Planning an Academic Analytics Program:

A look at what is being offered and what is being considered.

Amy L. Phelps, PhD Duquesne University
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Kathryn A. Szabat, PhD La Salle University
Max Knape, Duquesne University

AmStat News, June 2012

- "Big Data is a Big Topic" but, despite the enormous potential for contributions by statisticians, our profession and the ASA have not been very involved in Big Data activities, promoting…

→The International Year of Statistics

SIBSIG meeting at JSM 2014

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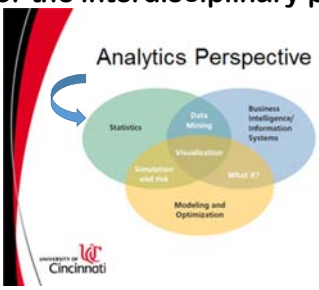
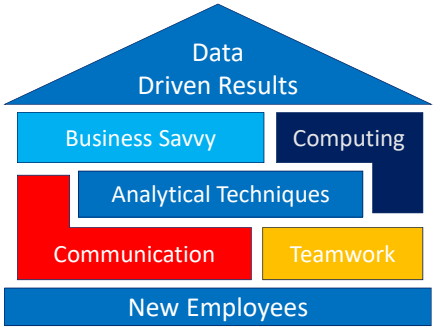
And not step aside in this "next wave of business" namely 'Analytics'

Statistics as an important and equal piece of the interdisciplinary proposed model





Two Benchmarking Papers

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Skills Identified in Literature

- math
- statistics and probability
- data mining
- visualization techniques
- programming
- problem-solving
- knowledge of technologies and techniques for data capture
- data storage and data management
- understanding of "unstructured" data and data "quality"
- familiarity with hardware, platforms and architectures
- understanding of ethical considerations, especially privacy
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- communication skills

Where analytics programs housed

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Online Qualtrics™ Survey

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   - ✓ 92 read and consented to participate
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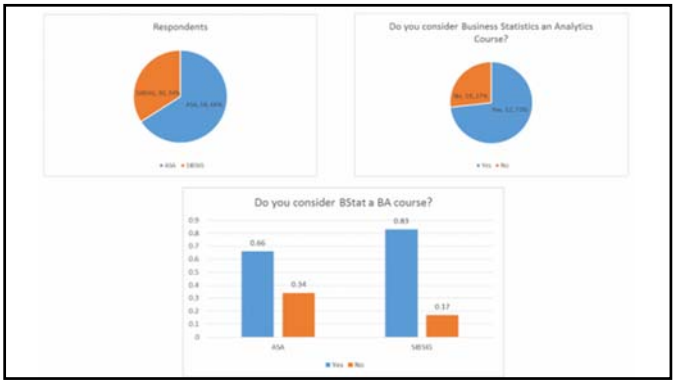
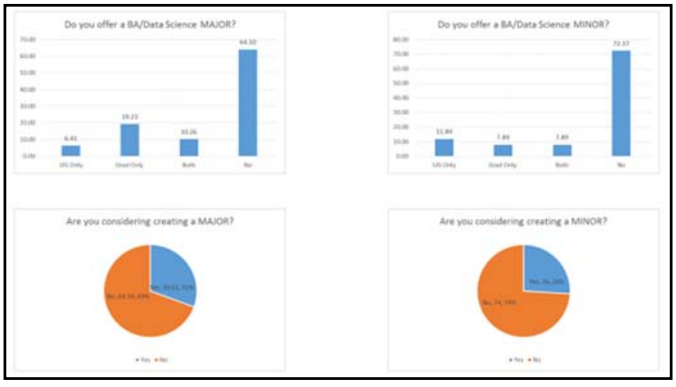
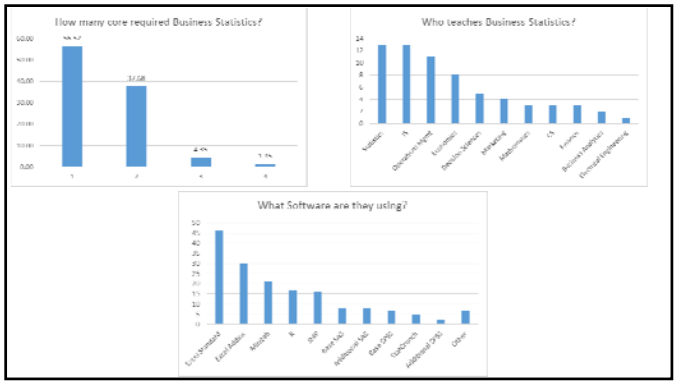
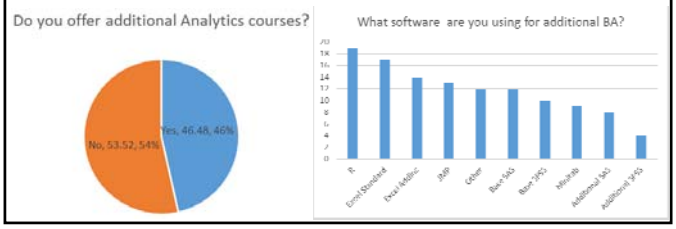






Do you offer additional Analytics course?

Other software options included:
- 3 Tableau
- 3 Python
- 2 SAS Enterprise Miner
- Stat, e-views and SQL



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- Respondents were ask to indicate the extend to which they agree with each of the following:
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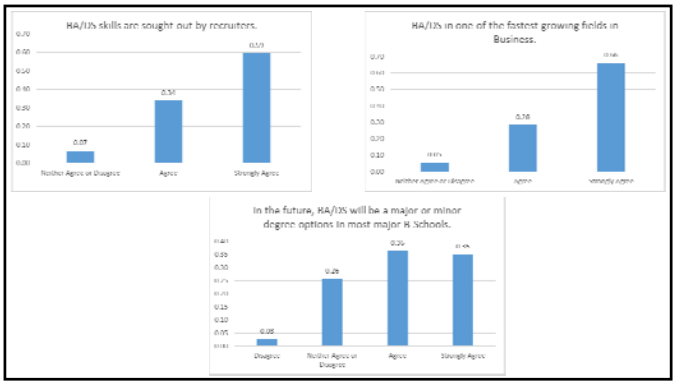
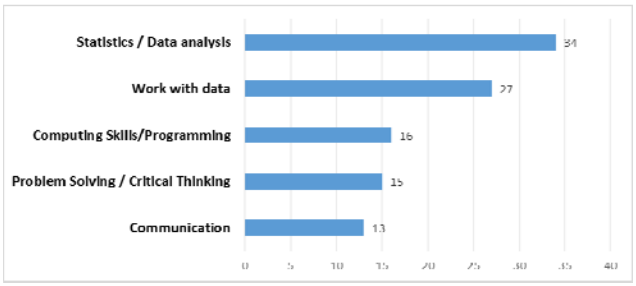


