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Research on Peer Mentoringwithin Arts & Professional Courses at the University of Calgary

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Research on Peer Mentoring within Arts & Professional Courses at the University of Calgary

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Central Issue

- How can we conduct useful & insightful RESEARCH on peer mentoring programs?
  - Learning processes and outcomes
    - Of student “mentees” in the “host courses”
    - Of “peer mentors” learning & serving in courses
    - Of “host instructors” and teaching teams
  - Psychological and social aspects of programs
    - Identity, gender, ethnicity, socioeconomic factors, etc.
    - Cognitive, interpersonal and emotional factors, etc.
  - Organizational contexts
    - program development and leadership, networks

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Agenda

- What is *Curricular Peer Mentoring*?
  - Edited book on *Undergraduate Curricular Peer Mentoring Programs* (Lexington Books, 2012)
  - Definitions, Aims and Values
  - U of Calgary *Curricular Peer Mentoring Network*
- Overview of our research methods & some student survey findings
- Problem-solving and brainstorming
  - Discuss potential methods and challenges of research

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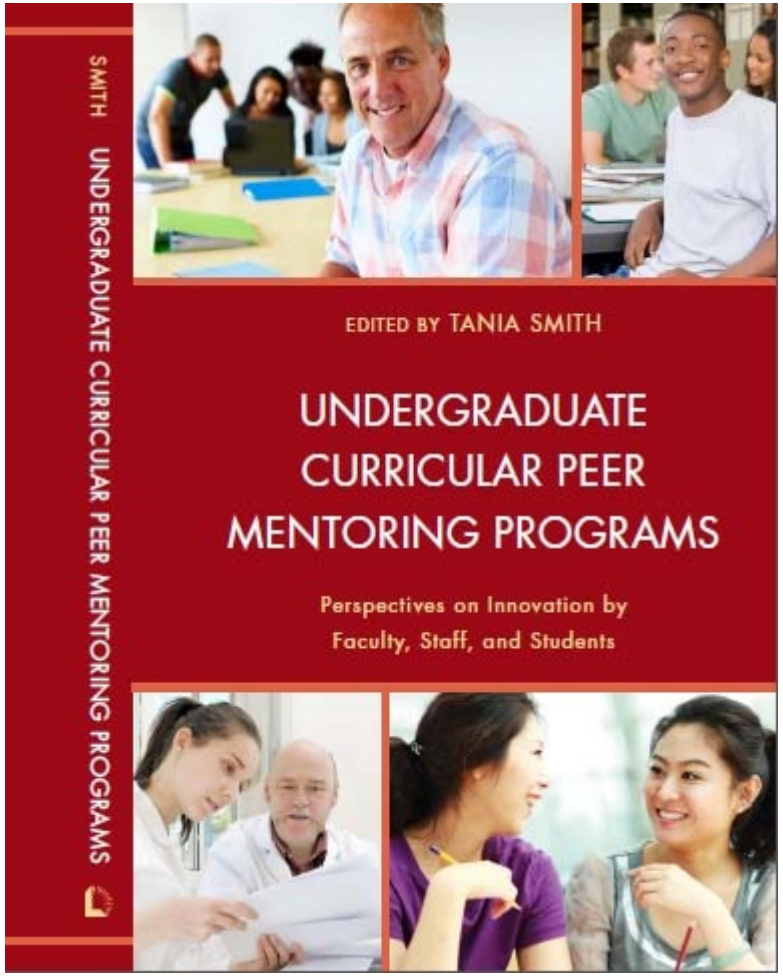
Preview of Final Brainstorming & Discussion Qs

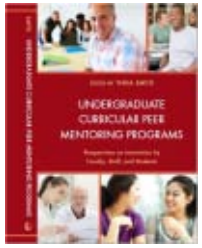
- How do we measure “learning outcomes” in a way that most teachers and administrators can value & understand?
- What are other effective ways to measure engagement and collaborative learning – both participation and outcomes?
- How can we measure program or network success when the program is so diverse?
- How can we measure peer mentor success?
- How can we measure host instructor effectiveness?

