Assessment of a Student Peer Tutoring Program: Benefits to the Tutors

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Objectives

• Identify benefits of a peer tutoring program for the tutors.
• Identify elements of multi-pronged assessment of a peer tutoring program.
• Identify the use of assessment to promote a school culture in which students seek, accept and offer assistance.
Benefits of Peer Tutoring: Tutee

• assisting struggling and distressed students
• improving grades & academic achievement
• increase student success & graduation rates
• more comfortable learning environment
• lessons better suited to the level of the tutees
• emotional benefits of interaction with more senior students
• tutoring → mentoring
Benefits of Peer Tutoring: Tutor

• reviewing & revisiting course material
• developing teaching skills
• increased understanding of a topic
• ?
Types of Tutoring Programs

• for academic credit or paid

• group setting or one-on-one sessions

• responding to failure or targeted to struggling students
Program Development

• Office of Student Affairs
  – Support Student Academic success
  – Multiple student requests for academic support

• University of Pittsburgh Academic Resource Center (ARC)
  – Undergraduate peer tutoring
  – Adapted structure and training materials
Collaboration and Buy-In

• Collaborated with Office of Academic Affairs, Student Promotion Committee, Curriculum Committee, and Course Directors to:
  – Identify courses for tutoring
  – Develop elective course & syllabi (credit)
  – Identify of tutors
  – CODA
Course Development

• Student Peer Tutoring Program (est. Fall 2015)
  – Intro. to Peer Tutoring in Dental Education (2cr.)
  – Peer Tutoring in Dental Education (1cr.)
  – Developed Blackboard course site
  – Tutors identified and enrolled (D2-D4)
  – Tutees Identified (D1 & D2)

  • open to all students after initial pilot term
Session: Do’s & Don’ts of Peer Tutoring

Objectives:

• Accept the role of a peer-tutor
• Appreciate & understand the academic & ethical guidelines of peer-tutoring
Session: Interacting in a Tutoring Session – Objectives

• Identify principles of learning relevant to peer tutoring

• Identify effective teaching techniques for one-on-one and small group peer tutoring sessions.

• Recognize the steps to create tutoring materials in Course/Web/Blackboard
Session: Interacting in a Tutoring Session

Diagnose:
- study skills
- reading skills
- note taking skills

Common misconceptions

- Activity:
  - What are common misconceptions in your content course?
  - Discuss in your group how to help students to correct misconceptions

Prior Knowledge can help or hinder learning
- Prior knowledge helps most of the time - in the brain doing nothing.
- Prior knowledge must be activated to be useful.
- Learning happens if new information is connected to something you already know.
- Inaccurate prior knowledge can hinder learning.
- Inaccurate prior knowledge can be reinforced, fossilized, frozen, faulty, thanks.

Your role:
- Assist accurate prior knowledge.
- Diagnose inaccurate prior knowledge.

One-on-One
Group
Lab

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Resources

Learning Strategies Inventory

Gauge how your tutee studies

- From McGuire's Teach Students How to Learn, p. 179
- http://www.odu.edu/educ/lischult/blooms_taxonomy.htm
- McGuire's Teach Students How to Learn Online Resources

Bloom's Taxonomy

- Creating
  - Making judgments based on criteria and standards through checking and critiquing
- Evaluating
  - Breaking material into constituent parts; determining how the parts relate to one another and to an overall structure
- Analyzing
  - Carrying out or using a procedure through experimenting or implementing
- Applying
  - Constructing meaning from oral, written, and graphic messages through interpreting, summarizing, and explaining
- Understanding
  - Interpreting, summarizing, and explaining
- Knowledge
  - Reading, reviewing, and understanding

The Study Cycle

- Preview
  - Before class: Skim the chapter, read headings and subheadings, review summaries and chapter objectives, and come up with questions you'd like the lecture to answer for you.
- Attend
  - Class: Go to class! Answer and ask questions and take meaningful notes.
- Review
  - After class: As soon after class as possible, review notes, fill in gaps and note any questions.
- Intense Study Sessions
  - Review
  - Ask questions such as why, how, and what if.
  - Intense Study Sessions: 0-5 short study sessions per day.
- Assess your Learning: Periodically perform reality checks.
  - Did I use study methods that are effective?
  - Do I understand the material enough to teach it to others?
- Assess
  - Review
  - Go over what you just studied.