Top Five Identified Skills



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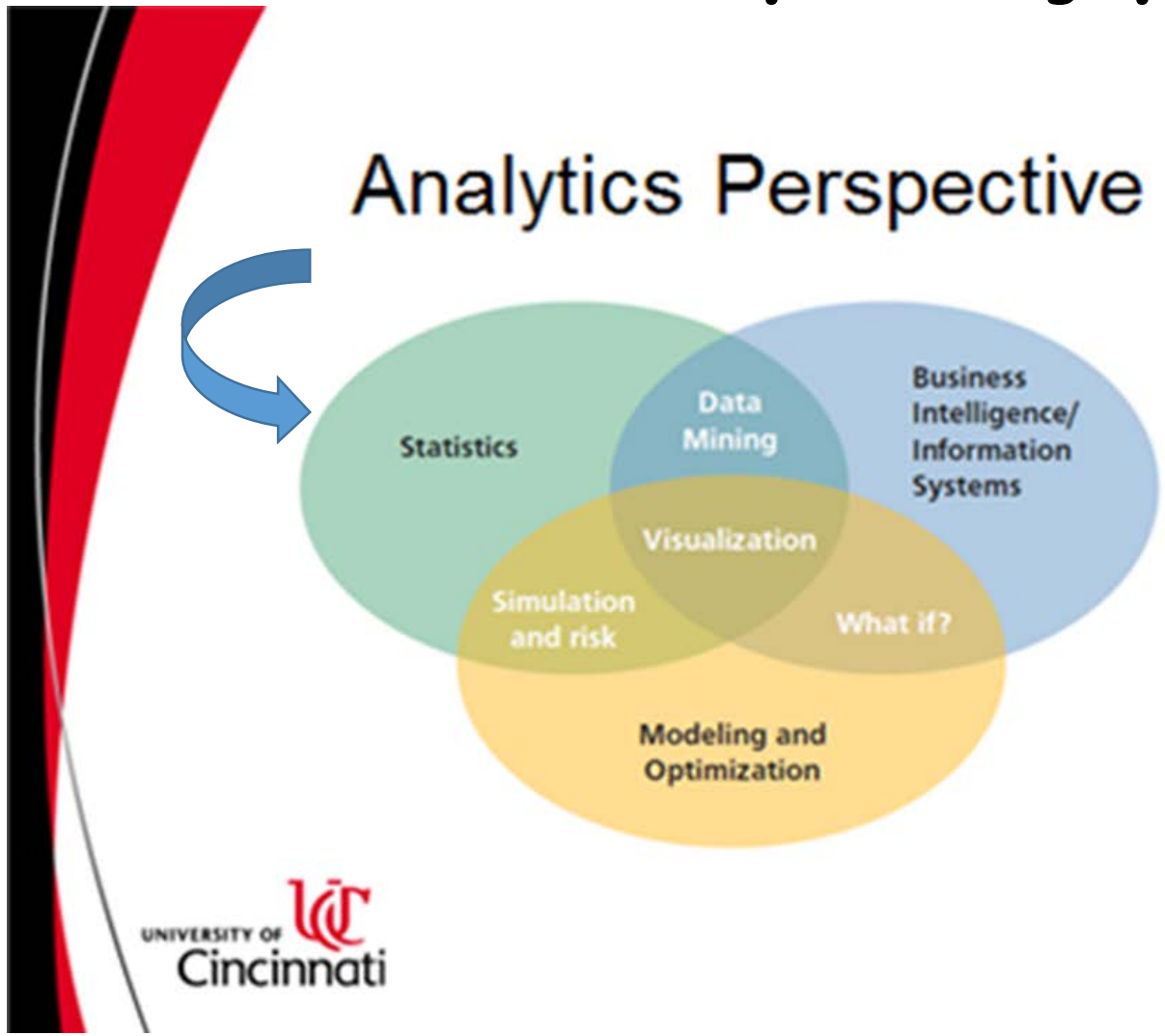