New Book: Undergraduate Curricular Peer Mentoring Programs



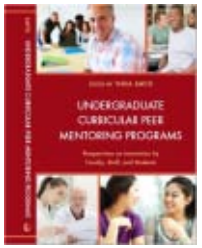
- Defines, describes & supports a broad genre of postsecondary programs that train & integrate undergraduate peers into classrooms and teaching teams to facilitate student learning and engagement
- A 40-year history of diverse program development, including: *Supplemental Instruction (SI), Peer-Led Team Learning (PLTL), Peer-Assisted Study Sessions (PASS), Student-Assisted Teaching, Writing Fellows, Undergraduate TAs, and innovative one-of-a-kind programs.*
- 6 chapters contributed by 13 authors in Canada, US, and India
- 7 short “Theory & Practice” chapters

The book’s web page at Lexington Books: https://rowman.com/ISBN/9780739179338



Definition

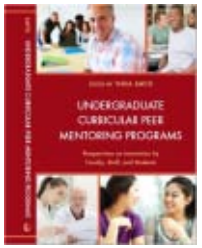
- Curricular – placement within courses and teaching teams in the academic curriculum
- Peer – "*near*-peer," a more experienced student who is not a graduate student or professional, usually not co-enrolled in the same course as the mentees
- Mentoring – Includes peer facilitation, peer leadership, may involve some peer tutoring -- in class, beyond class, online -- individual or in groups. Activity goals and methods are peer-appropriate and complement teachers and TAs. The focus is more on fostering effective learning *processes*, *attitudes*, *reflection* and *critical discourse* than on skill training and explanation of subject matter knowledge.
- Program – recruitment, education, monitoring, reward for mentoring placements in more than one course



Aims & Benefits

Among all the programs studied, these were the *most common aims* and benefits:

- Student academic success
- Academic skill development
- Student engagement and active learning
- Openness to diversity and challenge
- Development of peer mentors
- Instructional staff development

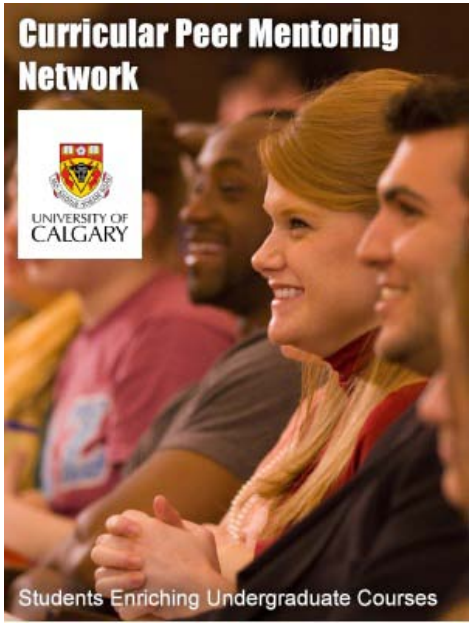


Program Values

Curricular peer mentoring programs aspire to achieve greater levels of...

- Curricular Integration – within courses, teaching teams, student community, curriculum
- Collaborative Implementation-- within teaching teams and within programs
- Holistic Professional Education – Peer Mentors, Host instructors, Peer mentor instructors

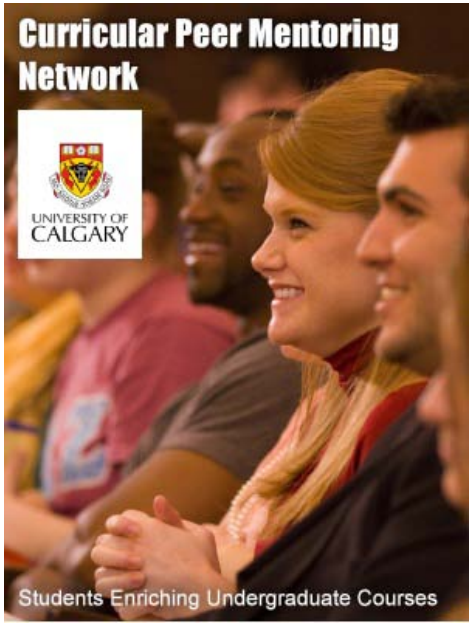
U of C Curricular Peer Mentoring Network



A university-wide, faculty-led initiative that supports instructors and students cooperating to enrich student engagement in courses

