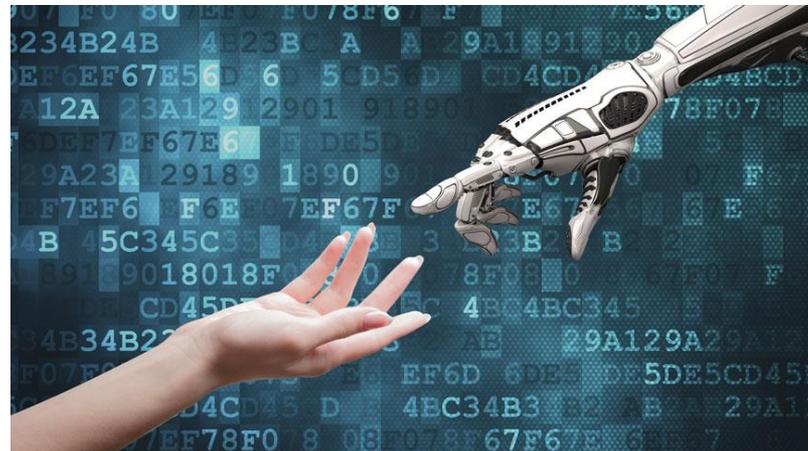*Artificial Intelligence and its Impact on Public Administration*

Artificial Intelligence And Its Impact on Public Administration

Welcome & Introduction: **Teresa Gerton**, President and CEO, National Academy of Public Administration

Moderator: **Alan R. Shark**, Chair, NAPA Standing Panel on Technology Leadership

Keynote: **Dr. Lynne Parker**, Assistant Director for Artificial Intelligence, Office of Science and Technology Policy, The White House

Book Authors

Karen Shrum, Principal, Government and Public Sector, Ernest and Young, LLP – *The Future of Work*

Priscilla M. Regan, Professor of Government and Politics, Schar School of Policy and Government, George Mason University and **Karl Maschino**, Chief Administrative Officer/Chief Financial Officer, U.S. Government Accountability Office – *AI and Ethics*

Alan R. Shark, Executive Director, PTI, and Associate Professor, Schar School, George Mason University - *AI and the Public Administration Curriculum*
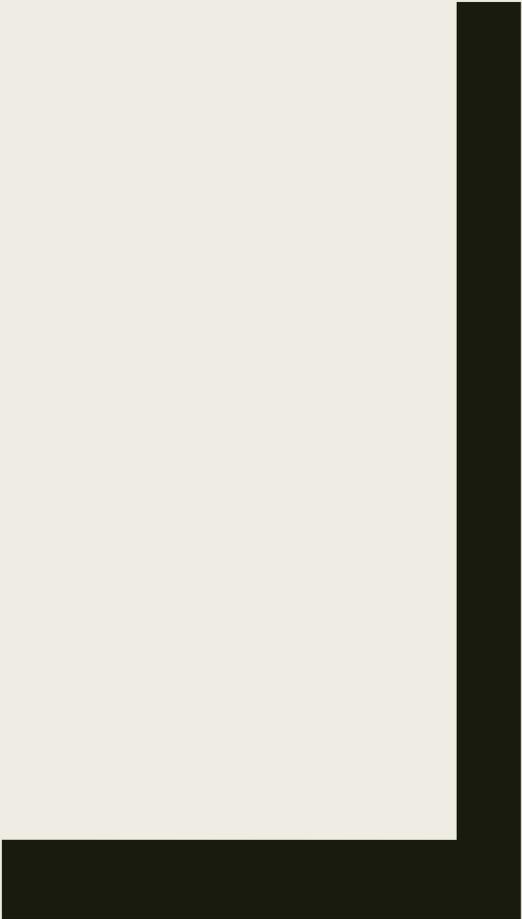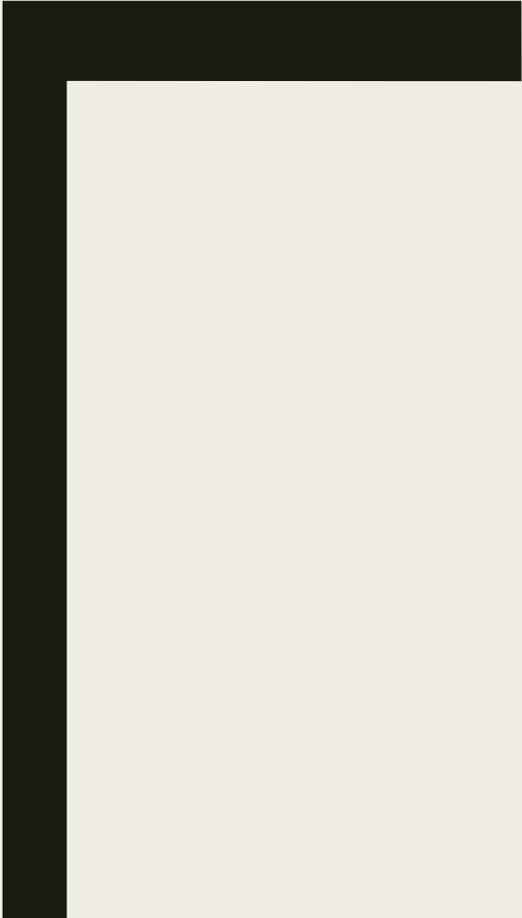
AI AND ETHICS SPECIFIC ISSUES