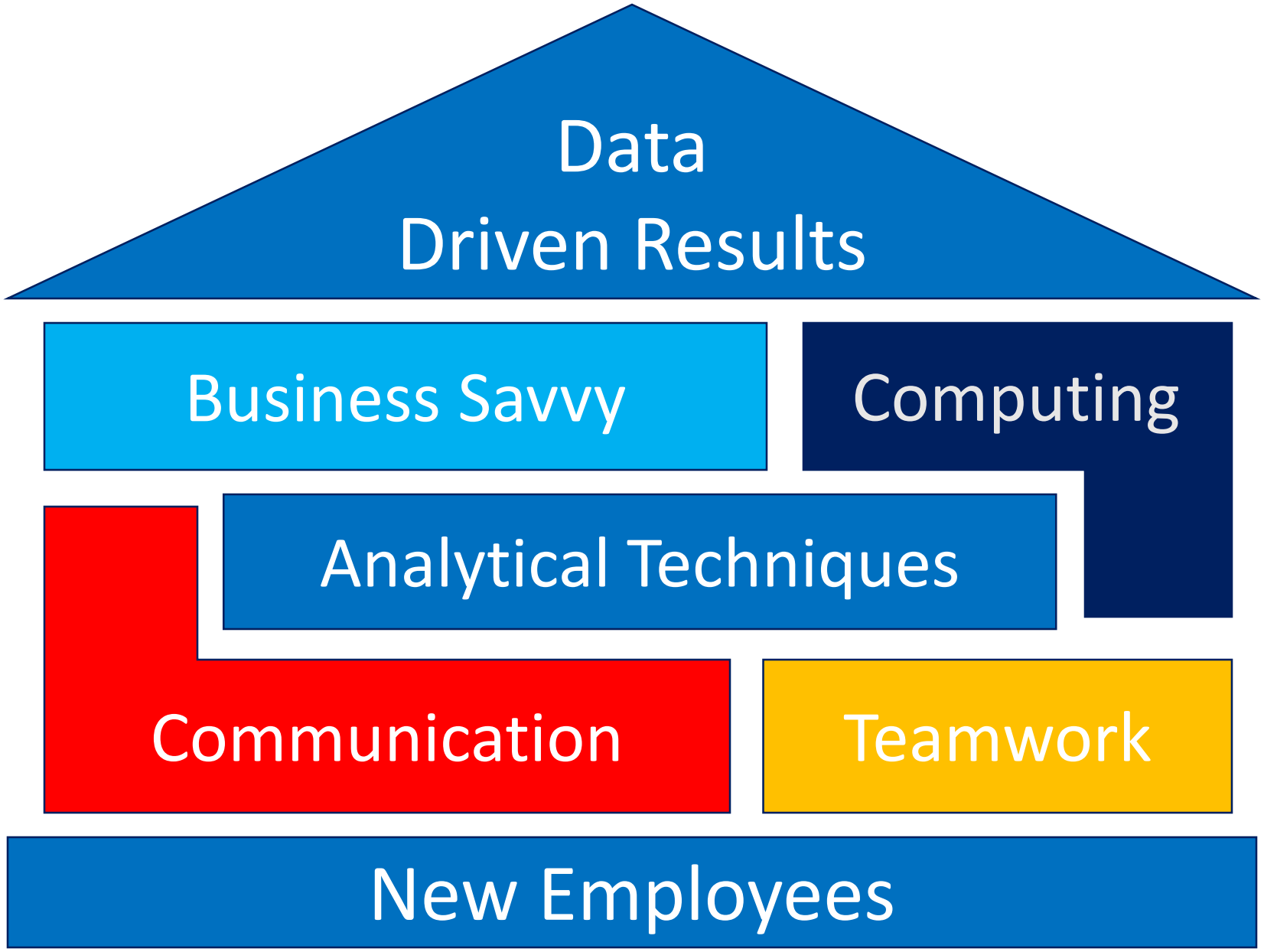

LaBarr, Aric DSI 2013

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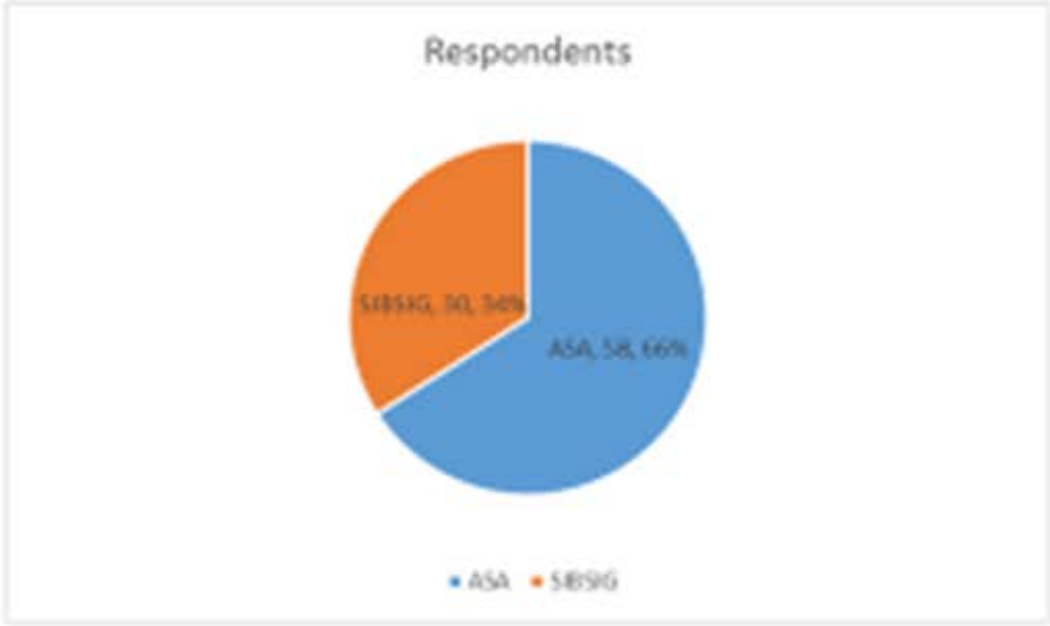
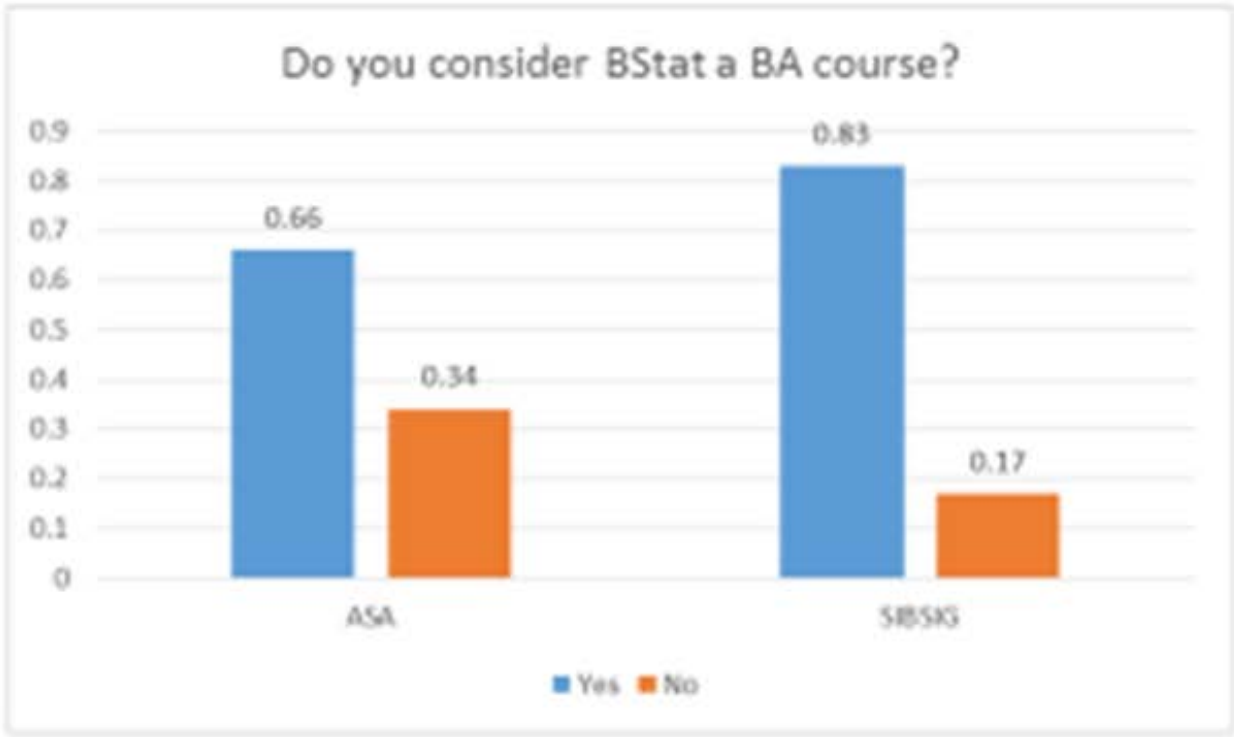
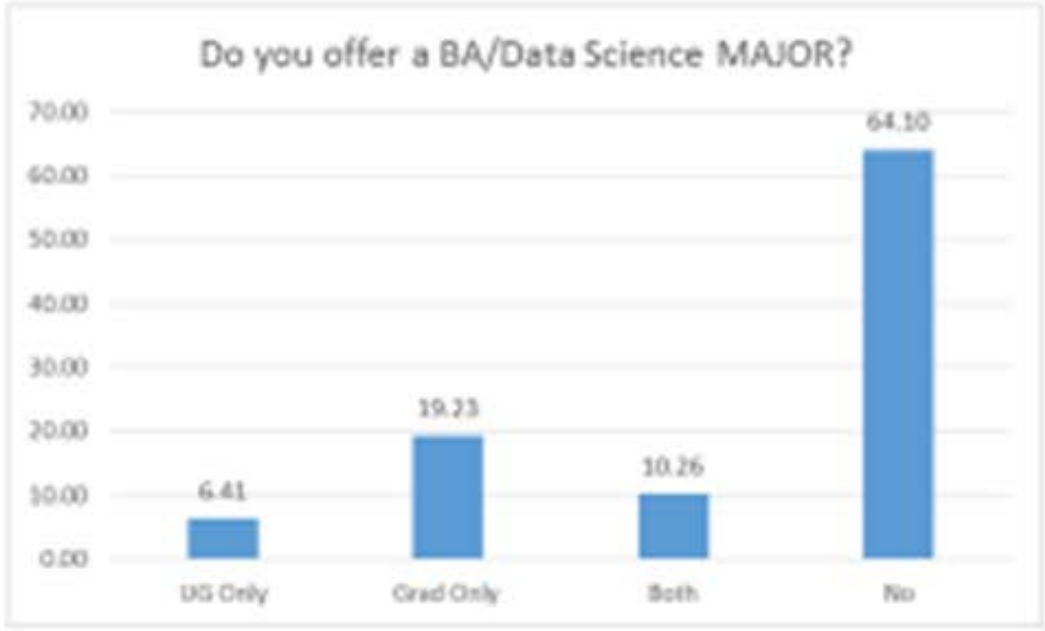
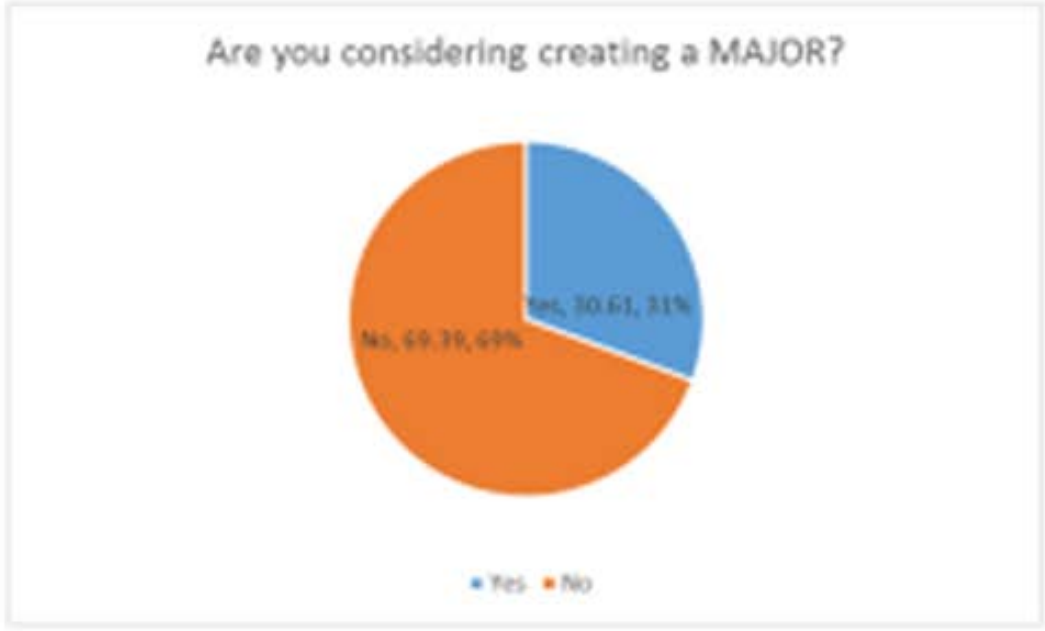