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Implementation

- New Student Orientation
- Program Solicitation
- Tutor Matching
- Tracking
- End of Term Review
- Post-Term Survey

<table>
<thead>
<tr>
<th>Course Director ID'd - Student Matched</th>
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<tbody>
<tr>
<td>Name</td>
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<tr>
<td>-------------</td>
</tr>
<tr>
<td>Student 01</td>
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<td>Student 02</td>
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<td>Student 03</td>
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<td>Student 04</td>
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<td>Student 05</td>
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<table>
<thead>
<tr>
<th>Course Director ID'd - Student Declined/No Response</th>
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<tbody>
<tr>
<td>Name</td>
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<tr>
<td>Student 06</td>
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<td>Student 07</td>
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<td>Student 08</td>
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<td>Student 09</td>
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<td>Student 10</td>
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</tbody>
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Implementation

• Additional Tutoring Opportunities
  – Quiz/Test Banks
  – Exam Review Sessions
  – Help Desk Sessions
  – Finals Study Breaks
Program Assessment: Methods

Tutors

• Pre- and post-course surveys
  – expectations, prior experience, perceived preparedness
  – standard course evaluation and student feedback
  – perceived gain in skills & perceived change in preparedness
  – teaching experience and perceptions about tutoring

• Reflective journals
  – what went well, what challenges they had, and what they would do differently next time

Tutees

• Post course surveys
Program Assessment: Methods

• Time frame: Fall 2015 – Summer 2017

• First time tutors: 73
• Veteran tutors: 60

• Tutees: 234
• Tutees in study: 106
# Results: Tutees

## Tutee Feedback (N=106)

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage of tutees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree or strongly agree working with their tutor improved their grade in the course</td>
<td>76%</td>
</tr>
<tr>
<td>Agree or strongly agree the tutor helped them understand course material better</td>
<td>82%</td>
</tr>
<tr>
<td>Agree or strongly agree their tutor provided effective tutoring sessions</td>
<td>88%</td>
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Results: First Time Tutors

Preparedness of First-Time Tutors
(Pre-course N=75, Post-Course N=78)

- Very prepared: Pre-course 15%, Post-course 62%
- Somewhat prepared: Pre-course 35%, Post-course 56%
- Not Sure: Pre-course 24%, Post-course 3%
- Slightly underprepared: Pre-course 1%, Post-course 0%
- Substantially underprepared: Pre-course 1%, Post-course 1%

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Results: First Time Tutors

Tutor Concerns About Tutoring
(Pre-Course N= 69, Post-Course N= 68)

- Lack of knowledge: Pre-course 29%, Post-course 15%
- Personal Coursework: Pre-course 20%, Post-course 13%
- Ineffective teaching: Pre-course 30%, Post-course 28%
- Lack of sessions: Pre-course 0%, Post-course 18%

Categorized Concerns about Tutoring

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Results: First Time Tutors

- Reflective journal after completion of the tutoring course
  - what went well
  - what the challenges were
  - what they would do differently next time

<table>
<thead>
<tr>
<th>Categorized Responses</th>
<th>Percentage of First time Tutors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had a positive experience</td>
<td>55%</td>
</tr>
<tr>
<td>Wants to tutor again</td>
<td>32%</td>
</tr>
<tr>
<td>Improved teaching skills</td>
<td>25%</td>
</tr>
<tr>
<td>Improved own skills</td>
<td>20%</td>
</tr>
<tr>
<td>Review of material</td>
<td>10%</td>
</tr>
<tr>
<td>Interest in teaching as a career</td>
<td>4%</td>
</tr>
<tr>
<td>Developed a sense of community</td>
<td>1%</td>
</tr>
</tbody>
</table>
Limitations

• Due to the nature of anonymous surveys, there are several aspects that cannot be tracked or measured
  – Cannot track who the students are and who might be changing their opinions and perceptions

• Discrepancies in interpretation when coding

• Low n values, statistical significance may not be possible at this point

• Not generalizable
Changes to the Program

• Asynchronous & synchronous virtual communication
• Suggestions from previous tutors (excerpts from journals)
• Suggestions for upcoming curricular change
• Suggestion licensure exam preparation
• Midterm tracking/check in
• Quiz/Test Banks
• Exam Review Sessions
• Help Desk Sessions
• Finals Study Breaks
• Lab tutoring
Conclusions

• Benefits to tutees
• Benefit to tutors
  – academic credit
  – training
  – reviewing the course materials
  – practicing skills for future career
  – academic and person benefits
• Tutoring
  – more accepted
  – supportive environment
Co-Authors @ University of Pittsburgh

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  – Dental Student Class of 2021
  – School of Dental Medicine

