



Getting Hired:

How the University of California Prepares Students for the Workforce

Changing Role of Education in the 21st Century

Historically,

- Universities were proud of their educational past
- Described as “a city of intellect” (Clark Kerr, 1962)
- Focus on learning, knowledge development and creation

In the 21st Century,

- Global economies brought new expectations
- Singular focus on knowledge is no longer adequate
- Universities are urged to transform themselves
- Expect a broader perspective of education with multiple dimensions of learning and experience

Multiple Purposes of an Undergraduate Education

- The broader perspective of universities should include six dimensions (SPACES*):
 - **S**ocial skills development,
 - **P**ersonal development,
 - **A**cademic knowledge and cognitive skills,
 - **C**ivic engagement,
 - **E**conomic opportunities and careers preparation, and
 - **S**ettings for inclusiveness.
- Cultivate breadth of skills

** Research University Spaces: The Multiple Purposes of an Undergraduate Education (Steven Brint, 2015)*

What are soft skills?



What Are Soft Skills

- Personal attributes, ability to interact with others
- A complement to hard skills, enhance job performance

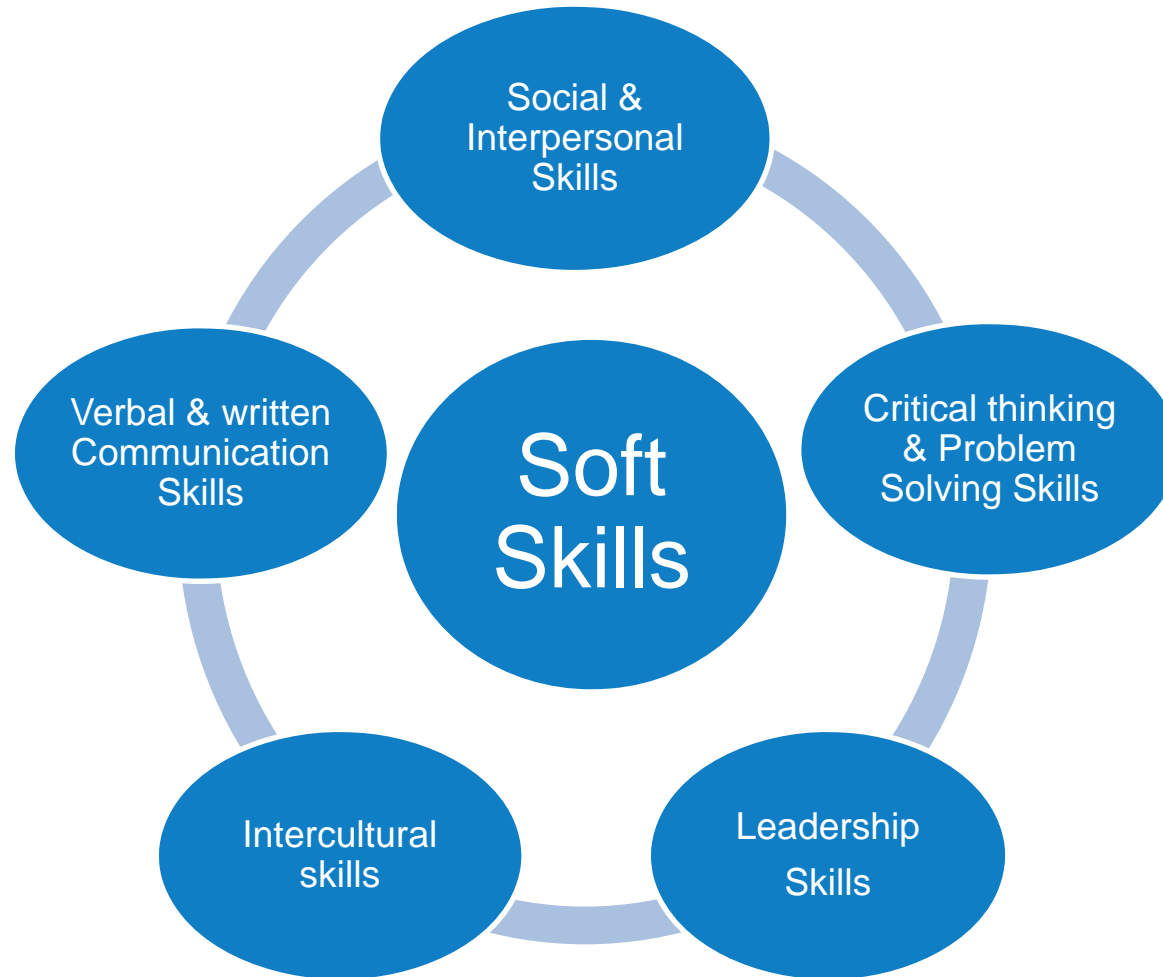


- People skills, transferable skills, work-readiness skills, corporate skills, etc.
- Communication abilities, leadership traits, teamwork, personal and social graces.

Literature Review on Soft Skills

Soft skills Defined by Employers (Comparisons)										
Soft skills definition	UCUES Survey	Career Builder Survey (Harris Poll)	Eastern Kentucky University	Economist Intelligence Closing the Gap Companies & Colleges	Educational Resources Information Center	Hart Research College Learning & Career Success	Michigan State What's Important to New Graduates	(NACE) Job Outlook	United States Department of Labor	Linked-In talent Solutions Research Study
Communication -Written/Verbal	√	√	√	√	√	√	√	√	√	√
Leadership Skills	√	√	√	√	√	√	√	√	√	√
Critical Thinking/Problem Solving	√	√	√	√	√	√	√	√	√	√
Social/Interpersonal/Teamwork	√	√	√	√	√	√	√	√	√	√
Intercultural/Conflict Management	√	√		√	√	√	√	√	√	√
Adaptability/Flexibility	√	√	√	√	√	√		√	√	√
Work Ethic		√	√	√		√	√	√		√
Professionalism		√	√	√	√		√		√	
Fluency in Foreign Language						√		√		
Locating/Evaluating Information				√		√				
Social Responsibility	√									√
Organization/Time management							√	√		
Curiosity and Creativity						√		√		
Research Skills	√									
Initiative								√		
Attention to Details								√		

Popular Soft Skills Aligned with UCUES



A photograph of a university campus scene. In the foreground, a long wooden bench sits on a paved walkway. Several students are present: one is sitting on the left end of the bench, another is sitting in the middle, and a group of three is on the right. One student is standing with a large backpack, while two others are sitting on the bench. The background is filled with large, mature trees with green and yellowing leaves, suggesting an autumn setting. The lighting is bright, casting shadows on the ground.

The Current Study: research questions and methods

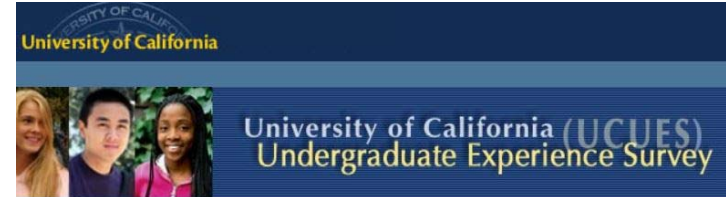
Research Questions

- How do UC students rate their soft skills?
- Do UC students report changes in their soft skills by senior year?
- Are student extracurricular activities associated with soft skills development for UC students?
- Do self-reported student soft skills relate to future earnings?