Respondents
SIBSIG, 30, 34%
ASA, 58, 66%
ASA
SIBSIG

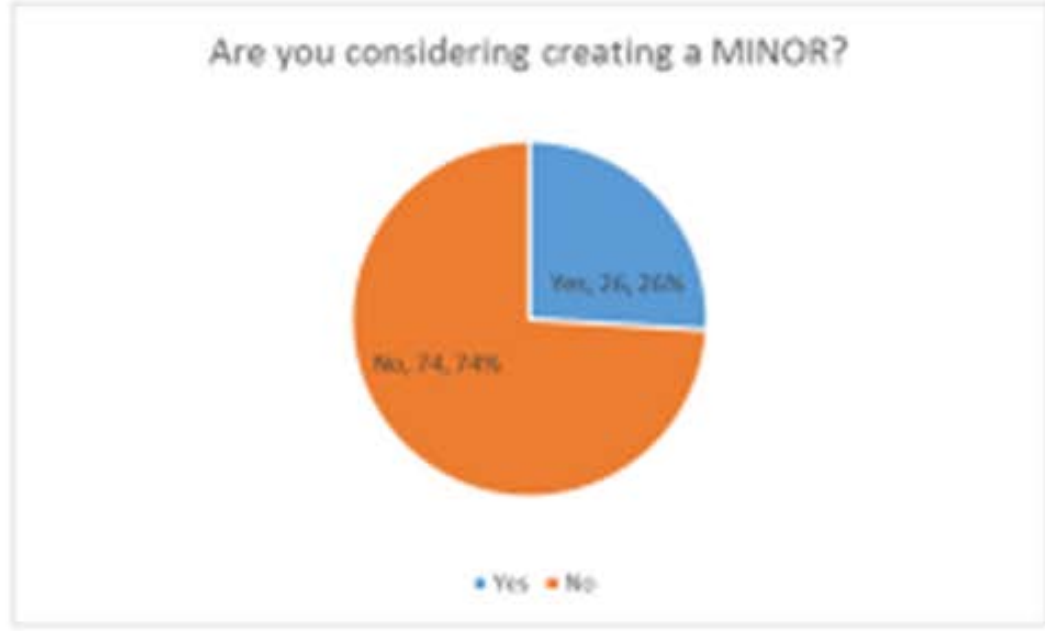
Do you consider Business Statistics an Analytics Course?
No, 19, 27%
Yes, 52, 73%
Yes
No