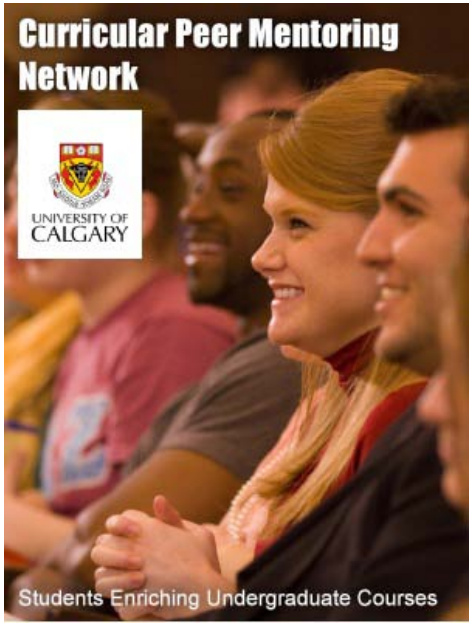
- Open, expanding network of programs & partnerships, currently across 5 faculties
- 2008 to present
- Funding by Students' Union Quality Money brings shared resources
- Collaborative learning and leadership

U of C Curricular Peer Mentoring Network



- 2 Main Programs in Arts & Nursing
  - Both programs began separately in 2005
  - Course-based training & placements for peer mentors; host instructor support, events and resources, research, etc.

U of C Curricular Peer Mentoring Network



Arts Peer Mentoring Program

- Interdisciplinary partnerships & placements:
  - Arts: Communication & Culture, other departments & disciplines
  - Haskayne School of Business: Cam Welsh, Ron Murch and colleagues
    - Network leaders and program developers since 2009
  - Medicine (Community Rehabilitation & Development Studies [CRDS]): Patti Desjardine and colleagues
    - CRDS Practicum program placements in CORE 205/207
  - Science: Heather Addy, Kyla Flanagan and colleagues
  - Others welcome!

Host courses 2005-2012

Faculty of Arts, 2005-2012

30 courses (81 sections) across the following disciplines (# of sections):

- African Studies (2)
- Canadian Studies (2)
- Communications Studies (18)
- Development Studies (8)
- General Studies (34)
- Latin American Studies (1)
- Law and Society (4)
- Psychology (2)
- Spanish (2)
- Science, Technology and Society (2)
- Women's Studies (4)

Faculty of Nursing, 2005-2012

4 courses (19 sections) and curricular drop-in Peer Assisted Learning Sessions (PALS)

- Nursing 203(15), 285, 289(2), 389
- PALS sessions (25)

Faculties of Business, Medicine (CRDS) and Science, 2008-2012

7 courses (10 sections)

- Management Information Systems 321, 317(3), 467
- Finance 317
- Community Rehabilitation 205(2), 207(2)
- Biology 435

Peer Mentors F2005-W2012

Arts, Business, Science, CRDS

- 116 Peer mentors (CMCL 507)
- 46 Returning Peer Mentors (CMCL 509)

= 162 Enrollments

- Increased cohort in F2012, data from 2013 not included.

Nursing

- 42 Undergraduate peer mentors (NURS 503)
- Increased enrollment of 24/year in redesigned course in Spring/Summer 2012, 2013

Student Mentees 2005-W2012

6,681 enrolled in Arts, Haskayne School of Business, Science and CRDS host courses

- **3,073** was the estimated peer mentoring participation of students based on an average "active participation" rate of 46% (see data below)

1,211 enrolled in Nursing host courses

- Participation rates were close to 100% due to total integration into the course's activities.

700+ estimated participation in Nursing Peer-Assisted Learning Sessions.

Arts Peer Mentoring Program Research - Methods

Network-wide Research Ethics certification:

- Anonymous surveys of U of C student mentees in host courses, administered in class near end of term
  - **This presentation will focus on a sample of student survey data**
- Interviews or surveys of U of C peer mentors, & donated writing assignments, narratives, letters of support
- Interviews or surveys of host instructors and members of teaching teams (TAs, lab instructors) at U of C and beyond
- Interviews or surveys of program administrators at U of C and beyond

Course-based research by peer mentors in CMCL 507/509

- *CMCL 509: Research in peer mentoring and higher learning*

Student Survey Methods

Fall 2011 Host Courses Surveyed

- Surveys were conducted in 13 courses in a wide variety of Arts disciplines and the CRDS program
- Class size varied from 393 students to 17 students.
- 24 peer mentors were placed in these host courses.
- 1 to 5 peer mentors served in each host course.