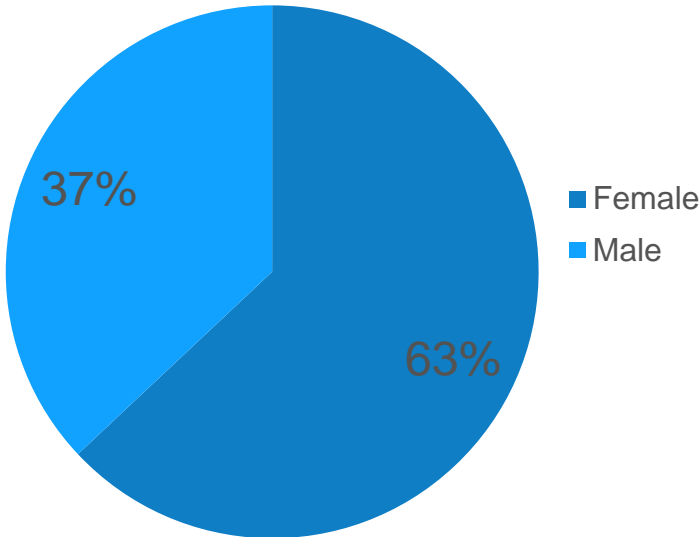
Data Sources

- The University of California Undergraduate Experience Survey (UCUES)
 - 2008 UCUES senior class (N=8,168)
 - 2008 Exit cohort (N=5,633; freshman only)
- California Employment Development Department Earnings Data (EDD)
- University of California administrative data
 - Undergraduate Admissions
 - Student Success