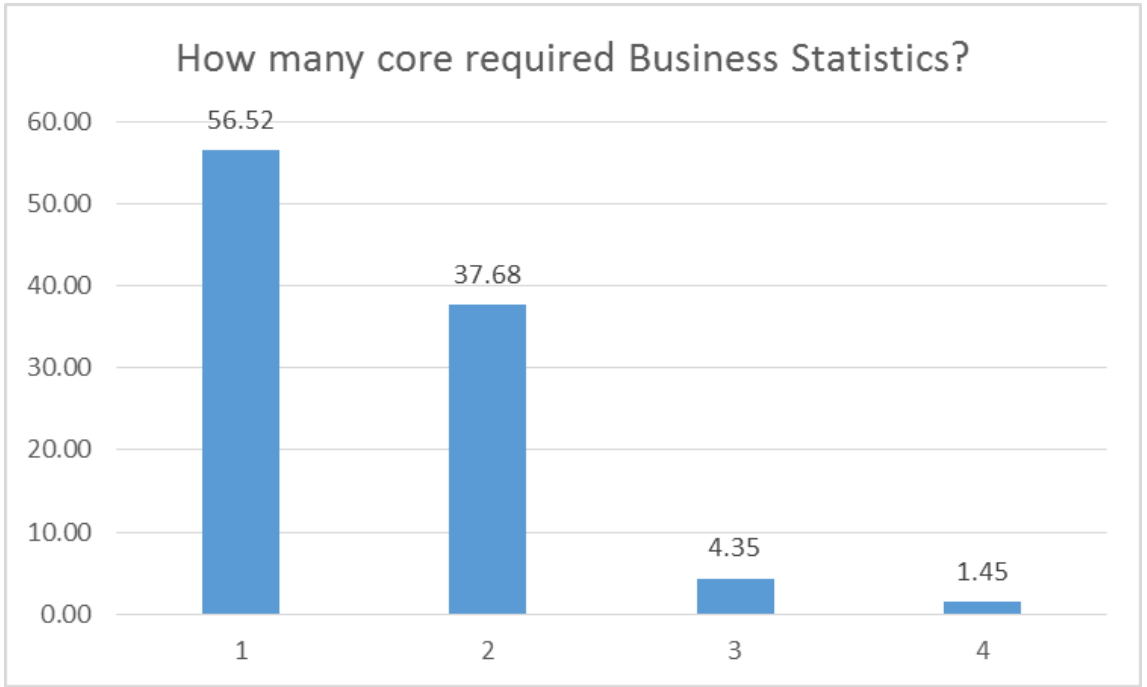

Do you consider BStat a BA course?
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.66
0.34
0.83
0.17
ASA
SIBSIG
Yes
No

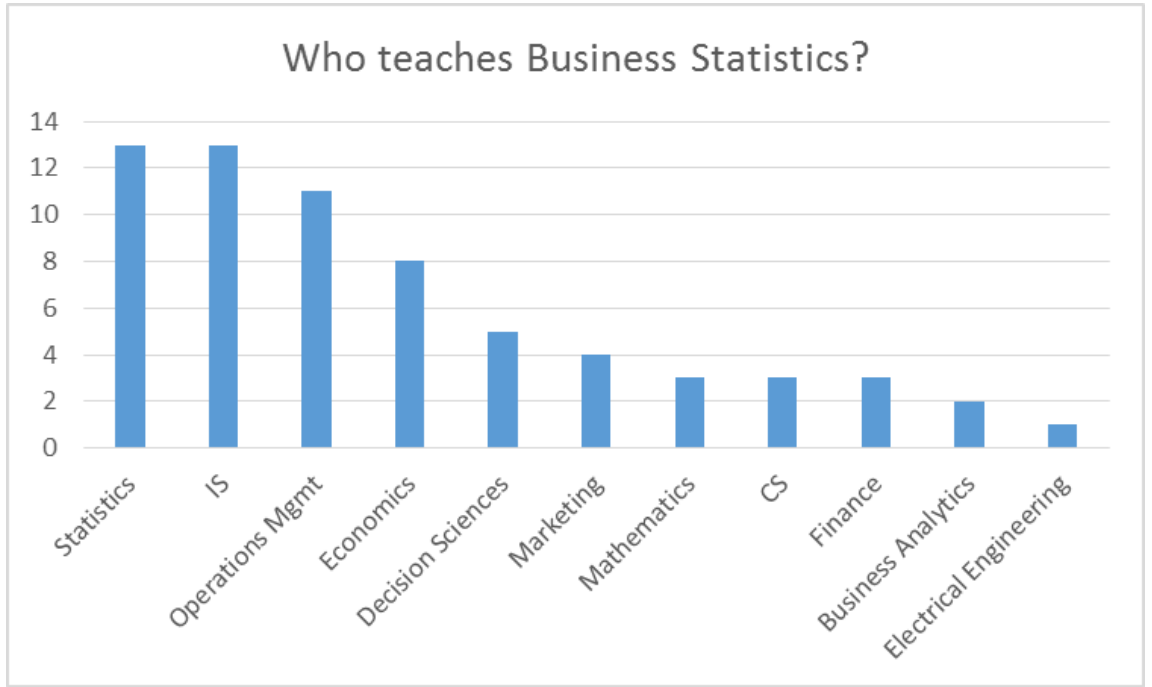

Do you offer a BA/Data Science MAJOR?
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
6.41
19.23
10.26
64.10
UG Only
Grad Only
Both
No

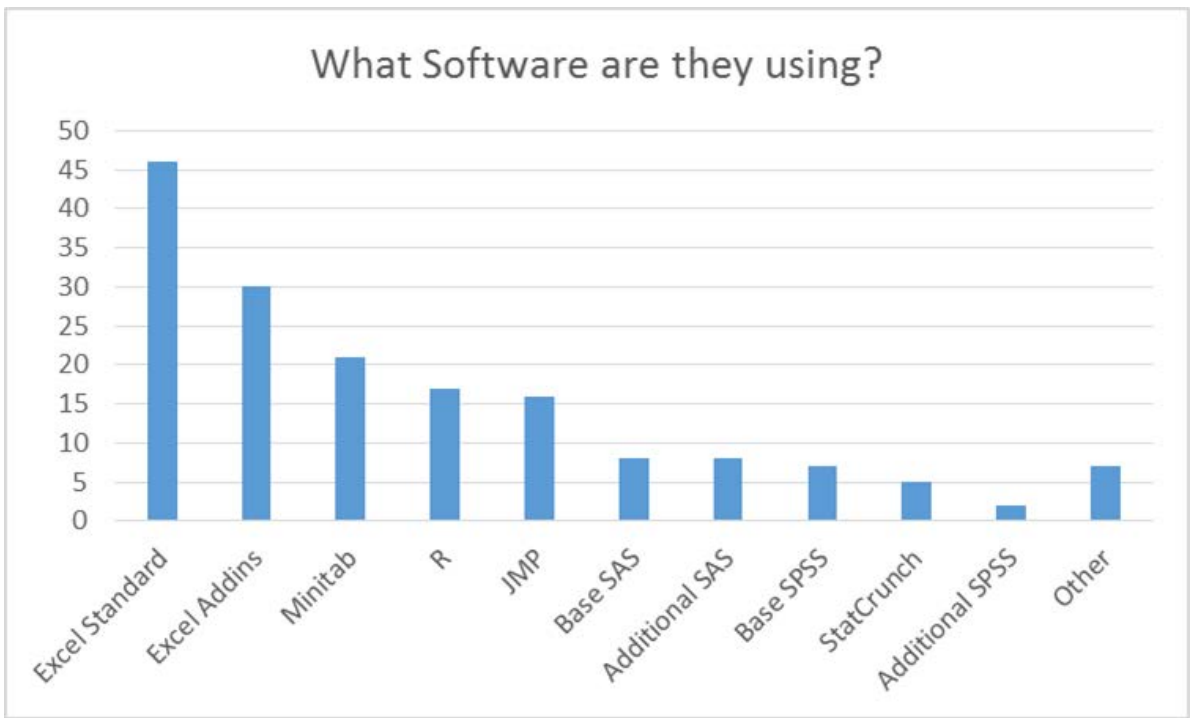
Do you offer a BA/Data Science MINOR?
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
11.84
7.89
7.89
72.37
UG Only
Grad Only
Both
No