Pris Regan
George Mason University
Karl Maschino
Government Accountability Office
NAPA
April 18, 2019

Context of AI

- Opacity of AI challenges traditional roles of administrators
- Core issue = Accountability
  - *Can I understand and explain results?*
  - *Can I effectively oversee?*
  - *Who is responsible/liable?*
- Critical step = agreements in TOS or contract
  - *Who owns the information created by AI system?*
  - *Risk analyses – document findings*

Information Privacy

■ What personal information is being used in the AI systems?

■ What are the sources of that information? How reliable are those sources? What are the risks that inaccurate, incomplete or irrelevant information will be used in the AI system?

■ Are individuals likely to perceive the use of this personal information in the development of the AI system as appropriate and reasonable or as "creepy" and improper?

■ Are the inferences that will be made based on the incorporation of non-agency datasets consistent with previous agency procedures and norms regarding how decisions are reached?

Anonymity

- How should we calculate the risks that someone might be re-identified?

- What data fields should we delete from the algorithm?

- How often should we audit what the AI system is producing to determine whether individuals may be able to be identified?

- Are there certain types of data that we should not include at all, e.g. date of birth, address or health status, in the development of the AI system?

- What are the benefits of being able to use data sets that potentially can be re-identified but that may yield socially or individually important insights?

Discrimination

- How can AI systems be tested before they are employed to ensure that they will not discriminate among individuals in ways that have traditionally been prohibited or to determine if they are discriminating among individuals in unanticipated ways?

- How often should AI systems be audited once they are employed to determine if they are inserting unexpected biases into decisions?

- What information should be provided to individuals who are subject to decisions reached by AI systems?

- In developing or purchasing AI systems that will be used in decision-making about individuals, what experiences and expertises should be involved in developing and evaluating the AI system before it is used?

- What redress or grievance procedures should be available to individuals who believe they have been unfairly treated as a result of an AI system?

Autonomy

■ Are messages suggesting options to individuals or leading them to a predetermined choice?

■ Can you identify a line between influencing people and manipulating them?

■ What is the timing of the nudge in terms of when an individual is likely to need to make a choice?

■ How susceptible is the targeted population likely to be to a nudge?

■ How does the AI system design a message and/or select a targeted population? How different is this from what program administrators would do without the assistance of the AI system?

Surveillance

- What kind of data has the agency used in the past in making these decisions? Is the use of these databases and AI systems to search these databases consistent with past practices? What value is to be gained?

- How reliable, relevant and accurate are the databases that your AI system is monitoring? If it is an appropriate database given the mission of the agency and programmatic goals, is the AI system extracting information the appropriate information?

