

INNOVATION & ENTREPRENEURSHIP



University of Maryland

2018 – Issue 1, April

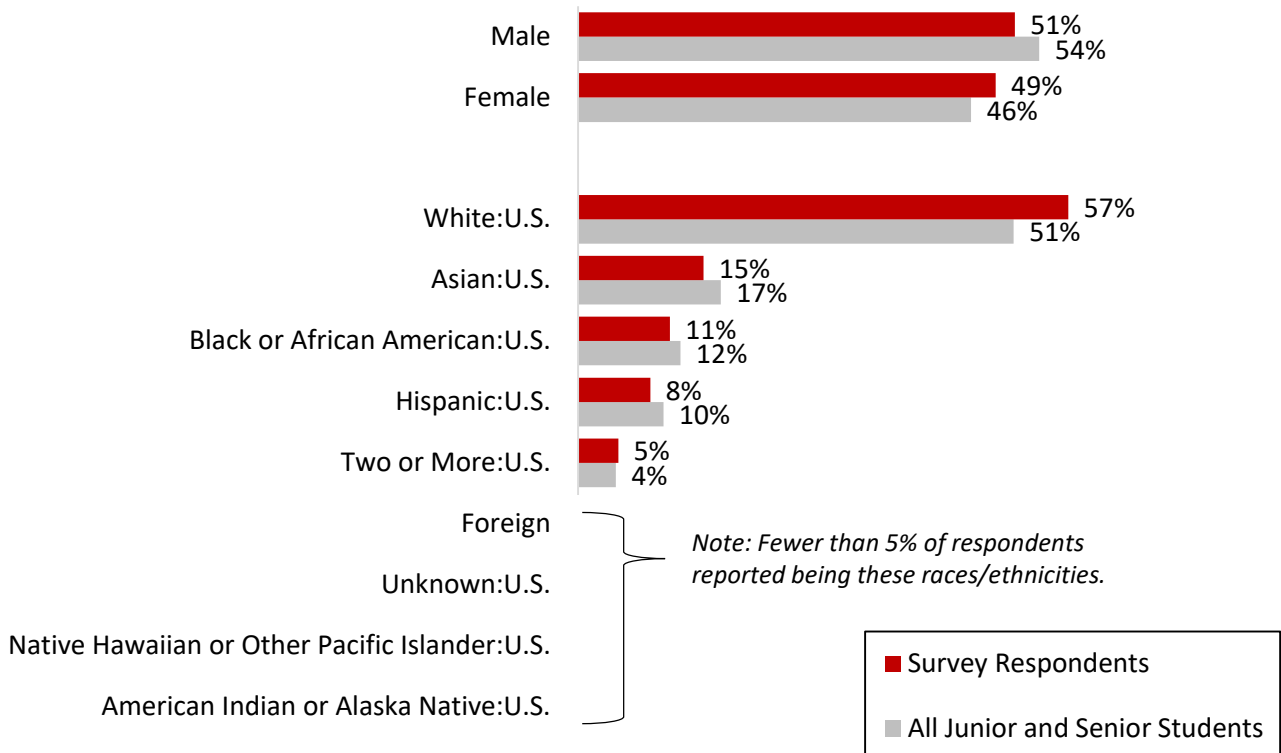
This Campus Assessment Working Group (CAWG) Snapshot reports findings on junior and senior students' perceptions with regard to Innovation and Entrepreneurship. The data represent results from the University of Maryland Student Survey (UMSS), an annual survey administered by the CAWG Assessing Campus Experiences Subgroup (ACES). Respondents completed the survey during the 2017 spring semester in Professional Writing courses.

The Beginnings subgroup of CAWG administered a similar survey in 2016 to first-time full-time students. Their Snapshot report is available at:

https://www.irpa.umd.edu/CAWG/Reports/2017/snapshot_mar17.pdf

Respondent Demographics

A total of 1,659 (51%) of the 3,262 juniors and seniors enrolled in Professional Writing courses during the spring 2017 semester completed the survey. The demographic breakdown of respondents generally reflects that of all juniors and seniors. The data in this snapshot represent only the responses of survey respondents, not all UMD students; therefore, use caution when generalizing. Percentages may not sum to 100 due to rounding.



