

# ASSESSMENT OF NSM GRADUATE STUDENT EXPERIENCE FOR AFFIRMING CAMPUS CLIMATE

Division of Natural Sciences and Mathematics  
University of Denver

# Methods Overview

- 81-question survey
- All questions were optional
- NSM provided an incentive for participants
- Areas assessed:
  - Teaching
  - Research
  - Community
  - Inclusive Excellence
  - Recommendations
  - Demographics

# Analysis Overview

- Trustworthiness:
  - ▣ Investigator Triangulation – three individuals analyzed and interpreted the data which allowed for overall consensus
- Quantitative Analysis
  - ▣ Used SPSS to run basic demographic frequencies
  - ▣ ANOVA tests were also completed
  - ▣ Across social identity groups, students had consistent responses to questions
- Qualitative Analysis
  - ▣ 1<sup>st</sup> level coding: In-vivo Coding in which the actual words of participants provided first level codes
  - ▣ 2<sup>nd</sup> level coding: Axial Coding which provided themes for each section of the data and further contextualized the quantitative data
  - ▣ 3<sup>rd</sup> level coding: Thematic Coding in which I looked across all the themes for each section to explore how themes related to or were in tension with each other

# Survey Findings

- 105 participants, 68 who responded to the entire survey

Demographic	Frequency*	Percent**	Teaching Assistants		Research Assistants	
			Frequency	Percent	Frequency	Percent
Man	33	31.4%	26/60	43.3%	8/32	25%
Woman	30	28.6%	22/60	36.7%	16/32	50%
Domestic Students	52	49.5%	42/60	70%	22/32	68.8%
International Students	11	10.5%	5/60	8.3%	2/32	6.3%
Heterosexual/Straight	53	50.5%	43/60	71.7%	22/32	68.8%
LGBQ	5	4.8%	3/60	5%	0/32	0%
White Students	43	41%	35/60	58.3%	18/32	56.3%
Students of Color	14	13.3%	9/60	15%	3/32	9.4%

\*68 participants completed the entire survey; however, all demographic questions were optional.

\*\*All calculated percentages do not add up to 100%, as demographic questions were optional.

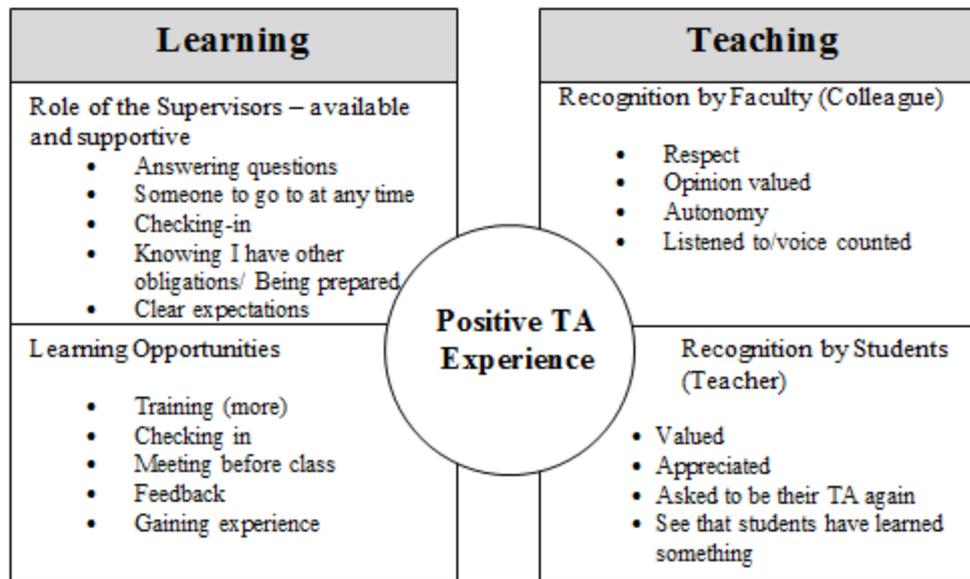
# Teaching

- 60 students indicated they held/hold a teaching assistant position

Question	Agree	Neither Agreed nor Disagreed	Disagreed
Positive Support Structure	63.3%	25%	11.7%
Valued Member of Teaching Community	60%	20%	20%
Teaching is valued	66.7%	10%	23.3%