Student Survey Methods

Fall 2011 Arts & CRDS Population and Sample

- 1,270 total student enrollment in host courses.
- A maximum of 50 surveys were administered per peer mentor, and a maximum of 100 surveys per course.
- Out of 650 surveys handed out, 413 respondents responded.
- Respondents comprised 63.5% of the sample and represented 32.5% of the population

Theoretical Framework

- National Survey of Student Engagement (NSSE)
  - Students learn more effectively the more they actively engage with learning in a variety of ways.
  - Student engagement can be fostered by instructors and institutions, and engagement with co-peers and near-peers enrich student engagement
  - Signs of engagement include frequency, duration, and types of active student participation in learning (i.e. hours spent working with peers on assignments outside of class)
  - NSSE research shows positive association between student engagement, student success (learning) & retention.

Theoretical Framework

Collaborative, peer-led learning

- Supplements, does not replace formal learning led by professional instructors
- Supports the development of academic skills such as problem solving, critical thinking, feedback, oral or written communication, negotiation
- Supports social goals of learning: sense of academic community and belonging, emotional and interpersonal elements of learning, identity formation, ethical sensitivity and respect for difference, shared responsibility for learning

Theoretical Framework

Research implications

- Peer mentoring is highly context-sensitive and depends on the structure and aims of a course and program, campus culture, and society.
- Peer mentoring is interpersonal. Students share responsibility for the success of peer mentoring programs.
- Student self-report data is necessary to measure and track unsupervised student engagement activities, to gather narratives of experiences, and to understand psychological and social dynamics of peer mentoring.

Arts Peer Mentoring Program
Complexity & Factors

- **Host courses** vary widely in:
  - Enrollment (small, large), level of study (1st year, 4th year)
  - Student demographics & motivations for taking the course
  - Course subject matter & learning objectives
  - Teaching & learning philosophy and methods
  - Opportunities for peer-to-peer student engagement and collaborative learning within the course
  - The teaching & learning culture of the discipline

Arts Peer Mentoring Program
Complexity & Factors

- **Host Instructor** goals, strategies, expertise vary
  - A teaching philosophy more or less conducive to fostering student engagement via peer mentoring
  - Time and motivation to co-design mentoring roles and offer ongoing support and mentoring
  - Varying degree of integration of peer mentor(s) into class activities, student learning processes, assignments, student teams, etc.
  - Degree of collaboration with peer mentors as part of the teaching team (with any TAs, lab instructors)

Arts Peer Mentoring Program
Complexity & Factors

- **Peer mentoring roles & activities** vary
  - Peer mentors are expected to serve approx. 1-3 hours per week, but often serve more voluntary hours
  - Several roles / activities may be performed by each peer mentor
  - Locations and times of peer mentoring vary widely (in-class, out-of-class, online, in labs, in empty classrooms, library, restaurants)
  - Peer mentors vary in mentoring skills, motivations, communication strategies
  - Mentoring activities often unsupervised, sometimes not very peer-appropriate, mistakes & challenges occur