- Are individuals whose data are being monitored likely to regard the surveillance and extraction of data as legitimate given the previous practices of the agency or to regard it as "creepy"?

# AI and the Public Administration Curriculum

Robots…..

➢Don't call in sick

➢Do not join unions (yet!)

➢Do not need holidays or breaks

➢Can work 24/7

➢Never complain

➢Not bothered by repetition

➢Does not put off making decisions!

Robotics and Artificial Intelligence

Artificial Intelligence Has Grown Because of…

1. Advancements in complex algorithms.

2. Dramatic Increase in speed and computing power.

3. Ability to digest data from various sources.

4. Ability to store and retrieve massive amounts of data.

5. Advancements in speech recognition (2-way)
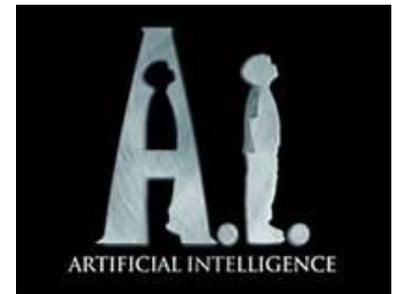
How robots hire job candidates

Updated 31 days ago

Artificial intelligence is becoming a key component in how companies hire, according to The Wall Street Journal. While computers scanning keywords in resumes is now common practice among large firms, hiring technology is becoming increasingly sophisticated, from avatars interviewing candidates to machine learning assessing a candidates public profiles for personality traits. The WSJ report looks at two firms upending the hiring process: DeepSense, which scans social media accounts to develop a picture of the candidate's personality, and HireVue, which assesses the candidate's behavior from a recorded video interview.

White House: 5 Percent of Government Jobs Could Be 'Automated Entirely'

CHARLES TAYLOR/SHUTTERSTOCK.COM

APRIL 17, 2018

The Office of Personnel Management will look at how to retrain the employees affected.

WHITE HOUSE   WORKFORCE

By Jack Corrigan,
Staff Correspondent

The Trump administration sees a critical role for automation in its long-term goal of building a smaller, more efficient federal workforce, according to a White House report.