• Nicholas Seger
  – Undergraduate Student

• Zachary W. Davis, MS
  – Academic & Student Support Services Administrator
  – School of Dental Medicine
Develop or assess your tutoring program

• Sit together in groups
  – A: have no existing tutoring program & developing a tutoring program
  
  – B: already have a tutoring program
Develop or assess your own tutoring program

ADEA 2018 Peer Tutoring: Helping the Next Generation of Students in Dental Education

Develop or Assess your Tutoring Program

Develop your Tutoring Program – What do you need?
1. List the resources on your campus that you can use (consult, tap into, etc.)
2. List any existing support infrastructure that can be helpful to your program development
3. Identify the courses in your curriculum in which students would most benefit from a tutoring program
4. Consider pros and cons of peer or professional tutors and which model would be the most beneficial and feasible for your setting
5. Consider what you can offer for tutors as incentive (payment, academic credit, etc.)
6. Consider how you would secure faculty buy-in and who the stakeholders are at your school (course directors, curriculum committee, promotions committee, office of education/academic affairs, etc.)
7. Consider who the support personnel will be (overseeing and administering the program, training tutors)
8. Consider your capacity for enrollment for tutors
9. Consider your capacity for enrollment for tutors
10. Consider your process for tutor selection (data from admissions, promotions, academic affairs, student affairs, recommendation by course director, self-selection, etc.)
11. Consider your process for tutor selection (data from admissions, promotions, academic affairs, student affairs, recommendation by course director, self-selection, etc.)
12. Consider components for program assessment (tutor success, tutor success, training materials, faculty feedback, etc.)
13. Consider anticipated challenges

Develop or Assess your Tutoring Program – What works well, what are the challenges?

1. List the resources on your campus that you use (consult, tap into, etc.)
   a. Are you using all resources available?
   b. Are these resources efficient?
2. List any existing support infrastructure that are helpful to your program development
   a. Is the support infrastructure sufficient for your needs?
3. Identify the courses in your curriculum in which students would most benefit from a tutoring program
   a. Do you provide tutoring in the courses in which students are struggling the most?
   b. Do you have any reason to switch to another model?
4. Consider pros and cons of peer or professional tutors and which model would be the most beneficial and feasible for your setting
   a. Does your model work for you?
5. Consider what you offer for tutors as incentive (payment, academic credit, etc.)
   a. Does your incentive structure work for you, for your tutors and tutors?
6. Consider how you would secure faculty buy-in and who the stakeholders are at your school (course directors, curriculum committee, promotions committee, office of education/academic affairs, etc.)
   a. Do any of your stakeholders need to be updated on the tutoring program?
7. Consider who the support personnel are (overseeing and administering the program, training tutors)
   a. Do you have sufficient support personnel for your tutoring program?
8. Consider your capacity for enrollment for tutors
   a. Can you manage the number of tutors you have?
   b. Do you have a sufficient number of tutors?
   c. Do you need to increase or decrease the number of tutors? If so, how can you do that?
   d. What do you need for that?
9. Consider your capacity for enrollment for tutors
   a. Do you have capacity to take more tutors?
   b. Do you have the need to offer more opportunities for tutoring?
   c. Do most students who would benefit from tutors enroll in the program?
10. Consider your process for tutor selection
   a. Are you using data from admissions, promotions, academic affairs, student affairs, recommendation by course director, self-selection?
11. Consider your process for tutor selection
   a. Are you using data from admissions, promotions, academic affairs, student affairs, recommendation by course director, self-selection, etc.?
12. Consider your components for program assessment (tutor success, tutor success, training materials, faculty feedback, etc.)
   a. How do you currently assess your program?
   b. Are there any missing components in your assessment?
   c. Have you made any changes to your tutoring program?
13. Consider past and anticipated challenges
   a. What are the challenges you have faced and resolved recently?
   b. Do you have any unresolved challenges?
   c. Are you anticipating any new challenges?
Q & A
References


Thank you!

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Revising/Assessing – What works well, what are the challenges?

1. List the resources on your campus that you use (consult, tap into, etc.)
   a. Are you using all resources available?
   b. Are these resource efficient?

2. List any existing support infrastructure that are helpful to your program development
   a. Is the support infrastructure sufficient for your needs?

3. Identify the courses in your curriculum in which students would most benefit from a tutoring program
   a. Do you provide tutoring in the courses in which students are struggling the most?
   b. Do students struggle in any areas outside of the currently available courses for tutoring?

4. Consider pros and cons of peer or professional tutors and which model would be the most beneficial and feasible for your setting
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