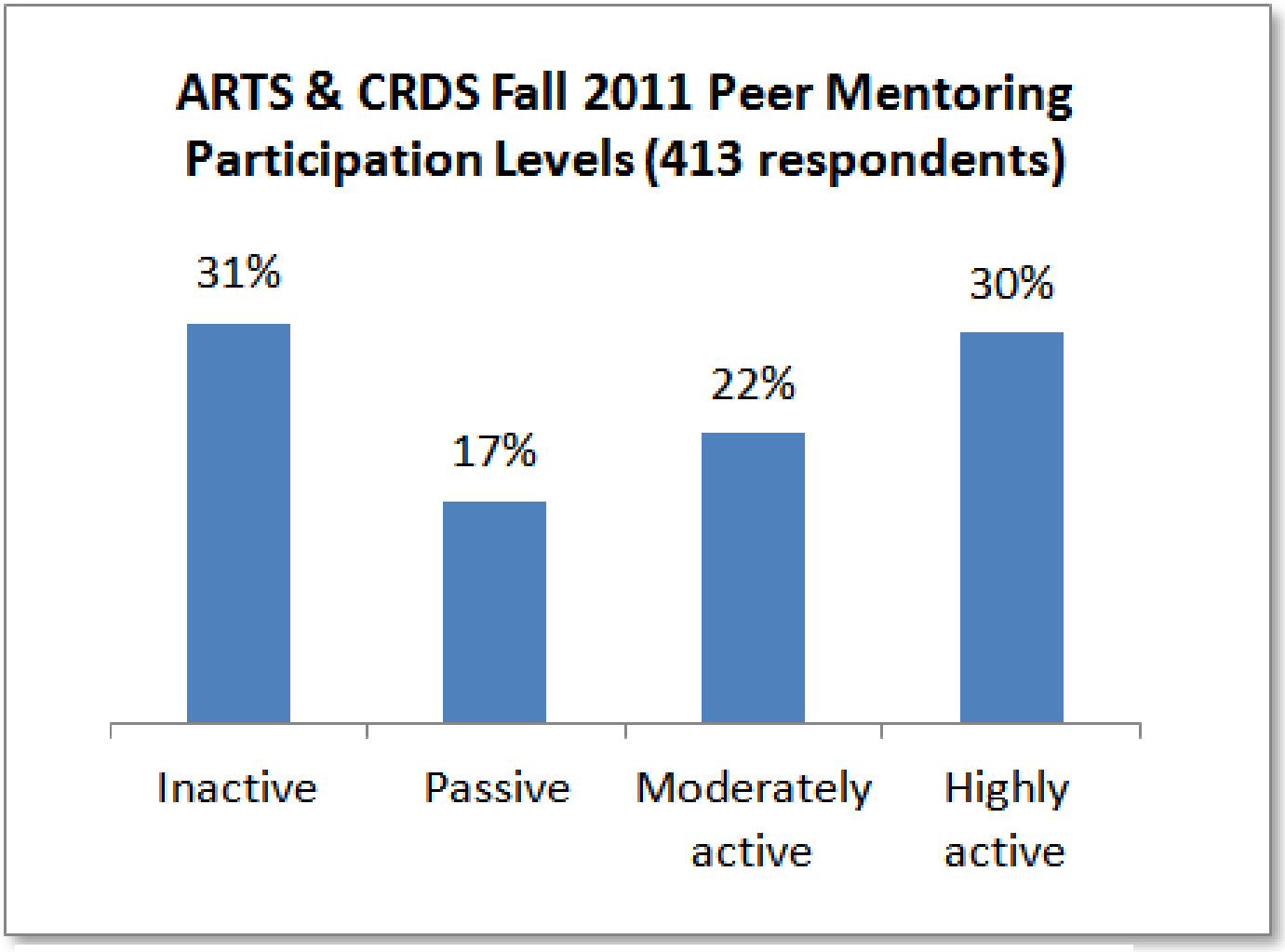
Student Surveys - Coverage

- Course size & structure, number of peer mentors serving in the course, etc.
- Student demographics (gender, age, year of study)
- Factors that may influence engagement in peer mentoring (i.e. time commitments, expected grade)
- Student participation type & frequency
- Motivation for participation in peer mentoring, reasons for limited participation in voluntary peer mentoring
- Benefits perceived by students (academic, psychological, social)
- Student experiences, comments, suggestions

Methods: Participation

- Students were given a checklist of 15 types of in-class and out-of-class peer mentoring interactions they may have participated in.
- During data analysis, the list was grouped into **Inactive, passive, moderately active and highly active** types of participation.
- Each participation type was given a numeric weight based on the level of active initiative and engagement it required.
- Weighted scores were totaled for each respondent to yield a number representing the student's overall participation level.