Are you considering creating a MAJOR?
Yes, 30.61, 31%
No, 69.39, 69%
Yes
No


Are you considering creating a MINOR?
Yes, 26, 26%
No, 74, 74%
Yes
No


How many core required Business Statistics?
60.00
50.00
40.00
30.00
20.00
10.00
0.00
56.52
37.68
4.35
1.45
1
2
3
4


Who teaches Business Statistics?
14
12
10
8
6
4
2
0
Statistics
IS
Operations Mgmt
Economics
Decision Sciences
Marketing
Mathematics
CS
Finance
Business Analytics
Electrical Engineering


What Software are they using?
50
45
40
35
30
25
20
15
10
5
0
Excel Standard
Excel Addins
Minitab
R
JMP
Base SAS
Additional SAS
Base SPSS
StatCrunch
Additional SPSS
Other

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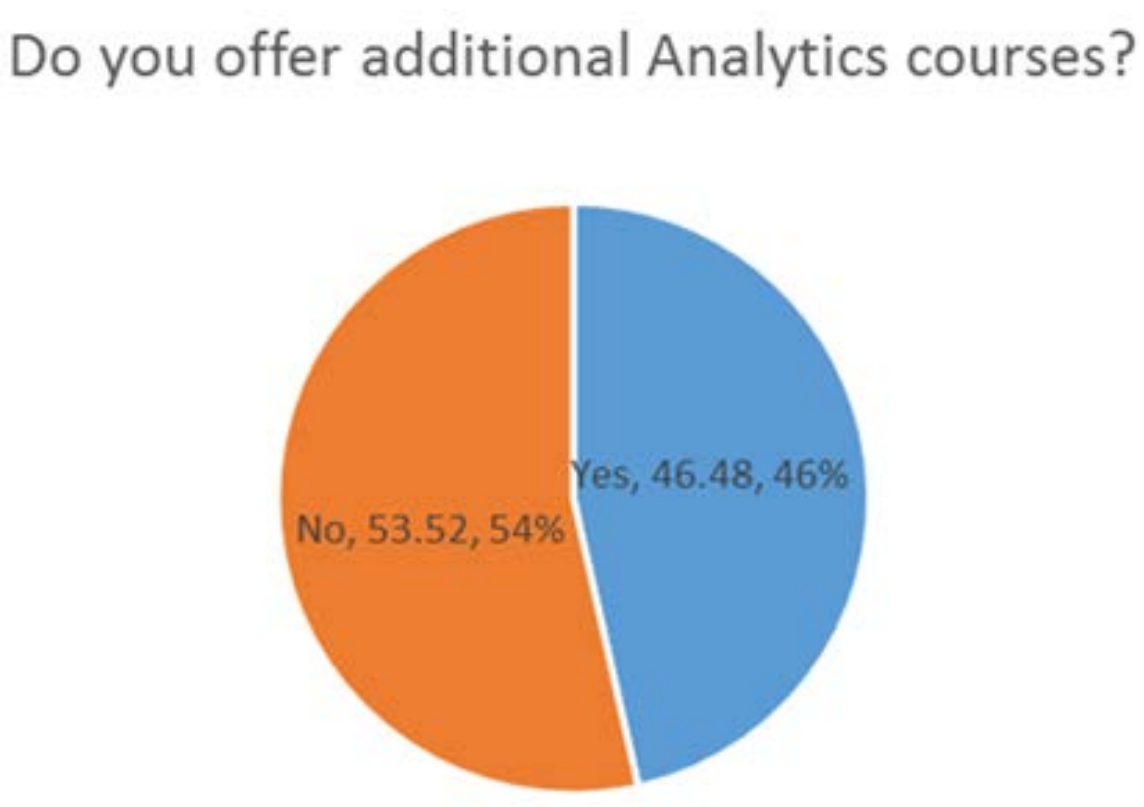