# Positive Teaching Experience

- Two overarching themes, with two subsequent subthemes



# Negative Teaching Experience

- 3 main areas impacted student's experience – Faculty Relations, TA Position, and Training

Faculty Relations	TA Position	Training
<ul style="list-style-type: none"><li>• Negative treatment</li><li>• No ownership (blame/use TAs)</li><li>• Lack of support and communication</li><li>• Unclear expectations/responsibilities</li><li>• No feedback</li><li>• No recognition</li></ul>	<ul style="list-style-type: none"><li>• Don't get to teach/share knowledge</li><li>• Babysit/busy work</li><li>• Not a member of community</li><li>• Heavy workload/long hours/stress</li><li>• No regard to discipline (Don't value TAs)</li><li>• No input</li></ul>	<ul style="list-style-type: none"><li>• More guidance/knowledge of teaching</li><li>• Develop as a teacher (philosophy)</li><li>• Maximize on TA abilities</li><li>• Limited opportunities to ask questions</li><li>• For faculty too</li></ul>

# Research

- 31 students indicated they held/hold a research assistant position

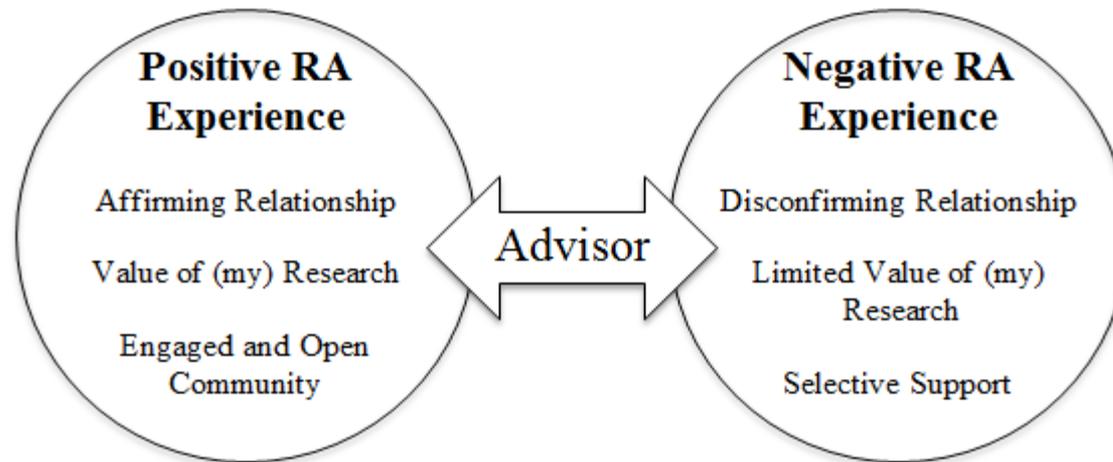
<b>Question</b>	<b>Agree</b>	<b>Neither Agree nor Disagree</b>	<b>Disagree</b>
Positive Support Structure	77.4%	9.7%	12.9%
Valued Member of Research Community	83.9%	9.7%	6.5%
Research is Valued	74.2%	16.1%	9.7%

# Positive & Negative Research Experience

- The advisor or PI plays the most critical and influential role
- They agreed, regardless of individual perception that the experience of being a research assistant “depends on the advisor. Some [advisors] are very supportive, some not so much.”
- “Ultimately, [my advisor] is the one who decides if we pass or fail in this program.”