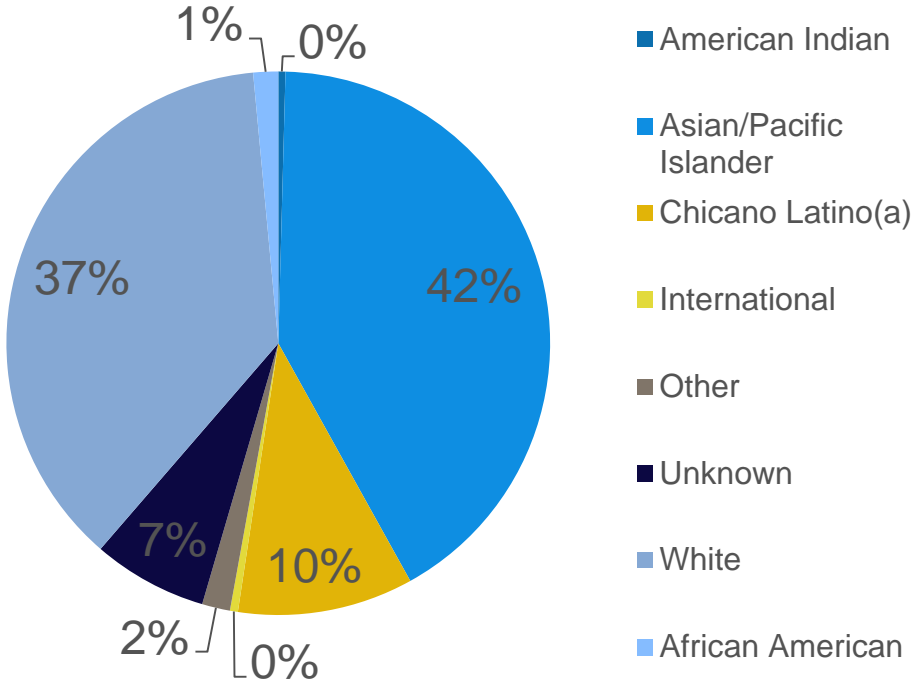


Demographics

Gender

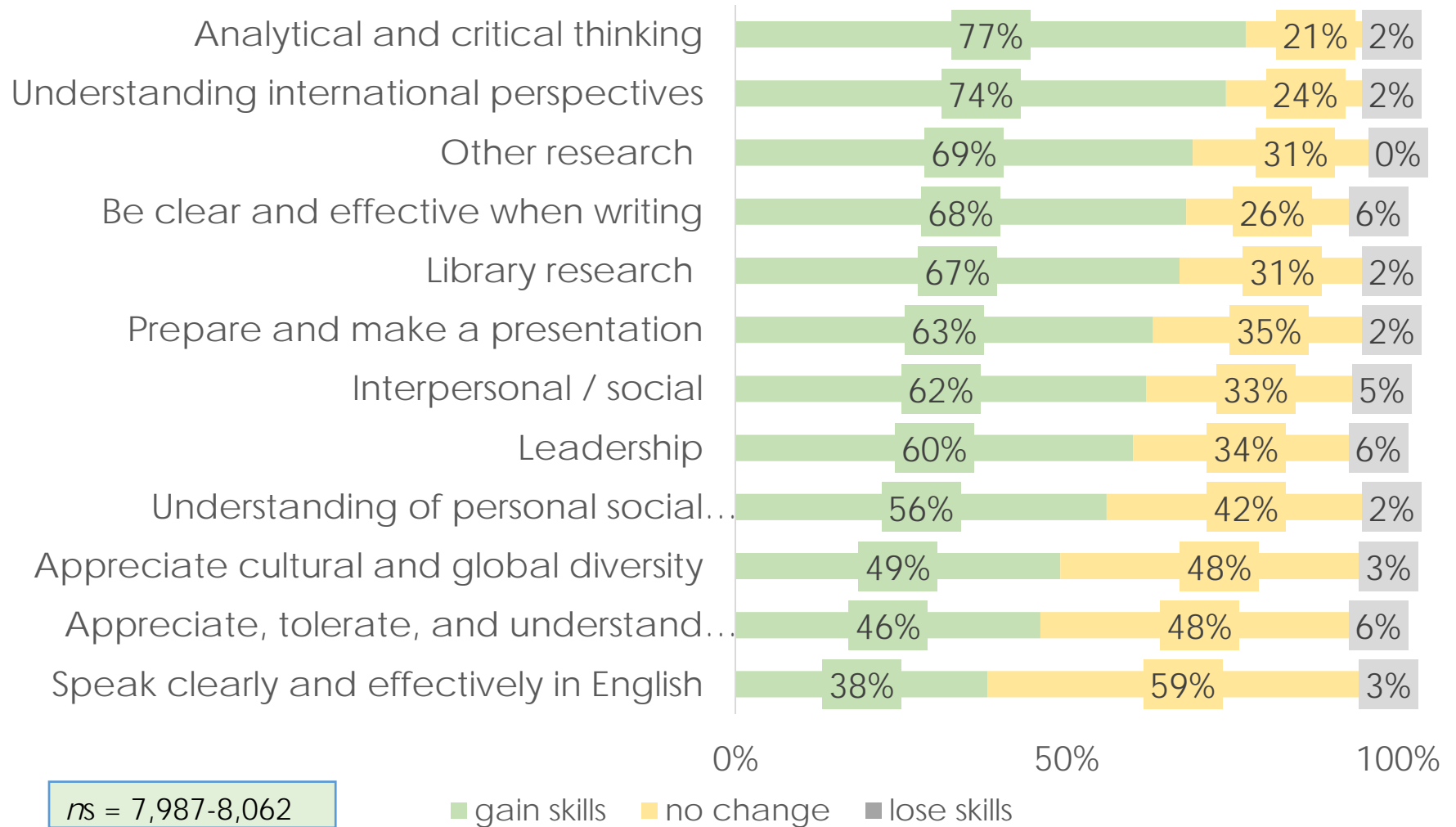


Race/Ethnicity

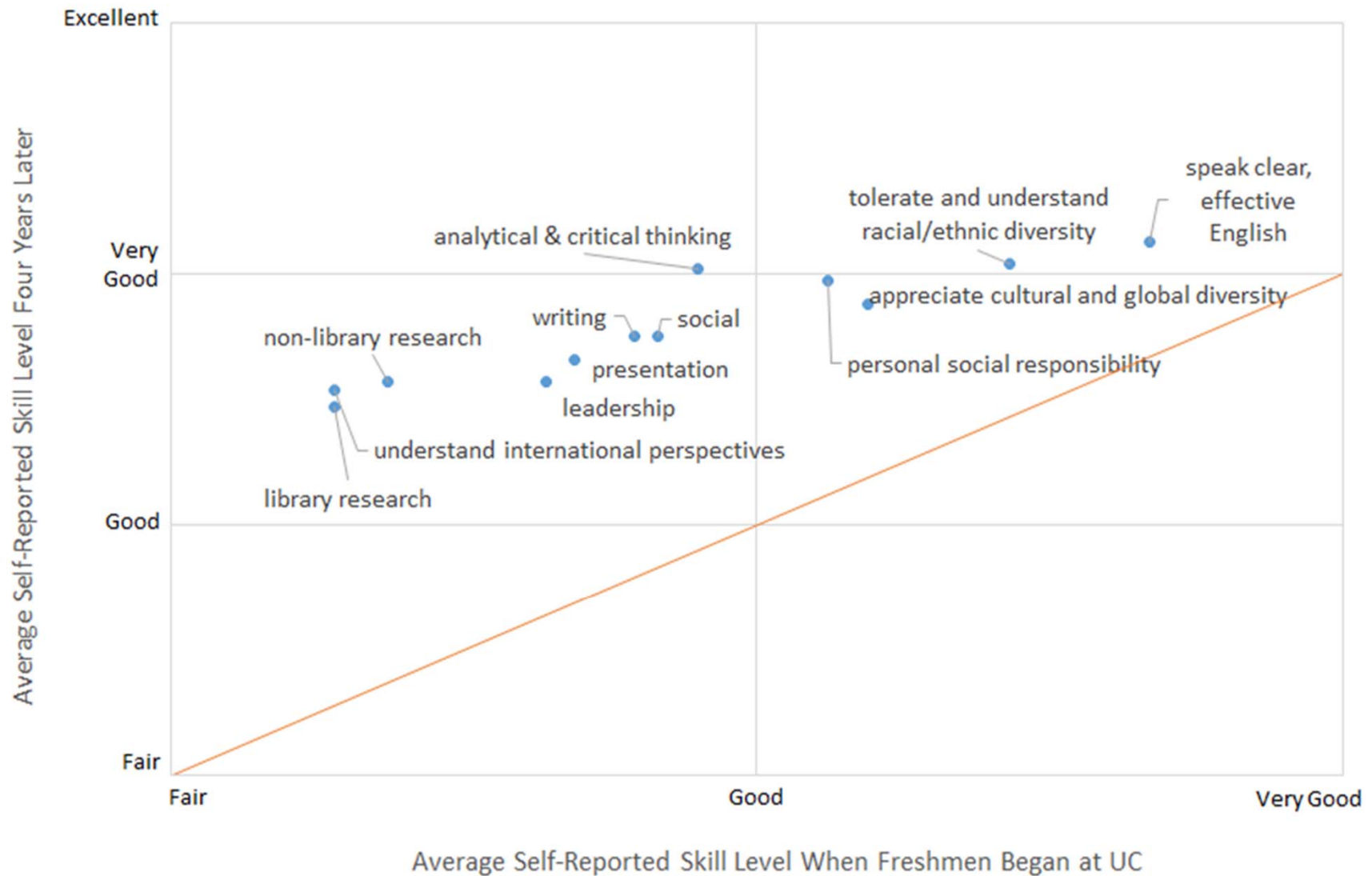


How do UC students rate their soft skills?

Percentage of UC Seniors in 2008 Rating Themselves Higher, Lower, or the Same in Soft-Skill Proficiency Since Freshman Year, by Area



Average Starting and Ending Skill Level



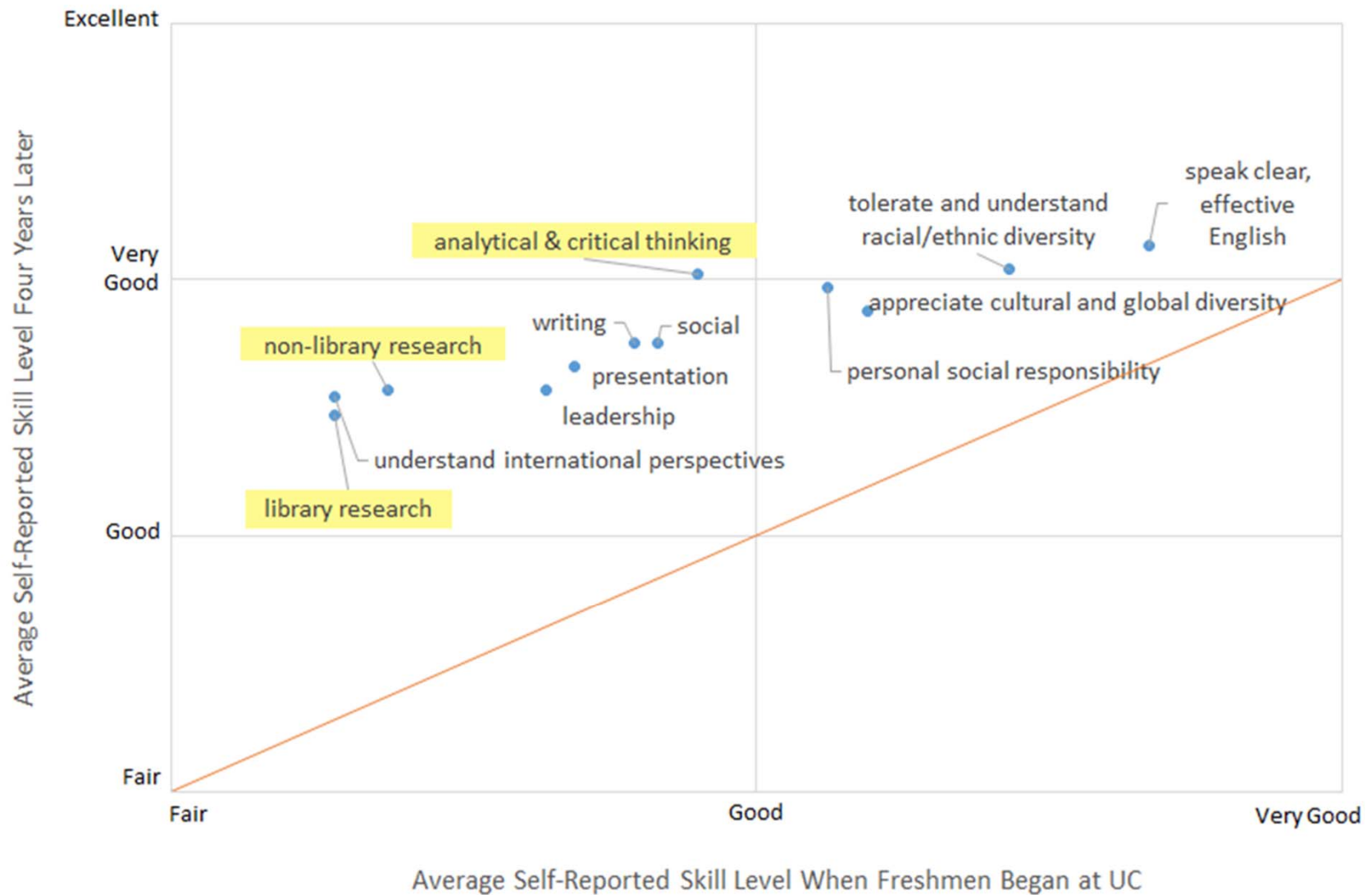
Measurement of Soft Skills from UCUES data

- **Problem-Solving**
 - Analytical and critical thinking
 - Library research skills
 - Other research Skills
- **Communication**
 - Ability to be clear and effective when writing
 - Ability to speak clearly and effectively in English
 - Ability to prepare and make a presentation
- **Interpersonal / Social**
 - Leadership
 - Interpersonal (social)
 - Understanding the importance of personal social responsibility
- **Intercultural Competency**
 - Understanding international perspectives
 - Ability to appreciate, tolerate, and understand racial and ethnic diversity
 - Ability to appreciate cultural and global diversity