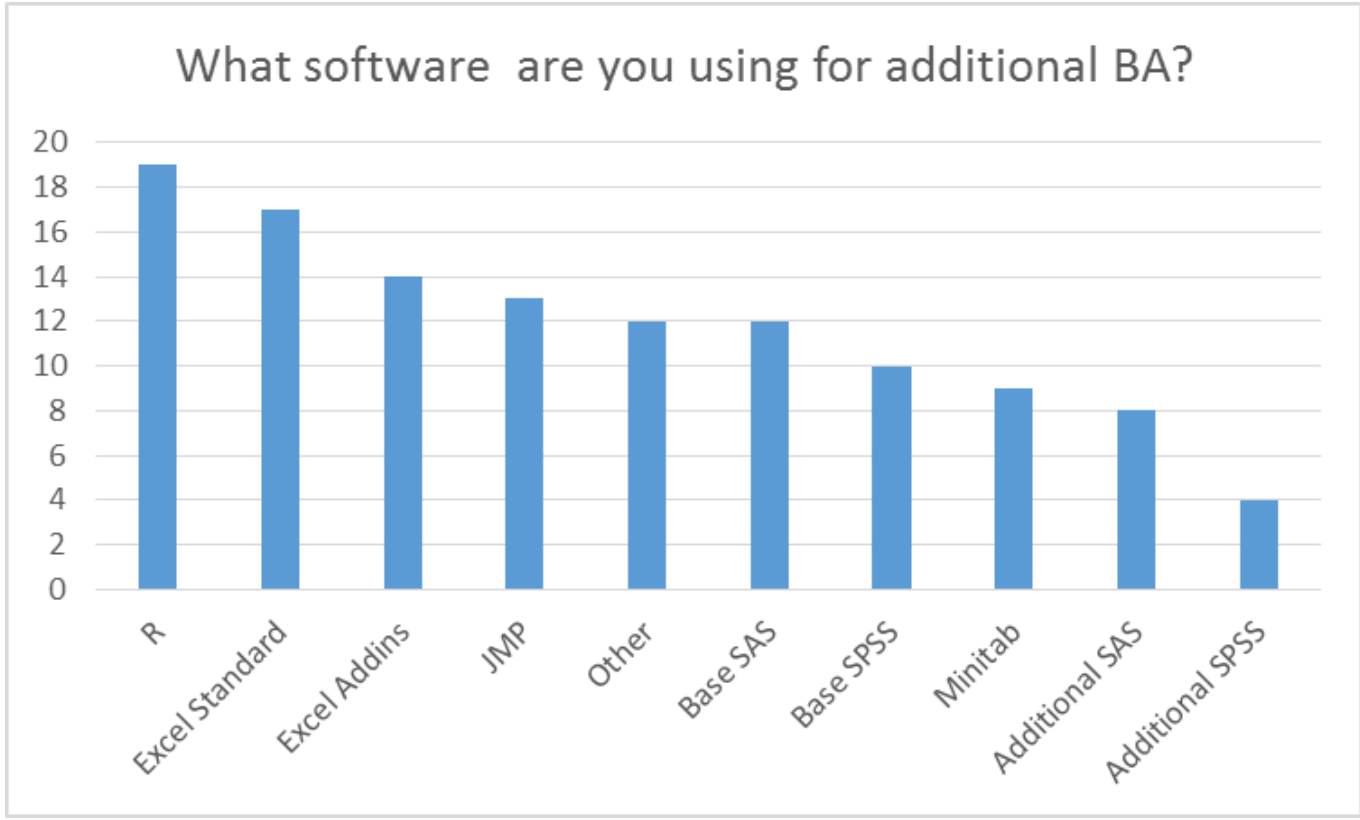

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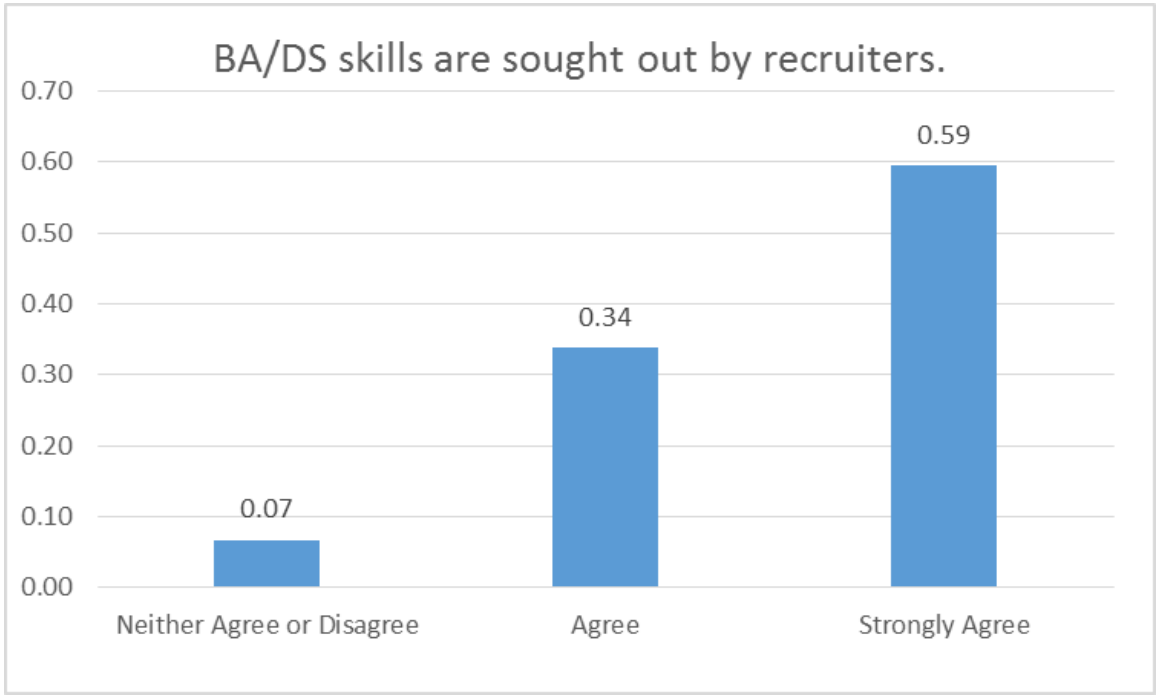
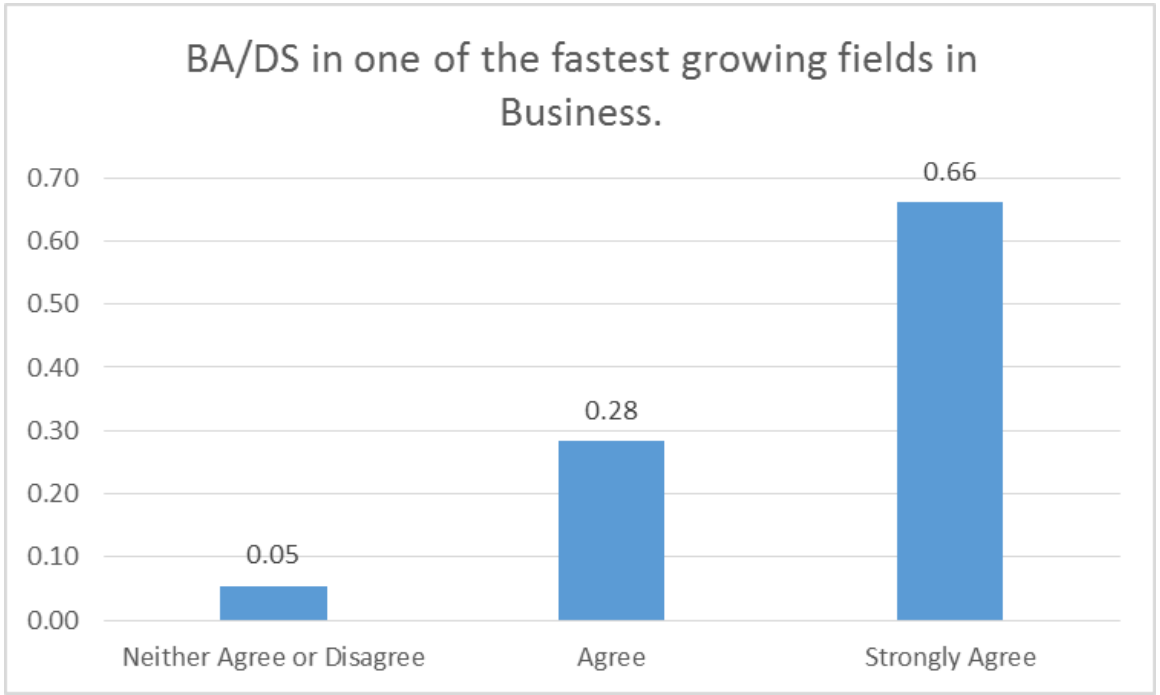