Project Context and Definitions

Given the university's prioritization of Innovation and Entrepreneurship (I&E) and its inclusion as an [Institutional Objective](#), CAWG focused on this theme in the 2017 survey. UMD was recently named one of the top 10 best undergraduate programs for entrepreneurship for the second year in a row (Entrepreneur Magazine 2017). I&E is woven throughout UMD's ecosystem, providing students with a wide variety of avenues to explore and learn these concepts through living-learning programs, competitions, research, hackathons, areas of study, and courses. Members of CAWG met with UMD faculty and staff whose work relates to I&E before developing survey questions, and discovered that the terms “innovation” and “entrepreneurship” mean different things to different people. For the purposes of crafting the survey, the CAWG subgroup defined I&E broadly.

- **What is innovation?** Innovation is knowing how to creatively solve complex problems.
- **What is entrepreneurship?** Entrepreneurship is knowing how to scale solutions to maximize the number of people affected.

While the terms are defined here to help enhance readers' understanding, the survey did not use the terms. Rather, CAWG opted to break down those ideas into smaller components: creative problem solving, forward thinking, willingness to take action, design thinking, and growth mindset. Survey results are organized into these broad, and admittedly overlapping, categories.

Findings From CAWG BSS 2016

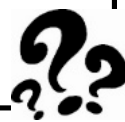
To accomplish CAWG's goals, the Beginnings subgroup administered the 2016 BSS to incoming first-year students. ACES continued the work of Beginnings by repeating the BSS 2016 questions in the 2017 UMSS.

For creative problem solving, the overall first-time student response pattern is similar to the junior/senior pattern. Below are some interesting differences in the two sets of responses:

- Creative problem solving: Fewer first-time respondents said they were interested in solving social and environmental problems (64% and 52% respectively) than junior/senior respondents (76% and 64% respectively).
- Forward Thinking: More first-time respondents (76%) were in agreement that it is more important to think about future possibilities than past accomplishments, vs. junior/senior respondents (65%).
- Willingness to Take Action: More first-time respondents (65%) agreed that they know the next steps for acting on a good opportunity, vs. junior/senior respondents (59%).

Questions to consider:

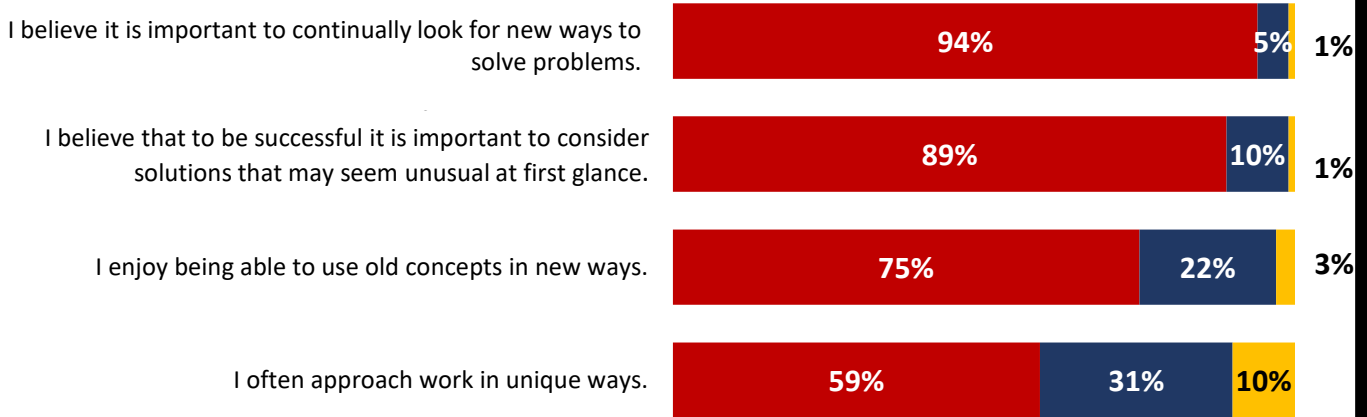
- What are alternative definitions of Innovation and Entrepreneurship and how would they affect the results of the survey?
- What trends would we expect to see (and what would UMD hope to see) in opinions regarding I&E for students progressing through their collegiate experience?



Creative Problem Solving

Part of both innovation and entrepreneurship is “stepping outside of the box,” or thinking about topics, problems, and processes in new ways.

■ Agree or Strongly Agree
 ■ Neither Agree nor Disagree
 ■ Disagree or Strongly Disagree



n = 1650 – 1655, depending on item

- As many as 94% of respondents indicated their willingness to think in new ways.
- Of note, fewer respondents (59%) indicated that they actively approach work in unique ways.



n = 1651 and 1650 respectively

- As many as 3/4th (76%) of respondents indicated interest in solving social and environmental problems. Current UMD initiatives related to these problems, include as the Do Good and Sustainability Initiatives.