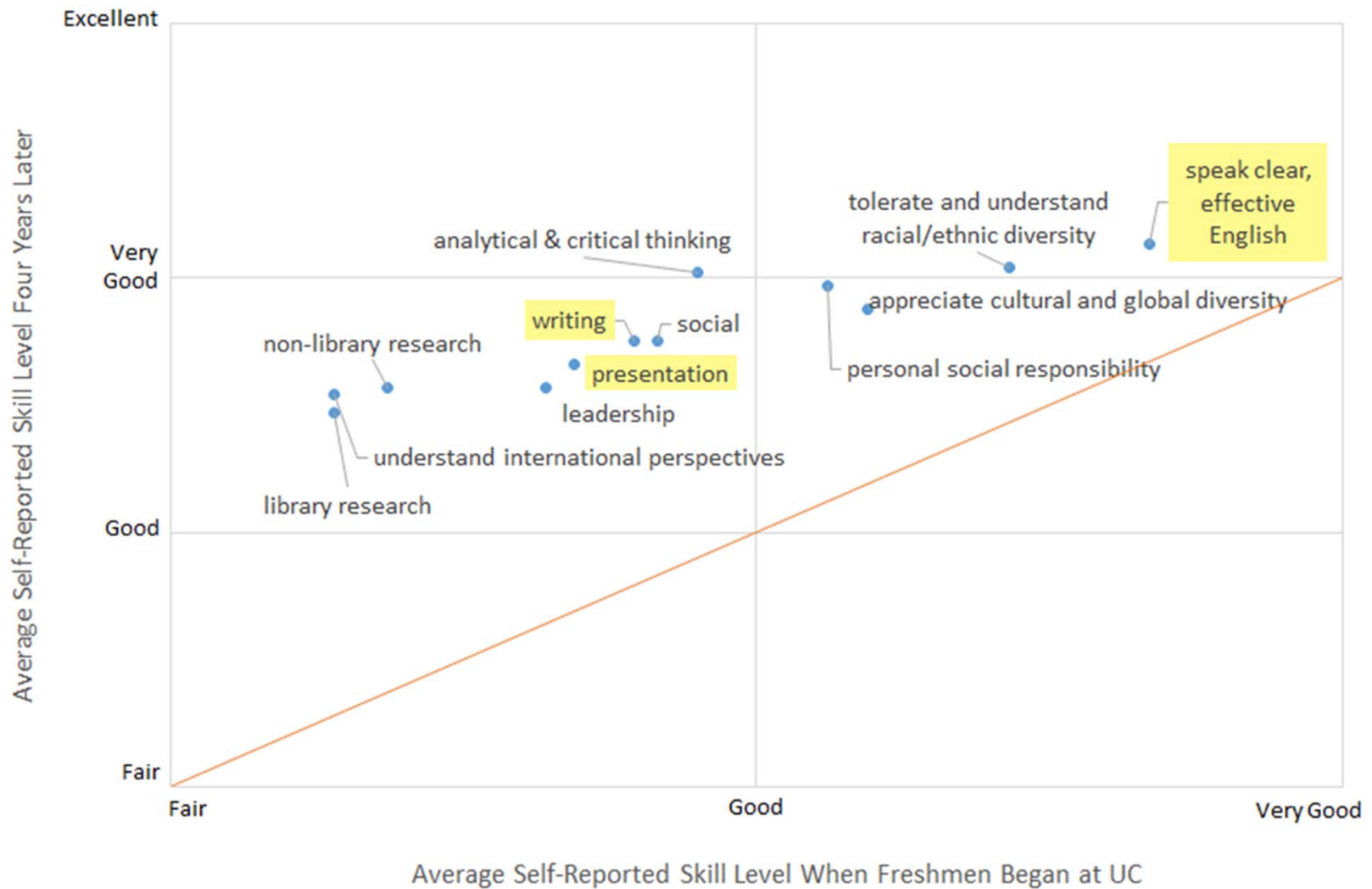
Factor Analysis of Soft Skills in 2008 UCUES

- Constructed four soft-skills factors based on the theoretical framework using UCUES data ($N = 31,228$)
- Used Cronbach's alphas to check the internal consistency of the items within each factor. ($\alpha = .7 - .72$)
- For easier interpretability, created Time 1 and Time 2 weighted average scores for each factor based on factor analyses.
- The weighted average score ranged from 1 to 6, the scale for the original variables. (1=Very poor, 2=Poor, 3=Fair, 4=Good, 5=Very Good, 6=Excellent)