gt government technology

Understanding th
A POLICY GUIDE

SOUNDING OFF

How Artificial Intelligence Will Usher in the Next Stage of E-Government

The defining feature of the new perceptive stage is that the work involved in interacting with government will be significantly reduced and automated for all parties involved.
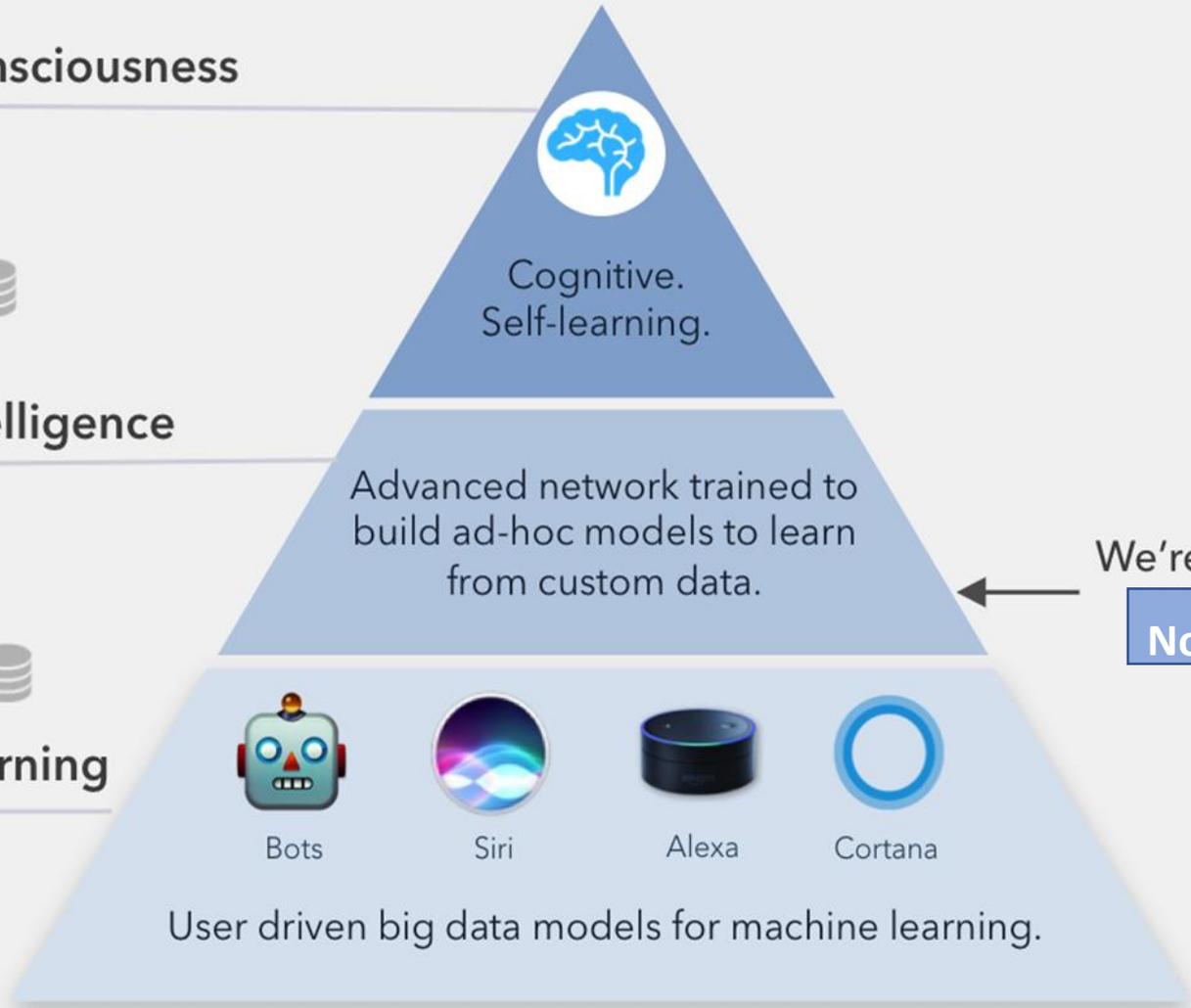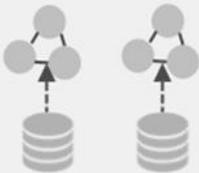
BY DANIEL CASTRO / DECEMBER 16, 2016

Stage 3: Machine Consciousness

Stage 2: Machine Intelligence
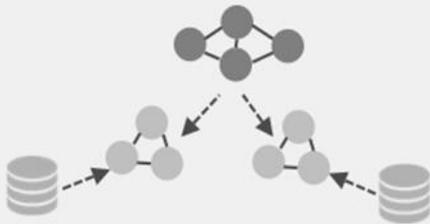
Stage 1: Machine Learning

Cognitive.
Self-learning.

Advanced network trained to
build ad-hoc models to learn
from custom data.

We're here

Now!