Question to consider:

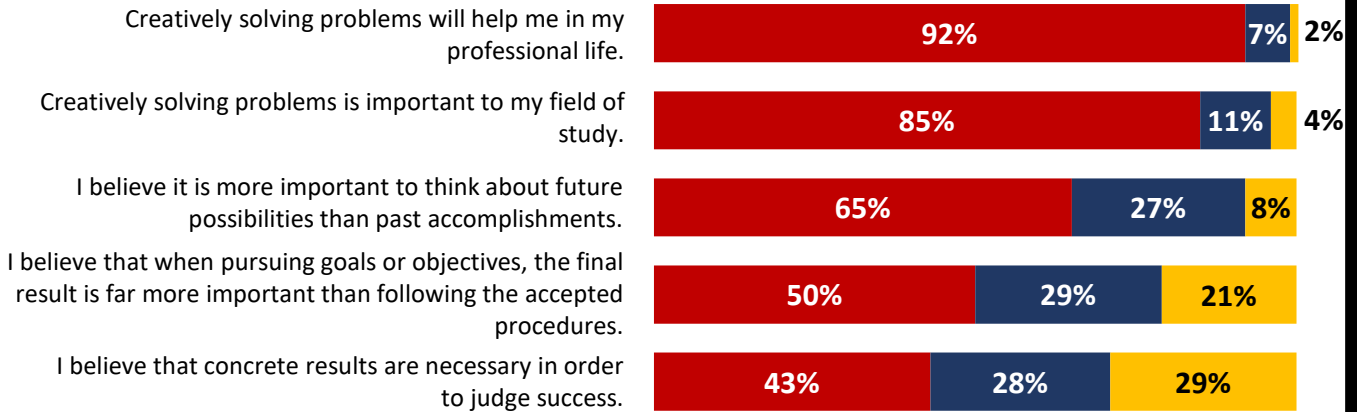
- Why do fewer respondents indicate interest in solving environmental problems rather than social problems?



Forward Thinking

Entrepreneurs often need to see past the immediate present and consider not only future events and needs but also how to get there.

■ Agree or Strongly Agree
 ■ Neither Agree nor Disagree
 ■ Disagree or Strongly Disagree



n = 1634 – 1656, depending on item

- Respondents generally agree that creatively solving problems will help them in their academic life (85%) and is important to their professional life (92%). However, fewer indicate they practice this specific type of thinking (65%).

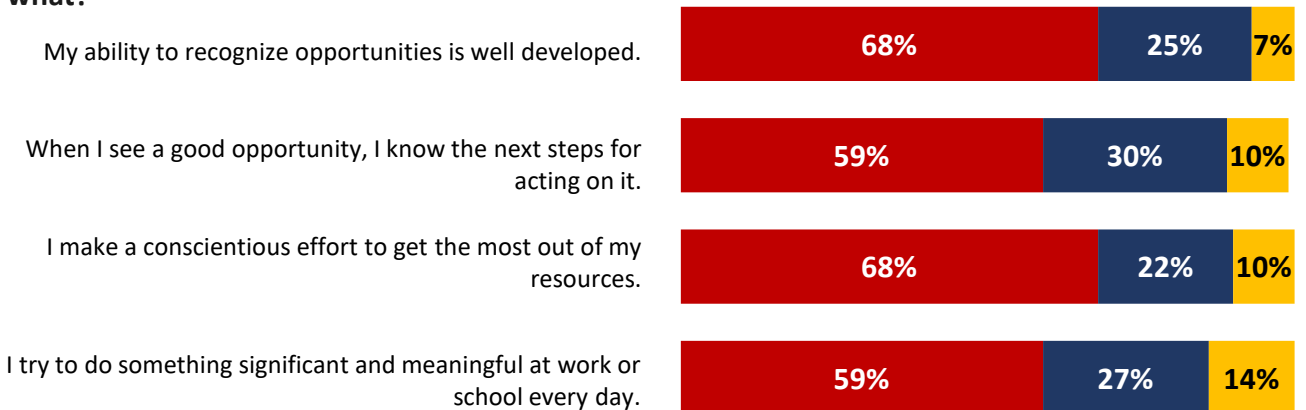
Questions to consider:

- In the fourth item above, how did respondents define “accepted procedures”?
- In not following accepted procedures might students run into ethical problems?



Willingness to Take Action

Any action, large or small, is key to taking an idea to the next stage. You have an idea, great! Now what?