Average Starting and Ending Skill Level



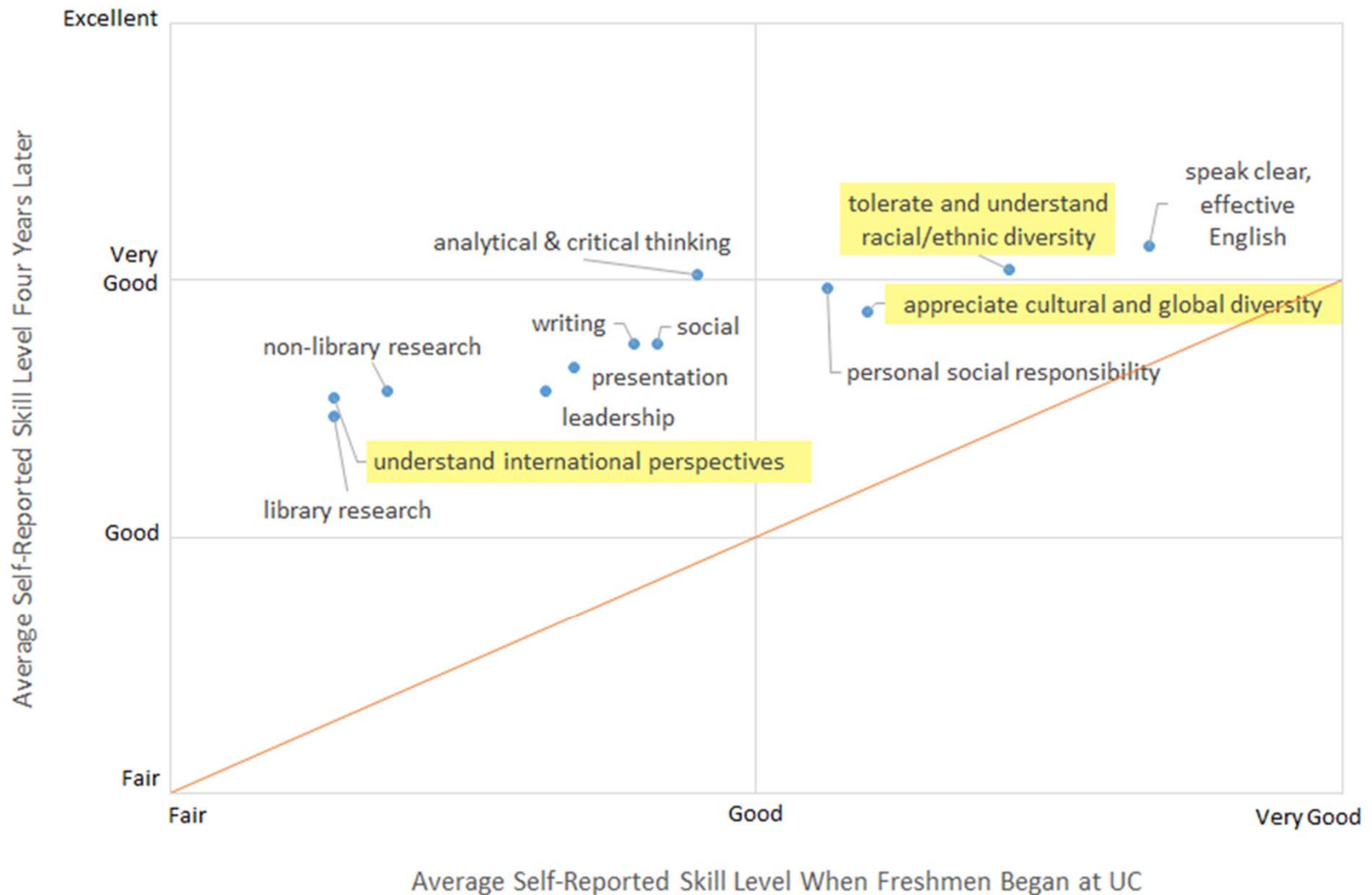
Average Starting and Ending Skill Level



Average Starting and Ending Skill Level

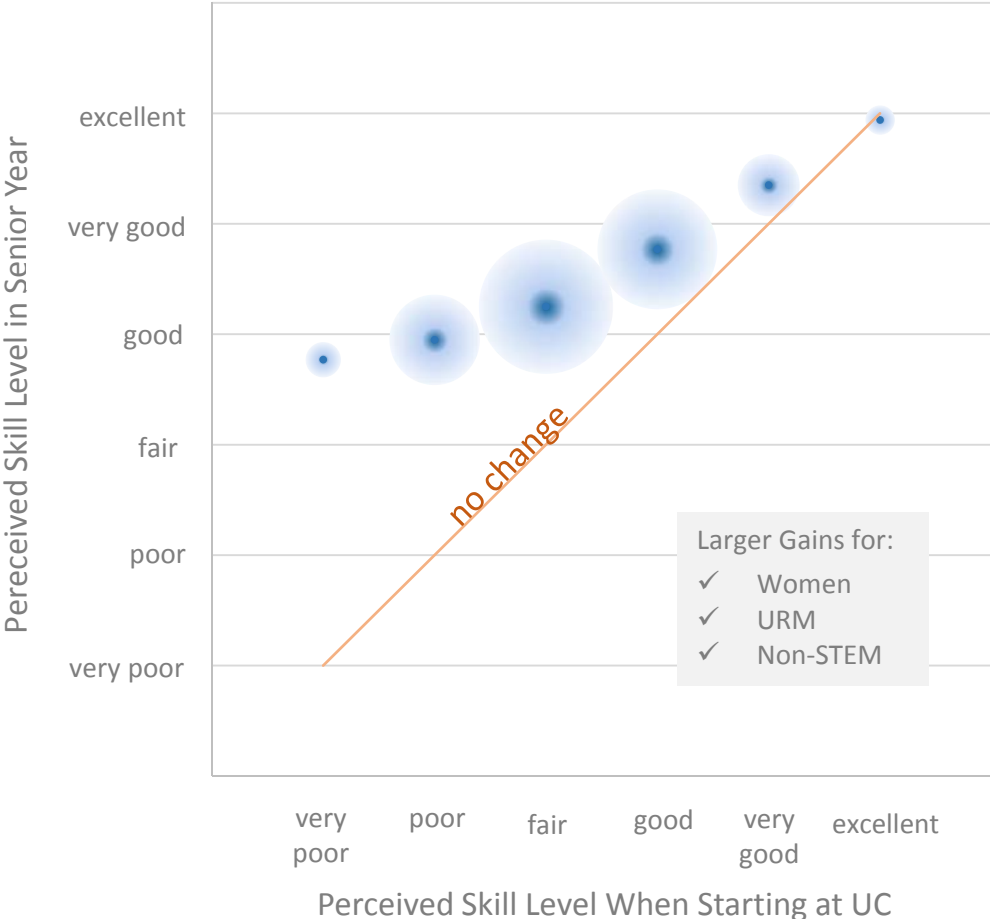


Average Starting and Ending Skill Level



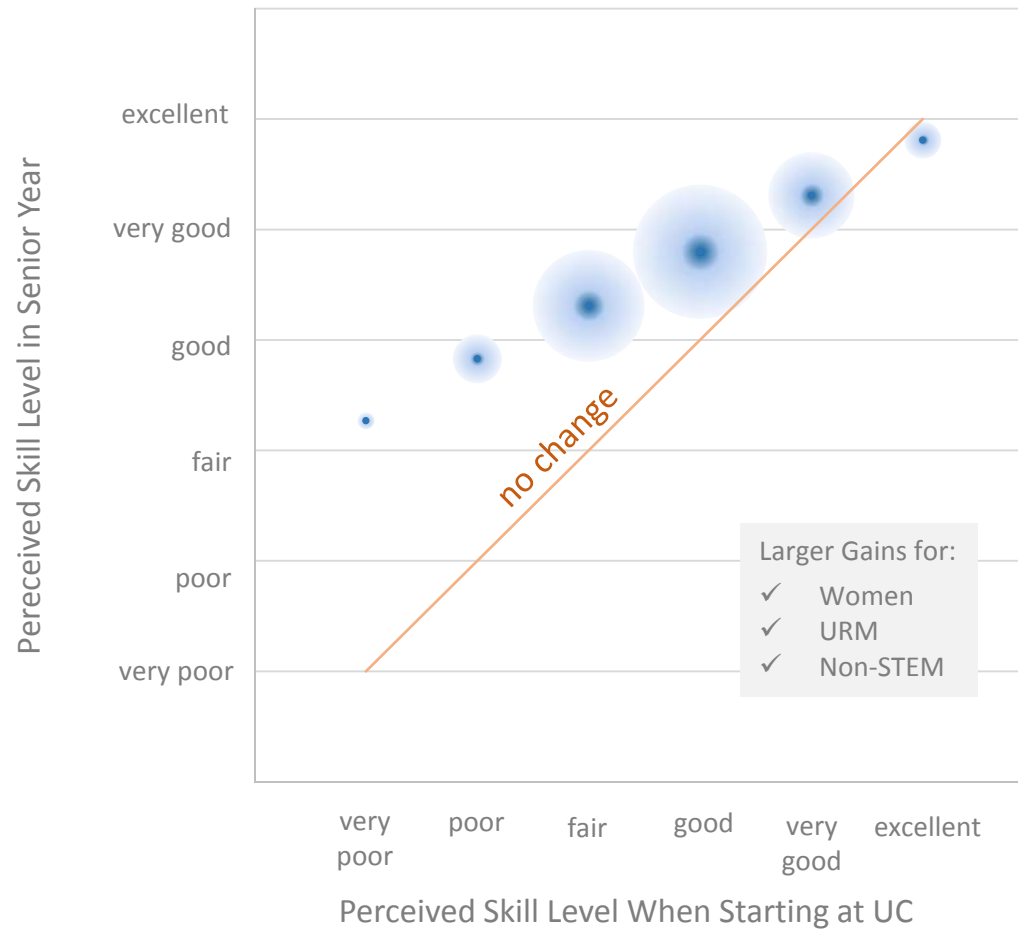
Problem-Solving Skills

Analytical and critical thinking; Library research skills; Other research Skills



Interpersonal Skills

Leadership; Interpersonal; Understanding the importance of personal social responsibility