# Positive & Negative Research Experience

- Experiences narrowed in on three areas: Advisor Relationships, Value of Research, and Available/Selective Support



# Community

- Overall, students indicated that they feel they have opportunities to develop positive relationships with fellow students (73.3%, N=55), faculty (77.3%, N=58), and staff (70.7%, N=53)
- Approximately, 75% of students have a positive perception of the community at NSM, in that, they have opportunities for positive relationships and they feel respected, welcomed, and included.

# Positive Community Experience

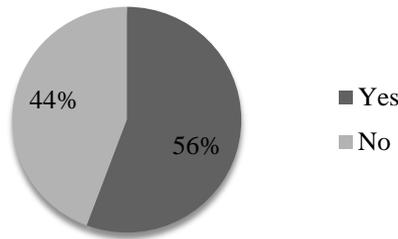
- Expressed their graduate experience through two, equally important lenses – member and learner
- Experience belonging and value when both of these roles are present
- “My opinions and needs are heard. My research is valued.”

# Negative Community Experience

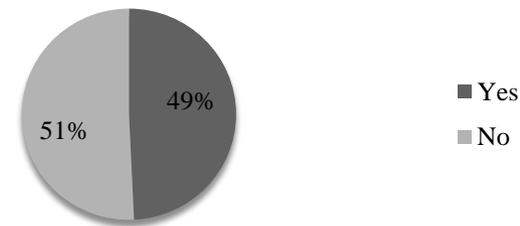
- Imbalance of where value is placed – learning vs. research, work vs. student
- “I’m just a cog in the wheel and nothing else”
- The emphasis on research can make students feel that their experience as a learner is not the goal or purpose that the school has for them during their time.
- “There is a lack of student activities that foster collaboration or a sense of community.”

# Inclusive Excellence Knowledge

**I have heard of  
Inclusive Excellence  
before.**



**I have heard of the University's  
commitment to Inclusive  
Excellence before.**



- 40.8% (N=29) of students perceived that IE is exemplified within NSM as a whole; 36.6% (N=26) of students indicate a neutral perception; and 15.5% (N=11) did not know.

# Varying Definitions of IE

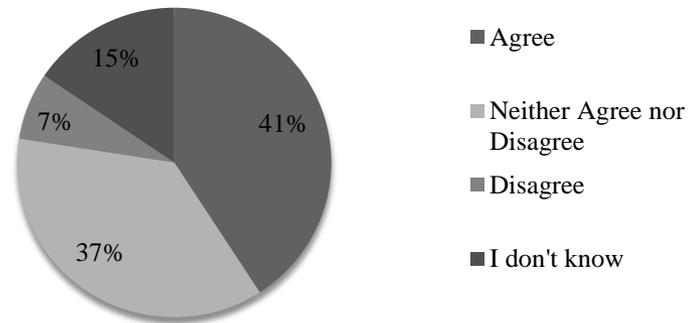
- Many students perceived IE as a way to provide opportunities to all students, no matter their background in order to increase diversity and help students and the University succeed.
  - “It means including motivated and excellent students who typically do not either have opportunities or are sometimes discouraged from activities, achieve the same results as someone with opportunity and encouragement.”
- To these students, compositional diversity or the presence of and opportunities provided to historically underrepresented populations is how they would define IE at DU.

# Varying Definitions of IE

- For some students, IE is related to the presence or absence of a welcoming climate in NSM.
  - ▣ “[Inclusive excellence is] respecting each person and valuing their opinions by listening to them, and acknowledging them as a human being, even if you cannot agree on everything.”
- For others, IE is “a waste and [the University] should focus its resources to better causes.”
- For these students it is “nonsense” for the university to make everyone feel welcome, concluding that “[IE] is a slogan universities that charge excessive amounts of tuition use to feel like they are not biasing themselves to a specific (white) demographic.”
- Student definitions are specific to their individualized location, within the Division and at DU, meaning who they see and how they feel.

