Data Science Subcommittee of the AMATYC Statistics Committee
Meeting Minutes
Saturday, November 17, 2018
11:55am to 12:45pm
Meeting Room: Acapulco

1. Introductions:

- Committee chairs welcomed everyone to the meeting of the Data Science Subcommittee of the AMATYC Statistics Committee.
- Meeting attendees introduced themselves including their name, location, and whether or not they have a data science program at their institution.
- The following is the tally of the status of the data science programs reported by the meeting attendees (Note: The tally is by institution, not by person. There were a couple institutions with more than one person attending the meeting. In these cases, only one tally was recorded for the institution.)
  - Already have a Data Science Program: 2
  - Currently Proposing or Just Starting a Data Science Program: 5
  - Exploring or Investigating the Possibility of a Data Science Program: 8
  - Curious about and Desiring to Learn More about the Possibility of a Data Science Program: 5

2. Update (Past, Present, Future):

- A brief history of the creation of this subcommittee last year under the leadership of Brian Kotz was given.
- There was a discussion of the goals of the Data Science Subcommittee. The goals are to:
  - Support and maintain a community of individuals interested in increasing the presence of data science in two-year colleges (including program and curriculum development);
  - Develop and share best practices in two-year college data science;
  - Facilitate communication among two-year college faculty from various disciplines interested in data science;
  - Facilitate communication with external organizations involved in data science education efforts;
o Actively participate in discussions defining the levels of mathematics and statistics needed in two-year college level data science curricula; and

o Encourage professional development and support for the teaching and learning of data science.

3. Breakout into Groups:
   - The attendees divided into four groups: Northeast/Mid-Atlantic, West, Midwest, and Southeast.
   - The Report Out from the Group Discussions Included:

     o There was a discussion of the differing names of programs (e.g. Data Analytics, Data Science, Business Analytics).

     o There was a discussion of ways to identify support for institutions that would like to create a data science program. One suggestion was to look for potential connections with local employers. This might include getting contacts by using the alumni office, the workforce development office, and existing advisory boards for other AAS degrees that the institution already has (e.g. AAS in computer or information science, AAS in business, AAS in health sciences if they have an advisory board member in the pharmaceutical industry).

     o There was a discussion of the scarcity of textbooks available for data science.

     o There was a discussion of the type of software that students should learn and the level of proficiency in the software that should be expected of students. R, Python and SQL were discussed.

     o There was a discussion of the differing departments that data science programs can be housed in (e.g. math, computer science, business).

     o There was a discussion of the level of mathematics courses needed for a data science program intended for transfer to a four-year school’s bachelors program in data science. An example of a four-year school’s bachelors program in data science in Florida that requires Calculus III was given. Another example of a four-year school’s bachelors program in data science in New Jersey that requires Calculus II was given.

     o There was a discussion of the difference between two different types of associate degree programs. A workforce associate degree (e.g. AAS) would focus on employment skills; whereas, a transfer associate degree (e.g. AS or AA) would focus on courses needed for transfer into a bachelors program.

     o There was a discussion of the role that mathematics plays in Data Science. This discussion included the possibility of teaching a “Math for Data Science” course and the topics that type of course might include.

     o There was a discussion of the need to connect with industry. This discussion included both the importance of this and the challenges of doing this.
4. Two-Year College Data Science Summit:

- A report was made on the Two-Year College Data Science Summit (TYCDSS).

- The American Statistical Association (ASA), with funding from the National Science Foundation (NSF), hosted the Two-Year College Data Science Summit (TYCDSS) in Arlington, Virginia on May 10 – 11, 2018. The summit assembled 72 educators, researchers, and practitioners in statistics, mathematics, and computer science. Summit participants included faculty from two-year colleges and four-year colleges, as well as industry representatives.

- The TYCDSS considered three types of potential data science programs: associate degree programs for students who intend to transfer to a four-year institution, associate degree programs for students who wish to go directly into the workforce, and certificate programs for professional development.

- The TYCDSS will produce a report (published in 2019) that includes general program outcomes, curriculum guidelines, and potential learning objectives.

- A discussion of next steps followed including:
  - What does an “Intro to Data Science” course look like?
  - What does a “Math for Data Science” course look like?

5. Meeting Wrap-Up:

- The attendees were each given an index card and asked to write the following information onto it:
  - Given all of our subcommittee’s goals, what do you think we should be doing first?
  - What can the Data Science Subcommittee do to help you?

- The attendees were encouraged to look at the AMATYC Data Science Resources webpage for resources and contacts in existing data science programs.

- The attendees were asked to please see committee leaders if they would like to serve as a volunteer from their region to submit upcoming events or information for that region (e.g. local speakers, meetings, webinars) so that it can be promoted to the subcommittee as a whole.