

Assessing the Impact of LSAMP: A Perspective & Methodology by WAESO-LSAMP

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"Paradigmatically expanding opportunities for all STEM students by supporting effective activities that help graduate more STEM URM's".

Our Motivation

- Measuring impact began from Day 1 of AMP
 - Describing impact beyond student R&G numbers
 - How do we continue to communicate to our stakeholders in a changing world?
- “Bang for your buck” assessment vital in today’s tough economic climate.
- As we Broaden Participation:
 - What unique program aspects have made a difference?
 - What challenges remain below the surface?

“Paradigmatically expanding opportunities for all STEM students by supporting effective activities that help graduate more STEM URM’s”.

The WAESO-LSAMP Approach

- Briefly, there are 3 parts:
 - ① Economic “Multiplier” of URM students graduating with STEM degrees based on (salaries) x (years since graduation) per NSF dollar.
 - ② Qualitative data collection on student and faculty experiences, using new tools to communicate findings.
 - ③ Calculate economic “Multiplier” on institutions due to retaining students and institutional infrastructure hiring over the years per NSF dollar.

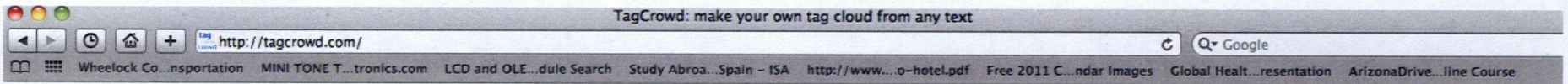
“Paradigmatically expanding opportunities for all STEM students by supporting effective activities that help graduate more STEM URM students”.

① Economic Impact Methodology

- Data Sources & Assumptions:
 - Urban Institute Report used because it is an external, well researched, and extensive evaluation of LSAMP vs. non-LSAMP students
 - National average salaries of STEM B.S. & M.S. degrees over a specific time frame vs. no college degree
- Calculate cumulative salary differential over time (using employment projections) with parameters clearly marked in spreadsheet, divide by NSF dollars
- Output is a “Multiplier”
- Present salary and employment parameters as a “base case”.
 - Sensitivity analyses can be done beforehand or invite stakeholders to use model & see how “Multiplier” changes with changes

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② Qualitative Data



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Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.

Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live.

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② Differences in Word Clouds:

>10,000 words from Faculty Vs. >10,000 words from Students



③ Economic Impact on Institutions

- Retaining students improves colleges and universities funding streams
 - Urban Institute data used
 - Faculty/instructor lines per x students enrolled (national averages change over the years)
- Institutional infrastructure in terms of program coordinators, staff, etc.
- A smaller “Multiplier” than (1), but local dollars are important!
- Add to “Multiplier” from (1) to communicate to stakeholders.

“Paradigmatically expanding opportunities for all STEM students by supporting effective activities that help graduate more STEM URMs”.

References/Resources

- Urban Institute Report (LSAMP)
<http://www.urban.org/publications/311299.html>
- Quesnay's *Tableau Économique*
<http://homepage.newschool.edu/~het/>
- A “Word Cloud” resource:
<http://tagcrowd.com/>
- Email me at tony.garcia@asu.edu for spreadsheet or other information.