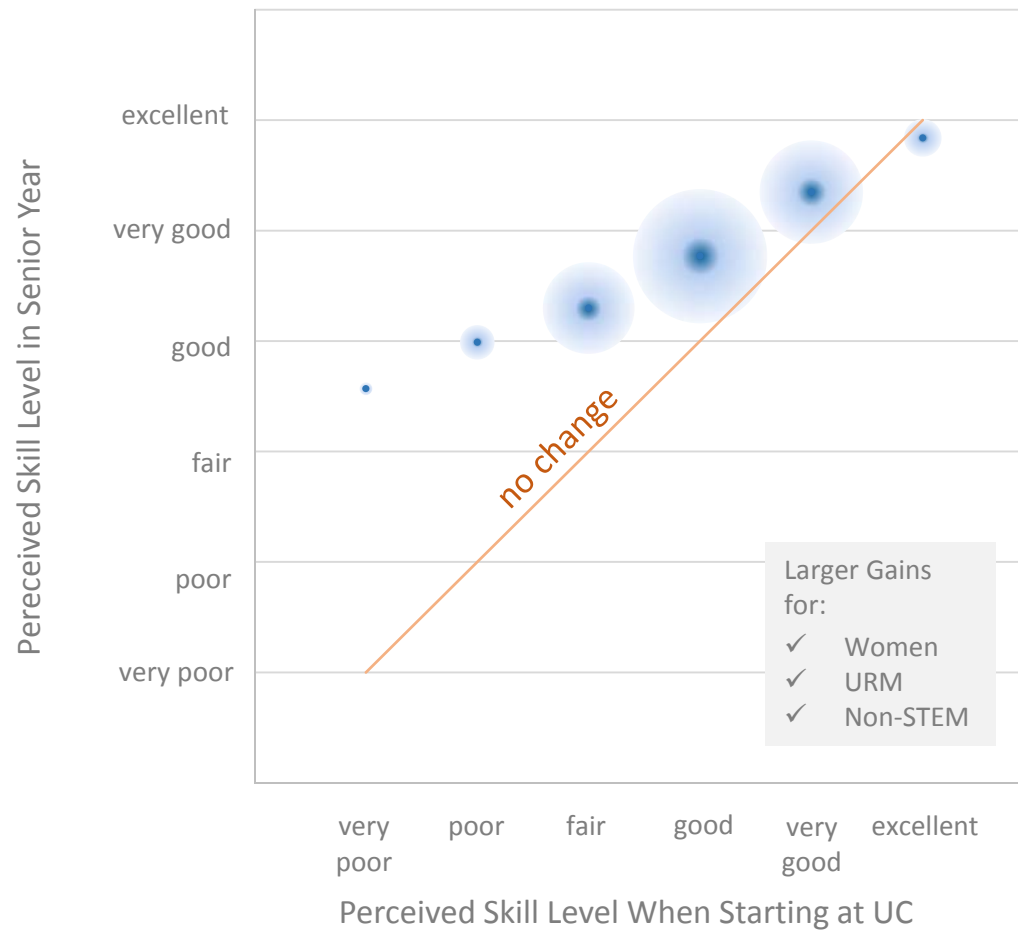
Communication Skills

Clear and effective writing; clearly and effective spoken English; prepare and make a presentation



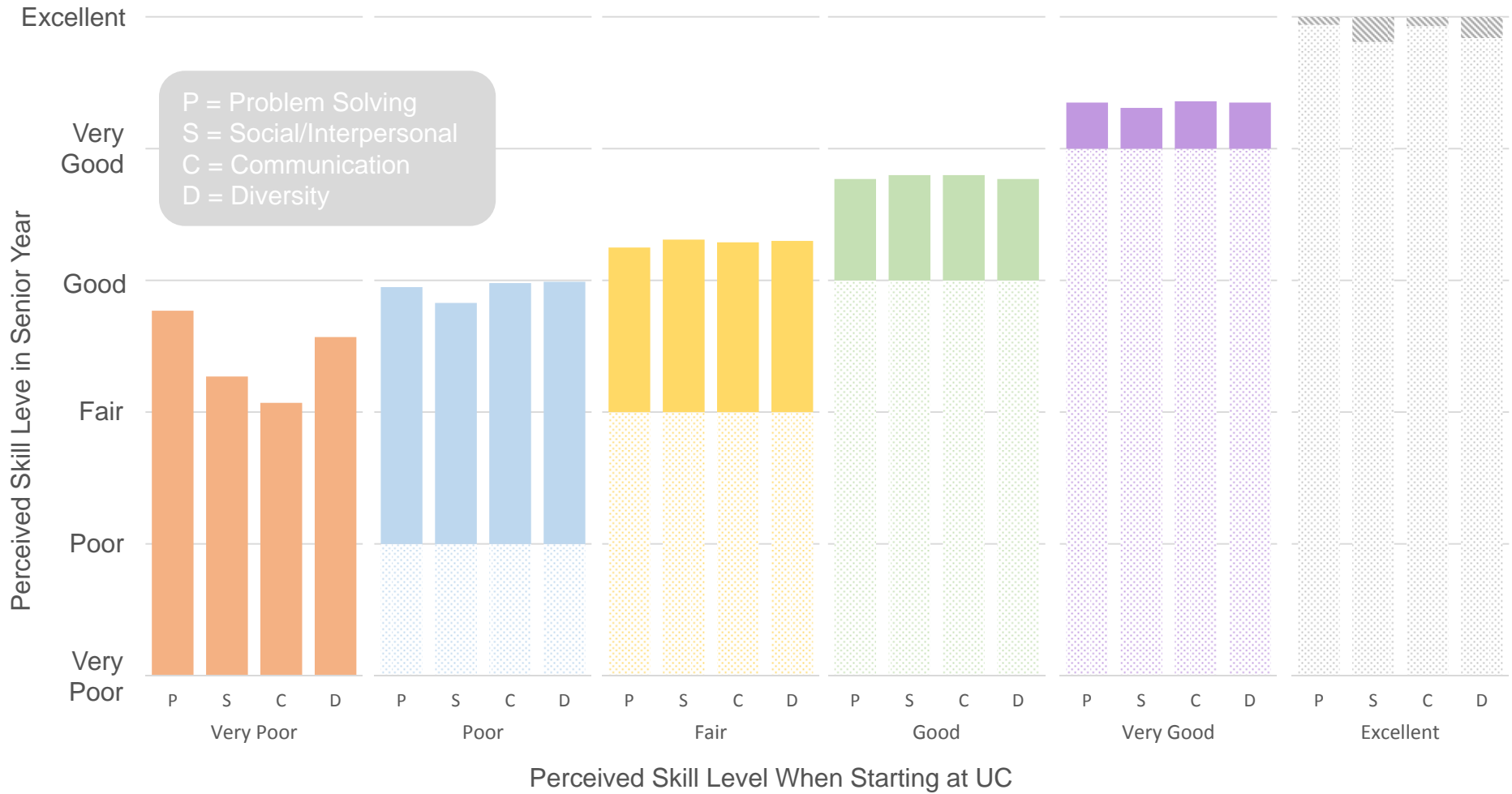
Intercultural Competency Factor

Understanding international perspectives; Ability to appreciate, tolerate, and understand racial, ethnic diversity; Ability to appreciate cultural and global diversity