Findings: Participation



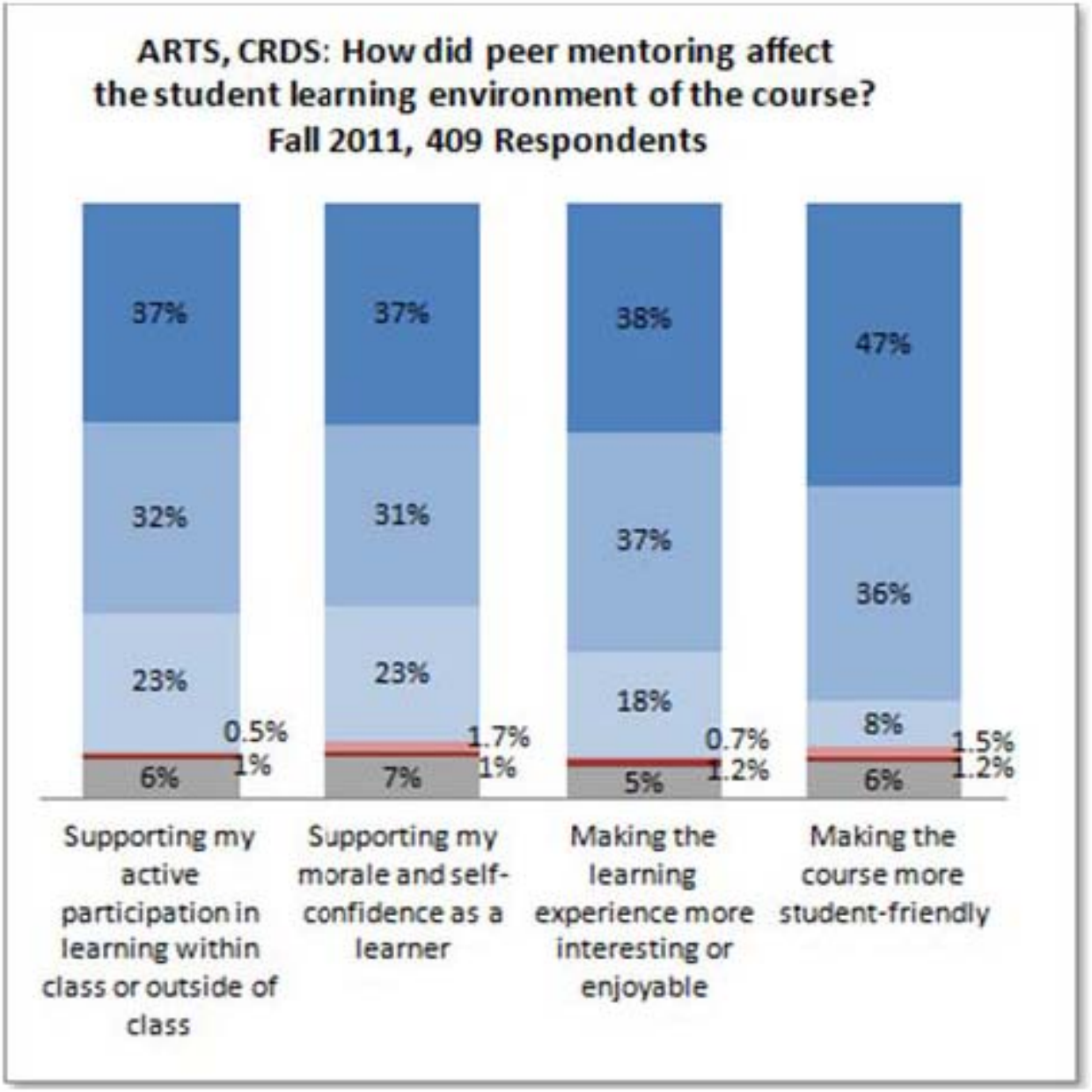
Methods: Impact ratings

the Fall 2011 survey asked 4 questions about the social and psychological impact and 3 questions about academic impact.