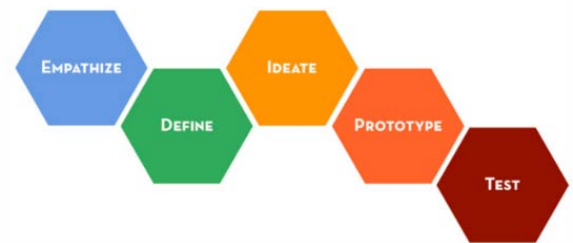


n = 1645 – 1650, depending on item

- Two thirds of respondents are confident in their ability to recognize opportunities (68%); fewer know the next step to act on a good opportunity (59%).

Design Thinking

Design Thinking is one way to approach creative problem solving. This mindset for innovation begins with empathy to define and understand problems and needs. Students with a diversity of skills, experiences, cultures, and viewpoints work in teams to ideate by generating many ideas that build on each other. Teams then prototype by creating inexpensive mockups and test them in the field. Key lessons from what worked and what didn't are captured, and the whole process is repeated. The results of Design Thinking aren't just physical products; they can be solutions, systems, services, or even experiences.



Text adapted from:

<http://innovation.umd.edu/about/design-thinking/>

Please indicate your level of confidence in your ability to do the following:

■ Completely or Very Confident ■ Confident ■ A Little or Not At All Confident



n = 1636 – 1644, depending on item

- While approximately 75% of respondents are confident in their ability to take the listed actions, from 16 to 30% indicate little or no confidence in this ability.

Questions to consider:

- How can UMD help students to build their confidence? What barriers might exist?
- What is the role of ethics/academic integrity in achieving these goals?



Mindset

A growth mindset is important to have throughout this process. The idea of mindset was developed by Stanford University psychologist Carol Dweck: “In a fixed mindset, people believe their basic qualities, like their intelligence or talent, are simply fixed traits. They spend their time documenting their intelligence or talent instead of developing them. In a growth mindset, people believe that their most basic abilities can be developed through dedication and hard work—brains and talent are just the starting point.” (<http://mindsetonline.com>)

■ Agree or Strongly Agree ■ Neither Agree nor Disagree ■ Disagree or Strongly Disagree

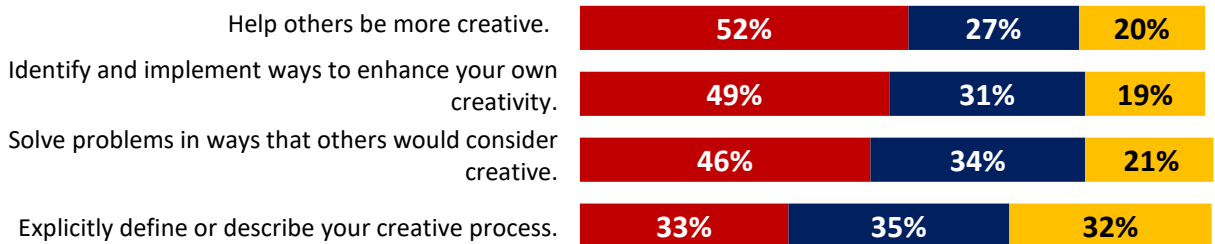
In general, people have a certain amount of creative ability and they cannot really do much to change it.



n = 1648

Please indicate your level of confidence in your ability to do the following:

■ Completely or Very Confident ■ Confident ■ A Little or Not At All Confident



n = 1641-1645, depending on item

- Fewer respondents (68%) indicate confidence that they can explicitly define or describe their creative process than for the other items. While respondents (79%) indicate more confidence about their ability to help others be more creative, enhance their own creativity (80%), and creatively solve problems (80%), the process of defining the creative process seems more elusive.
- Almost half of respondents (48%) believe that they can change the amount of creative ability they have -- a growth mindset.

Questions to consider:

- What can UMD do to help students “explicitly define or describe” the creativity they cultivate on campus and beyond? By more clearly defining the creative process, can students become even more creative?
- How can UMD help students to develop a growth mindset?
- What other factors might affect students’ confidence in applying innovation and entrepreneurship in real world situations?



The Campus Assessment Working Group (CAWG) regularly gathers and exchanges information about UMD student and alumni experiences. The group is charged with developing a campus “Culture of Evidence” in which data and assessment can inform campus decision making. Its three subgroups focus on freshman experiences, junior/senior student experiences, and retention and completion efforts. For more information, to view past reports, or to join a CAWG subgroup, please visit www.umd.edu/cawg.