Perceived Skill Levels by Factor

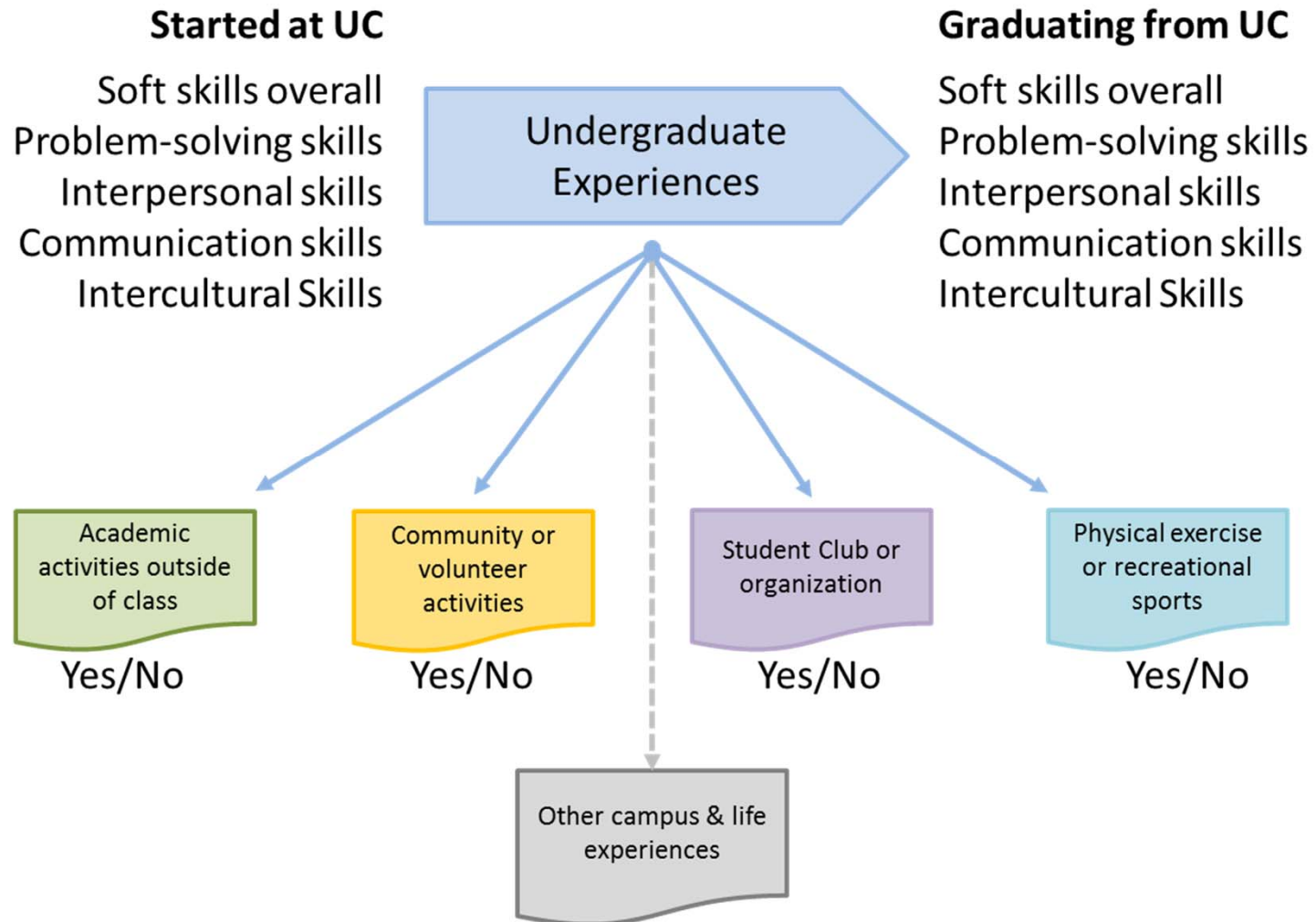
Freshman and Senior Year



Are Student Activities Associated with Soft Skills Development?



Soft Skills Development



Comparing students with and without Frequent academic activities

- Directly compare soft skills between students with and without frequent student activities by different starting levels.
- To make a simple straightforward comparison, we:
 - Dichotomized student participation
(‘ ≤ 5 hour’ =Not Frequent, ‘ >5 hour’=Frequent)
 - Three study populations with different starting skills (Low/Medium/High)
 - No control over student demographics
(age, gender, ethnicity, first-generation status, campus, and discipline.)

Comparing students with and without Frequent academic activities

Starting Level	Skill Dimension	Frequent	Not Frequent	Gap
Low Starting Skill	Softskill Overall	4.51	4.35	0.16
	Problem-solving	4.38	4.19	0.20
	Interpersonal	4.48	4.36	0.12
	Communication	4.54	4.40	0.15
	Intercultural	4.57	4.42	0.15
Medium Starting Skill	Softskill Overall	4.82	4.74	0.07
	Problem-solving	4.64	4.48	0.16
	Interpersonal	4.78	4.79	-0.01
	Communication	4.91	4.86	0.06
	Intercultural	4.87	4.78	0.09
High Starting Skill	Softskill Overall	5.19	5.15	0.04
	Problem-solving	5.04	4.91	0.13
	Interpersonal	5.15	5.15	0.00
	Communication	5.29	5.28	0.01
	Intercultural	5.24	5.20	0.04

Participating in frequent academic activities made the biggest difference in students who started with low soft skills.

The biggest difference was presented in problem solving skills.

Students who participated in frequent academic activities reported higher soft skills in all dimensions.

 p<0.05

1=Very poor, 2=Poor, 3=Fair, 4=Good, 5=Very Good, 6=Excellent

Summary of the Comparison Analysis

- **Directly shows the difference in perceived soft skills**
- **Limitations of the comparison analysis**
 - Dichotomized student participation in the activities (F/NF)
 - Starting skills were grouped into three levels (L/M/H)
 - No control over student demographics (age, gender, ethnicity, etc.)
- **Regression analysis**
 - Eight frequency categories of student participation
1=0 hours, 2=1-5 hours, 3=6-10 hours, 4=11-15, 5=16-20, 6=21-25, 7=26-30, 8=More than 30
 - Six original levels (1-6) of starting skills
 - Six student demographics (age, gender, ethnicity, first-generation, discipline, campus.)