BA/DS skills are sought out by recruiters.
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.07
0.34
0.59
Neither Agree or Disagree
Agree
Strongly Agree


BA/DS in one of the fastest growing fields in Business.
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.05
0.28
0.66
Neither Agree or Disagree
Agree
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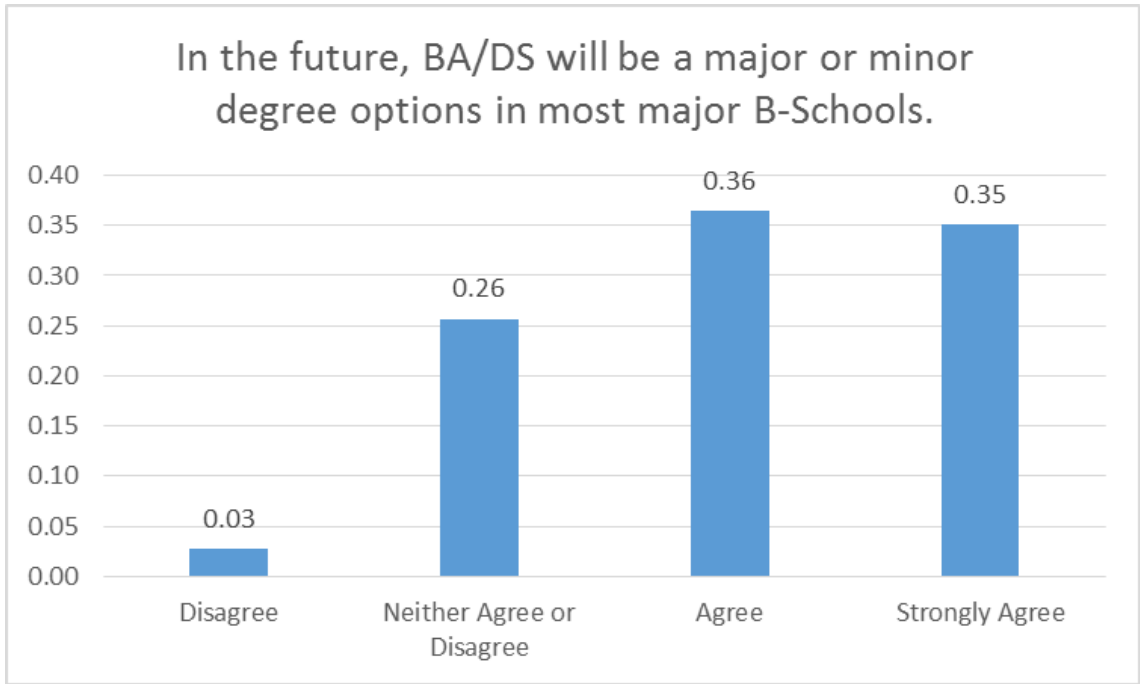
In the future, BA/DS will be a major or minor degree options in most major B-Schools.
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.03
0.26
0.36
0.35
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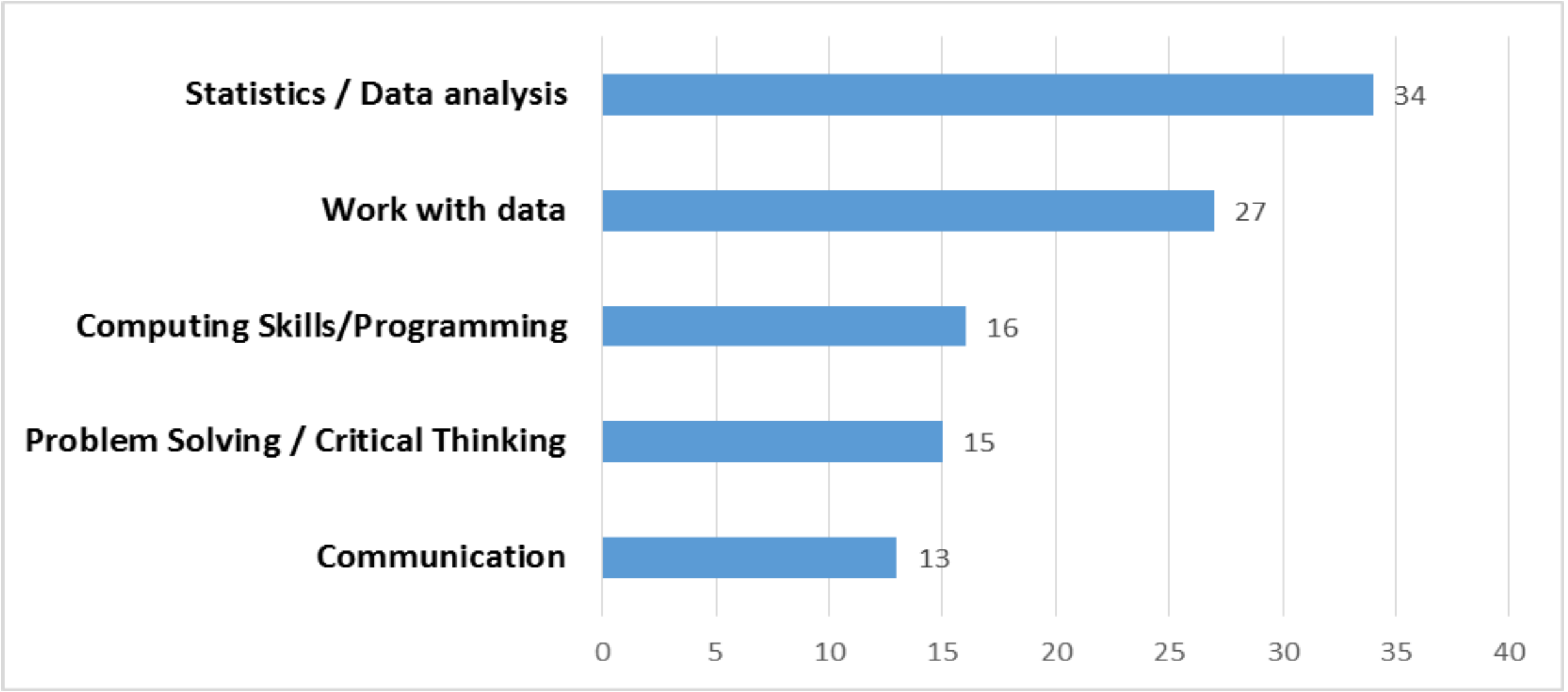

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