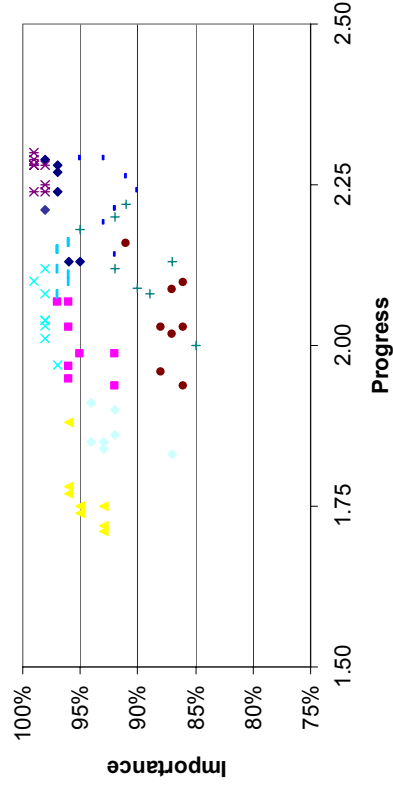
r) Web Design and Authoring Skills



s) Computer Applications Specific to Field



t) First 10 Skills Composite



APPENDIX 2

Background

In the progression from historic practices that relied on universities to exercise internal control to modern realities that insist that universities be publicly accountable there can be an opportunity for self-determination. The institutional research and student affairs research directors of the University of California recognized that opportunity February 12, 2003 at the Beckman Conference Center, Irvine. The need for action was clear. The prior year's UC-wide Student Experience in a Research University in the 21st Century (SERU21) survey pilot resulted in a bad combination of less-than-stellar survey performance and administrative misuse of results. The UC institutional researchers agreed that public accountability applications demanded a better quality, more comprehensive, and more open undergraduate survey. The 2003 UCUES survey resulted.

The earlier, 2002 survey attempted to test the limits of common digital survey administration across the University of California's undergraduate campuses. The project was intended to precede an annual census survey using a comprehensive collection of survey forms administered according to a matrix whereby questionnaire forms and students were randomly distributed. The wealth of information possible would be used to support the work of academic higher education and institutional researchers. The project experienced limited success for any number of reasons, but administrative complexity, questionnaire length, and lack of institutional experience were obvious factors. The most critical issue was use made of the results. When campus-level results were used by the Office of the President as evidence for performance comparison, the nature of the project shifted from a balanced, comprehensive, multiuse survey data collection mechanism to a project with clear evaluation and accountability purposes.

The institutional research and student affairs research directors responded to this fulcrum shift pragmatically. If the Office of the President and California generally requires data for accountability purposes, if there will be published lists of campuses ranked by performance measure, then the UCUES project must better control methodological variation and achieve a better response rate. In other words, every effort should be made to provide valid and reliable measures.

Questionnaire Content

UCUES survey items were selected to assess six dimensions: academic experiences, extracurricular experiences, progress toward goals, campus environment/climate, university services, and satisfaction. A complete questionnaire item map is available as Appendix 3.

Response Rates

A random sample of 2,000 winter-enrolled undergraduates from each of the UC campuses with undergraduate programs was invited to participate and 41% responded. The 41% response rate can be considered moderately good. Response rates varied from a high of 54% at UC Davis to a low of 32% at UC Riverside. (Response rates by campus from highest to lowest were UCD=54%, UCB=52%, UCI=50%, UCSB=39%, UCLA=37%, UCSC=35%, UCSD=34%, and UCR=32%.)

Local variation in survey administration methodology was associated with differences in response rates and possible differences in pattern of item responses. In other words, campus variation may have introduced response bias—the rates differed and responses given may or may not have been affected. That said, response rates for all campuses were at least typical of surveys of undergraduates and the overall 41% response rate was equivalent to the 40% web-based only response rate reported for the National Survey of Student Engagement by Carini et al.

Survey Methodology

The 2003 administration consisted of a contact procedure common to all UC campuses on quarter systems, and was administered by the Social Sciences Survey Center at UC Santa Barbara with unique campus supplemental efforts. The common contact methodology included an initial email message, followed by a postcard sent through US Mail, telephone contact of a stratified random sample, and three email reminders to nonrespondents. Students were also encouraged to participate for monetary incentives to be randomly rewarded at each campus, one \$100 and three \$50 prizes. There were two telephone contacts, an early contact reminder to about 100 at each campus, and a more extended interview, including survey items, directed to about 1,215 nonrespondents across the seven UC campuses. The number of students called for interview at each campus was based on inferred accuracy of email addresses, class size and perceived email response rate by campus. The number called varied from about 125 at UCSD, UCSB and Davis to 166 at Santa Cruz and over 200 at UCLA, Riverside and Irvine. The phone message encouraged participation and described login procedures. Overall, about 19% of the phone numbers were wrong. Only about 2% refused or hung up. The other 79% were completed. The highest proportion of wrong numbers was at UC Davis (27%).

Response rate by campus differed due to many factors but certainly because of differences in accuracy of email records and in local effort made to encourage response. As stated previously, The Social Sciences Survey Center at UC Santa Barbara managed the majority of the survey administration, but campuses were encouraged to try to increase response rate by means at their disposal. Several campuses employed no special effort, but others including UC Davis did. Some of the variations included local administration as part of a census survey (Berkeley), offering additional financial incentives (Berkeley and Davis), and emailing additional appeals (Davis). At UC Davis, local variation included:

- 1) “Preminder” note from the Vice Chancellor for Student Affairs, Judy Sakaki, that introduced the project, encouraged participation, and explained that an additional \$500 prize would be randomly distributed.
- 2) A note from the Director of SARI soon after initial contact to clarify that UC Davis students were eligible for both the UCUES prizes, one \$100 and three \$50 prizes, and an additional \$500 prize based on random selection among respondents.
- 3) A second email note from the SARI director shortly before the last UCUES contact, reporting that UC Davis students were participating at the highest rate, thanking those who had responded, and encouraging others to participate.

¹ Carini, R. M., Hayek, J. C., Kuh, G. D., Kennedy, J. M., and Ouimet, J. A. (2003). College student responses to web and paper surveys: Does mode matter? *Research in Higher Education*, 44(1).

APPENDIX 3

University of California
Undergraduate Experience Survey -- 2003
Topics and Instrument Items
Complete Content Mapping for UCUES Questionnaire

Topics	# of Items
1. Educational Objectives: Importance and Progress	19
2. Allocation of Time to Academic and Other Activities	15
3. Academic Effort and Distractions	7
4. Active Learning and Collaboration	8
5. Faculty Contact, Communication, and Advising	13
6. Research and Creative Projects: Experience and Engagement	10
7. Access to Courses and Academic Programs	5
8. On-Line Resources for Instruction	7
9. Quality of Instruction and Overall Undergraduate Experience	7
10. Student Services: Awareness and Need / Use and Satisfaction	26
11. Campus Climate: Diversity, Respect, and Sense of Attachment	8
12. Co-Curricular Activities and Political Participation	6
13. Selected Background Characteristics and Degree Objective	7
14. Residual -- Open End Items and Lists	9
Instrument Item Total	147