# Is IE exemplified within NSM?

**I think that Inclusive Excellence is exemplified within NSM as a whole.**



# Favorable Perceptions of IE

- These favorable perceptions both affirm these students' receptiveness to IE as well as their views of IE being exemplified in NSM.
  - ▣ "In our department, I felt welcome and I got help whenever I needed"
  - ▣ "There is a large amount of diversity and no one seems to be judged based on an external factor, but more on an academic basis."
  - ▣ "I think people of all backgrounds are represented here and all are treated equally and with as much respect as any other group."

# Neutral Perceptions of IE

- Students shared that they did not know enough about Inclusive Excellence to state whether they saw it in NSM.
  - “I don’t know if IE really comes into play a lot in the division”
  - “I’ve seen no evidence to the contrary”

# Resistance to IE

- Some students defined and described IE with a less receptive tone.
  - “[Inclusive Excellence is] some nonsense about making everyone welcome to the subject”
  - “[A] representation of an attempt to be overly politically correct. Honestly, I find the amount of time and energy the university spends striving for ‘Inclusive Excellence’ to be a waste and should focus its resources to better causes.”
  - “It is a hollow catchphrase birthed in some indistinguishable layer of university bureaucracy in an attempt to justify yet even more university employees that never teach or research – merely attach themselves to the swollen teat of post-secondary education, diverting more and more precious resources away from the actual point of the institution.”

# Implications

- Collectively, both positive and negative perceptions and experiences in NSM illustrate students' hope to be seen as **whole persons**.
- When valued as a whole person during their time as a graduate student, teaching assistant, and/or research assistant in NSM, students are given a more meaningful and personal educational experience.
- When seen as a whole person in NSM, student responses narrow in on three roles – **Collaborative Assistant, Contributing Student, and Valued Member**.

# Collaborative Assistant

- Active participants
- Supported and challenged by their guiding faculty without diminishing their voice, knowledge, and input
- Recommendations include:
  - ▣ Enhanced Guidance - Beyond mere instruction, guidance requires faculty and advisors to engage with students in the teaching and research process.
  - ▣ Level of Involvement - Faculty should look to graduate students for more than just completing tasks but to also acknowledge and invite students to bring their own knowledge and experiences to the work and research that is being accomplished.
  - ▣ Recognition and Feedback - At both individual and community levels, recognition and feedback provide students with a sense of belonging and contribution.

# Contributing Student

- Seen as learners and are able to demonstrate to the division/department their progress and growth through their years at DU
- Valued for both their work and research they provide to the department, in addition to their role as a student and learner
- Recommendations include:
  - Engaged Learning Opportunities - Students emphasized the need and desire for more training around teaching and having opportunities to learn and strengthen their own teaching philosophy and pedagogical techniques. By providing more training opportunities (in/formal), students will be able to develop not only as teachers and faculty but also as leaders in STEM fields.
  - Respected Scholar - By being treated as respected scholars, students can continue to learn but also share their knowledge and provide valuable insight from their own personal experience. Students feel a greater sense of belonging when others value their opinions, skills, and knowledge and when they are able to collaborate with others and give what they can and know.

# Valued Member

- Secure and appreciated part in the community
- Do not have any fear about their position or asking questions
- Students who are given opportunities to connect more with both their internal and external communities, can develop a greater sense of belonging and value toward NSM, their research/work, and their education.
- Recommendations include:
  - ▣ Community Events - Students emphasized the need for more informal community events in NSM. Having these opportunities and ways to connect with others would help students to not only better approach others but to collaborate together and build relationships.
  - ▣ Understanding of Extended Communities - It is important to recognize that students' lives and communities exist beyond their education and research in NSM.

# Limitations

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- Small number of participants
  - Future assessments could include focus groups or one-on-one interviews

# Conclusion

- In order for NSM to improve and develop a positive environment including attracting and retaining a diverse student body, the program should continue to understand students' experiences as well as recognize and treat students in all three roles of a whole person: collaborative assistant, contributing student, and valued member.
- Providing a meaningful and affirming space for students to learn and grow is imperative to the culture.
  - ▣ As one student shares, “The work is challenging, and emphasizing a positive work relation/environment between mentor/protégé is the most impactful way to prove the value of a student within the community.”