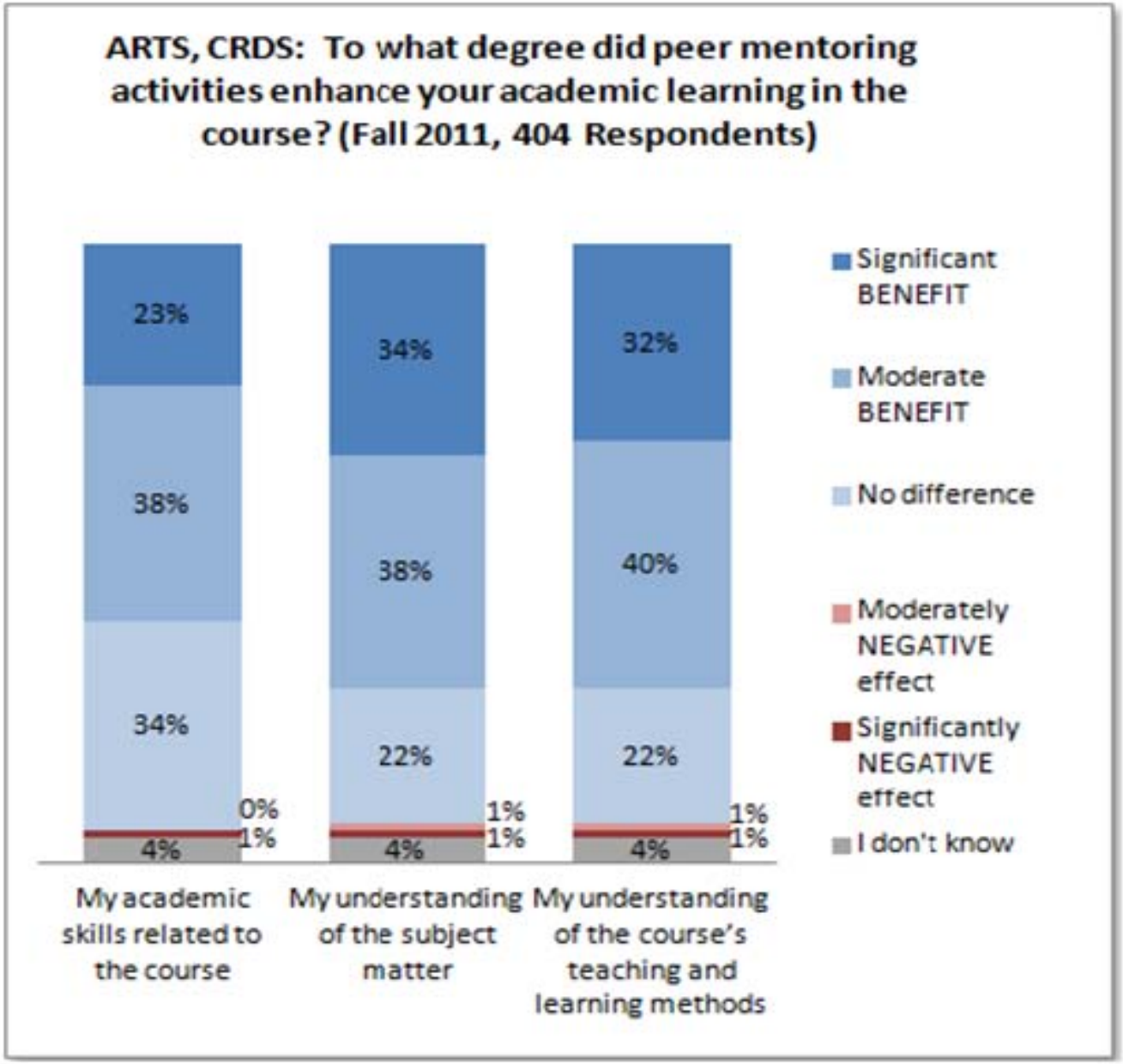
Students were asked to respond with Likert scale options ranging from negative effect to significant benefit, with an option for “I don’t know.”

In the next graph, “Significant benefit” is shown in dark blue at the top of each bar.