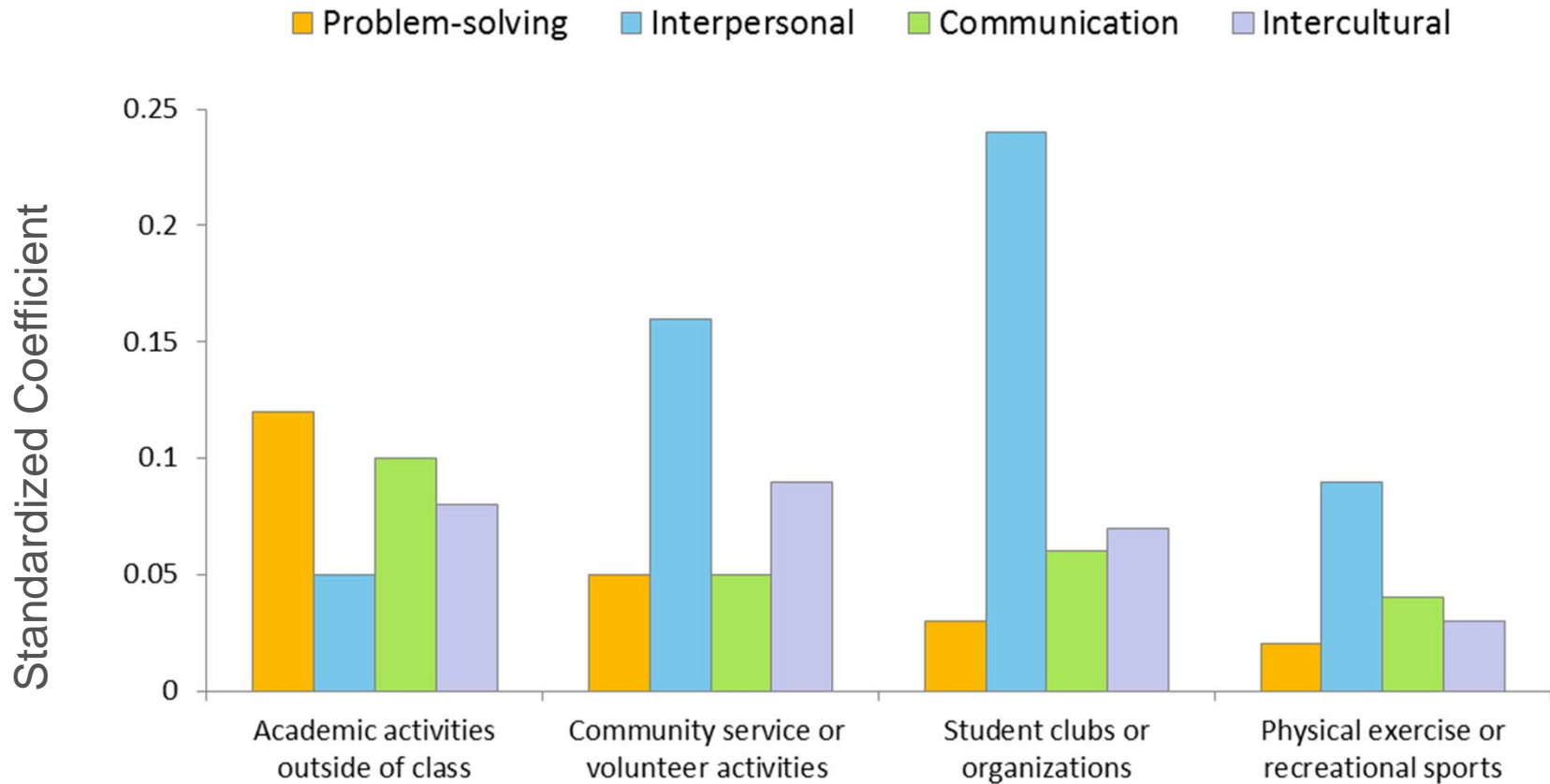
Regression Analyses

Activity		Problem-solving N=5,007	Interpersonal N=4,960	Communication N=4,973	Intercultural N=4,955
Academic activities outside of class	Age	0.03*	0.03*	0.03*	0.04**
	Female	0.05**	0.02	-0.03*	0.07**
	First Generation	0.02	-0.02	-0.01	0.05**
	Starting Skill	0.40**	0.44**	0.53**	0.46**
	Student activity	0.12**	0.05**	0.10**	0.08**
		N=4,944	N=4,911	N=4,907	N=4,900
Community service or volunteer activities	Age	0.03*	0.02	0.03*	0.04**
	Female	0.05**	0.02	-0.03**	0.07**
	First Generation	0.02	-0.02	-0.01	0.04**
	Starting Skill	0.40**	0.44**	0.53**	0.46**
	Student activity	0.05**	0.16**	0.05**	0.09**
		N=4,929	N=4,895	N=4,892	N=4,889
Student Clubs or organizations	Age	0.03**	0.03*	0.03*	0.04**
	Female	0.05**	0.03*	-0.03*	0.07**
	First Generation	0.02	-0.01	-0.01	0.05**
	Starting Skill	0.4**	0.44**	0.53**	0.46**
	Student activity	0.03**	0.24**	0.06**	0.07**
		N=4,959	N=4,925	N=4,923	N=4,915
Physical exercises or recreational sports	Age	0.03*	0.02*	0.03*	0.04**
	Female	0.05**	0.04**	-0.02	0.07**
	First Generation	0.03	-0.01	-0.01	0.05**
	Starting Skill	0.40**	0.44**	0.53**	0.46**
	Student activity	0.02	0.09**	0.04**	0.03**

**p<0.01

*p<0.05

Summary of Regression Analyses



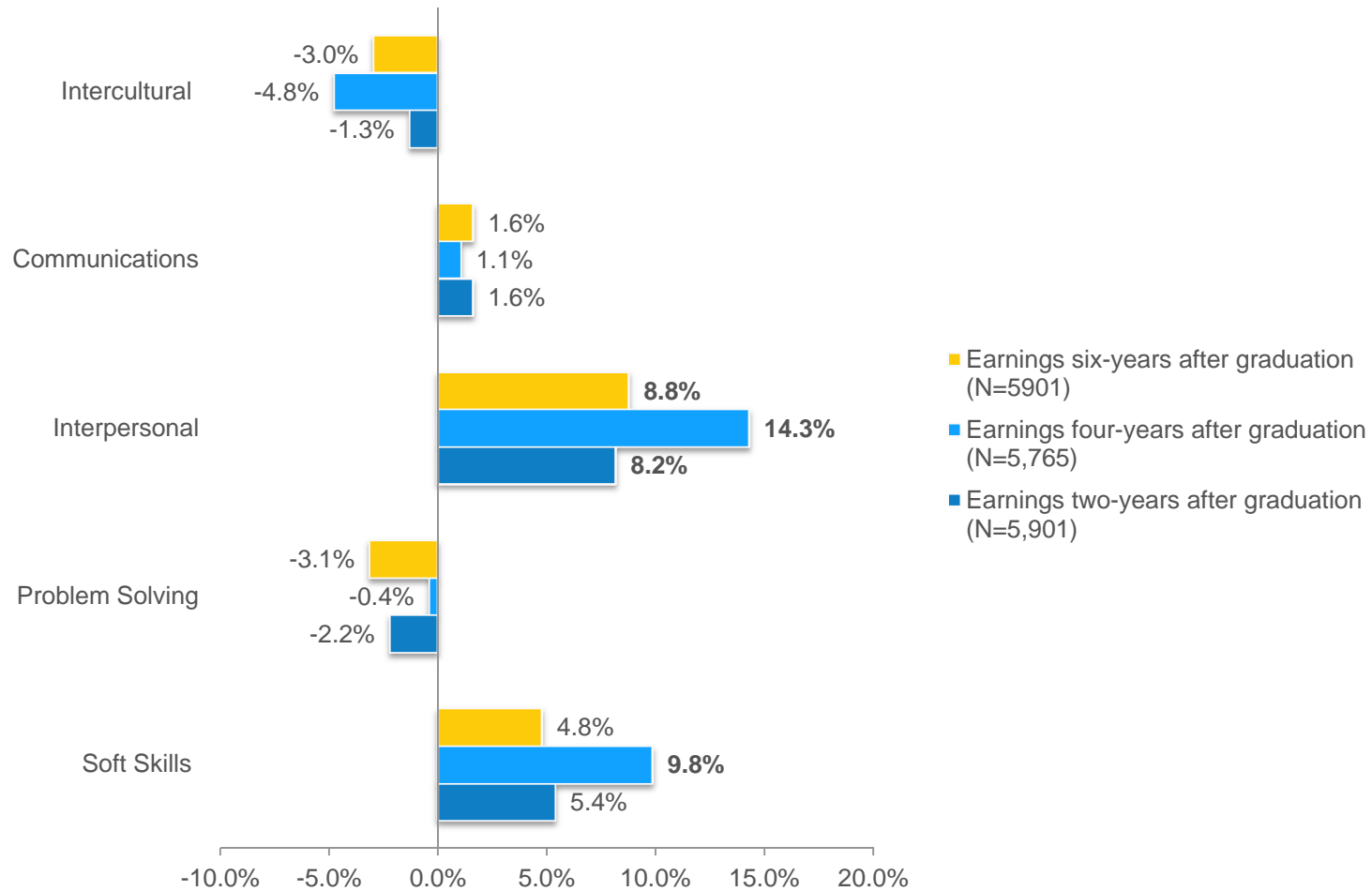
Do Soft Skills Translate into Higher Earnings?



Earnings Model Specification

- Dependent variables : Log earnings (two, four and six years after graduation)
- Predictor variables
 - Entry year
 - Demographic controls (age, gender, race/ethnicity)
 - Academic (discipline and graduating GPA)
 - Employment sector
 - Time two soft skills (all) or
 - Time two Interpersonal, problem solving, intercultural and communications skills

Interpersonal skills are related to an increase in earnings



Interpersonal Skills and Earnings



Two years
after
graduation

+\$3,017



Four years
after
graduation

+\$6,907



Six years
after
graduation

+\$4,544

Conclusions



Conclusions

- ✓ Ratings indicate that more students gain skills while at UC in analytical and critical thinking than in any other area.
- ✓ Student activities positively associated with development of soft skills in all dimensions, especially social and interpersonal skills.
- ✓ Interpersonal skills are associated with an increase in earnings after graduation

UC Efforts in Supporting Soft Skills Development

Some Examples:

- UC San Diego offers quarterly personal skills development workshops
- UCLA Bruin Development Academy
- UC Berkeley's Undergraduate Student Learning Initiative encompasses both hard skills and soft skills
- UC Riverside's R'Success workshops
- UC Santa Barbara's Career Center workshops

Thank You!

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