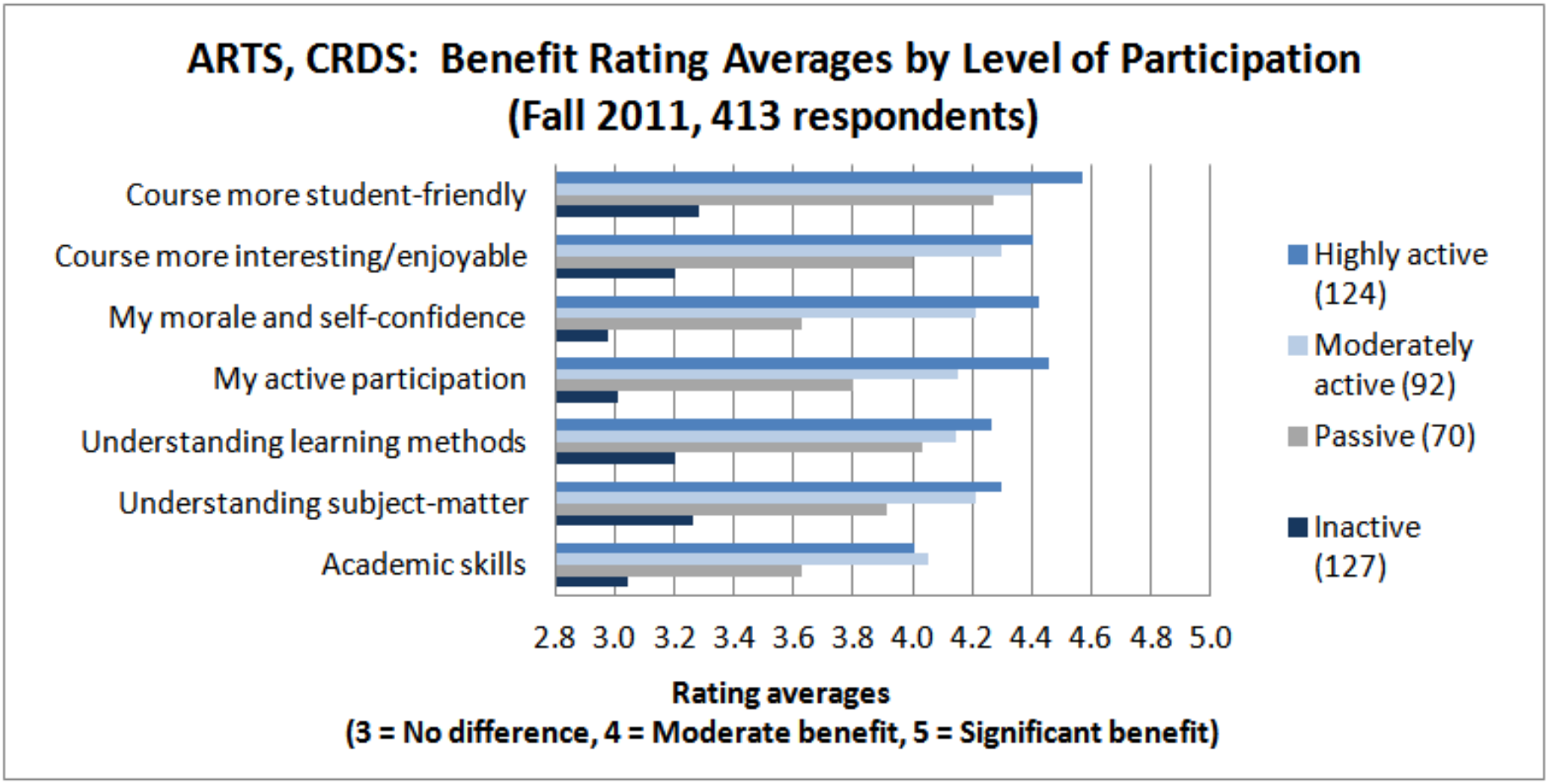
Social / Psychological Impact



Academic Impact



Participation & Impact



As expected, higher levels of participation correlate positively with perceived benefit.

Lasting Effect on Students

- Many students have now experienced peer mentors in more than one course over time.
- The Arts survey asked *“Have you taken (or are you currently taking) any other courses that have had an undergraduate peer mentor in them?”*
  - in 2011, 32% of the sample said “yes.”
- We also asked students about the impact of the Arts Peer Mentoring Program on their learning experience so far.

Lasting Effect on Students

Arts: First time or Cumulative effects of peer mentoring in courses (Fall 2011, 332 Respondents)

Overall, how has the Peer Mentoring Program affected your learning experience so far?		
	Had additional courses with peer mentors	
	Yes	**No**
Significantly negative effect	2%	0%
Moderately negative effect	0%	2%
No difference	13%	25%
Moderate benefit	55%	39%
Significant benefit	29%	27%
I don't know	1%	5%
answered question	105	224

Other findings from the entire data set, 2007-2011

- Participation & benefit levels were not correlated with the host course's **level of study** or **class size.**
  - Small, high level classes can be as effective sites for curricular peer mentoring as large first-year classes.
- **Student gender** made no significant difference in participation rates.
- **Time:** Student employment, volunteer and caregiving hours, travel time to campus, etc. did not impact mentoring participation rates.

Possibilities Considered

- Student Grades? Problematic as a measure:
  - Inadequate as measures of peer mentor success & program success. Grades are generally measures of cognitive outcomes of required & formal course components
  - Inappropriate to program philosophy and goals: not a remedial program, mentoring is for everyone including excellent students, and students are responsible for their own grades.
- Correlation with NSSE survey results?
  - If NSSE results are not anonymous, they could be correlated with students who have taken host courses to see if mentees had higher NSSE ratings than the average respondent in their program of study
- “Control” group for comparison?
  - Perhaps we could study the retention of a random sample of students, with similar demographics, who have not taken any courses hosting peer mentors

Brainstorming & Discussion

- How do we measure “learning outcomes” in a way that most teachers and administrators can value & understand?
- What are other effective ways to measure engagement and collaborative learning – both participation and outcomes?
- How can we measure program or network success when the program is so diverse?
- How can we measure peer mentor success?
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