Bots   Siri   Alexa   Cortana

User driven big data models for machine learning.
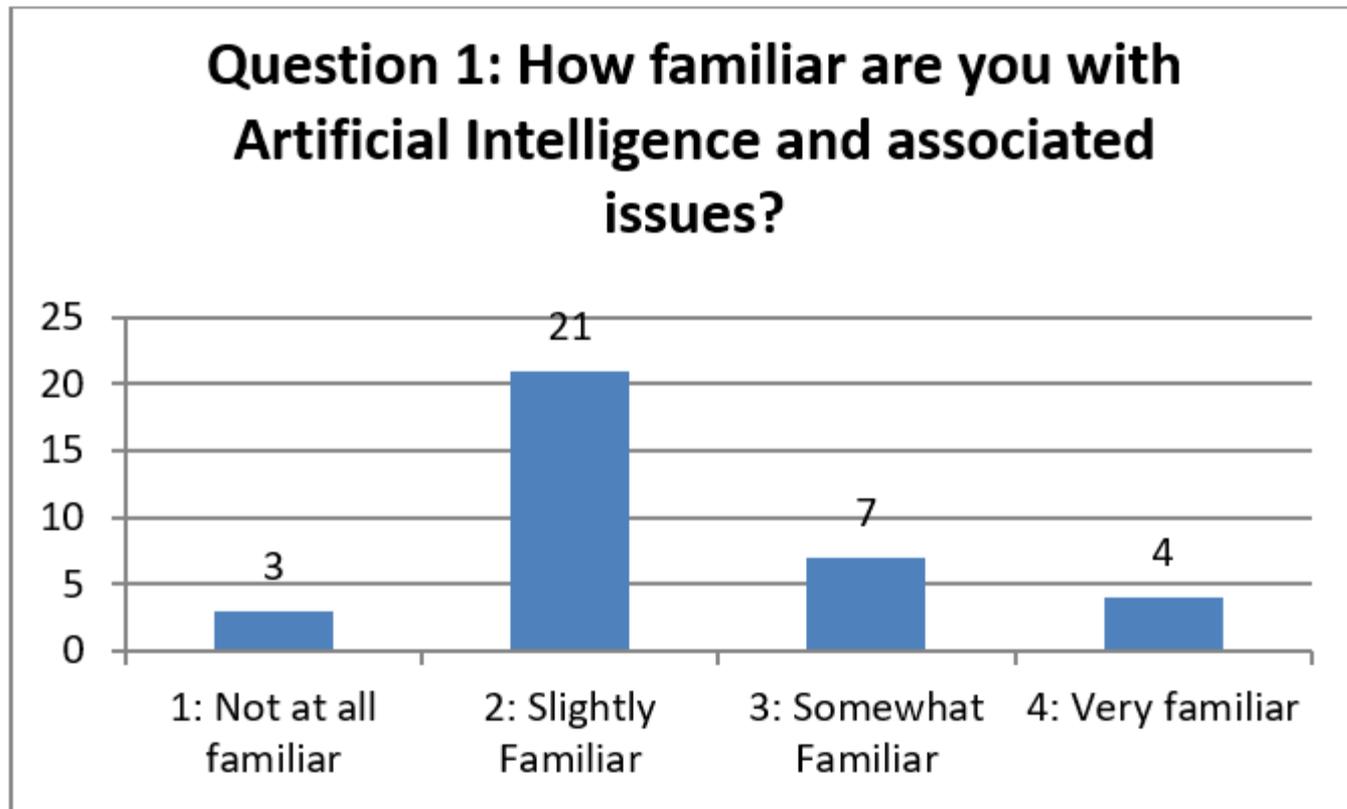
Three Stages of AI

@AmitPaka

NATIONAL ACADEMY OF
PUBLIC ADMINISTRATION®

How Well Are We Preparing Public Managers for the Future?
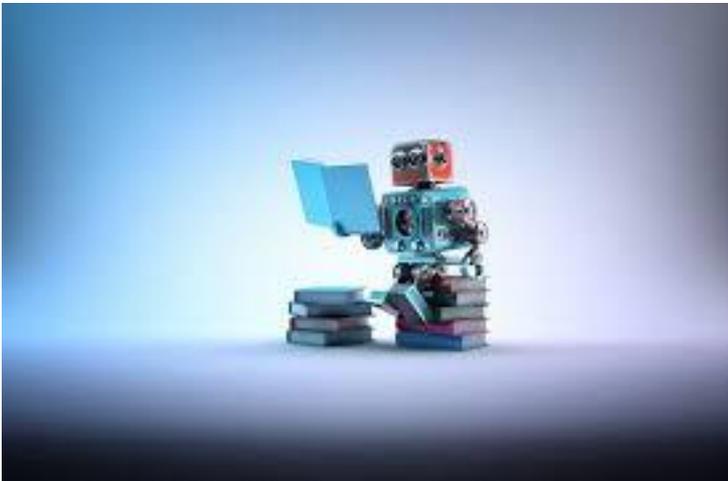
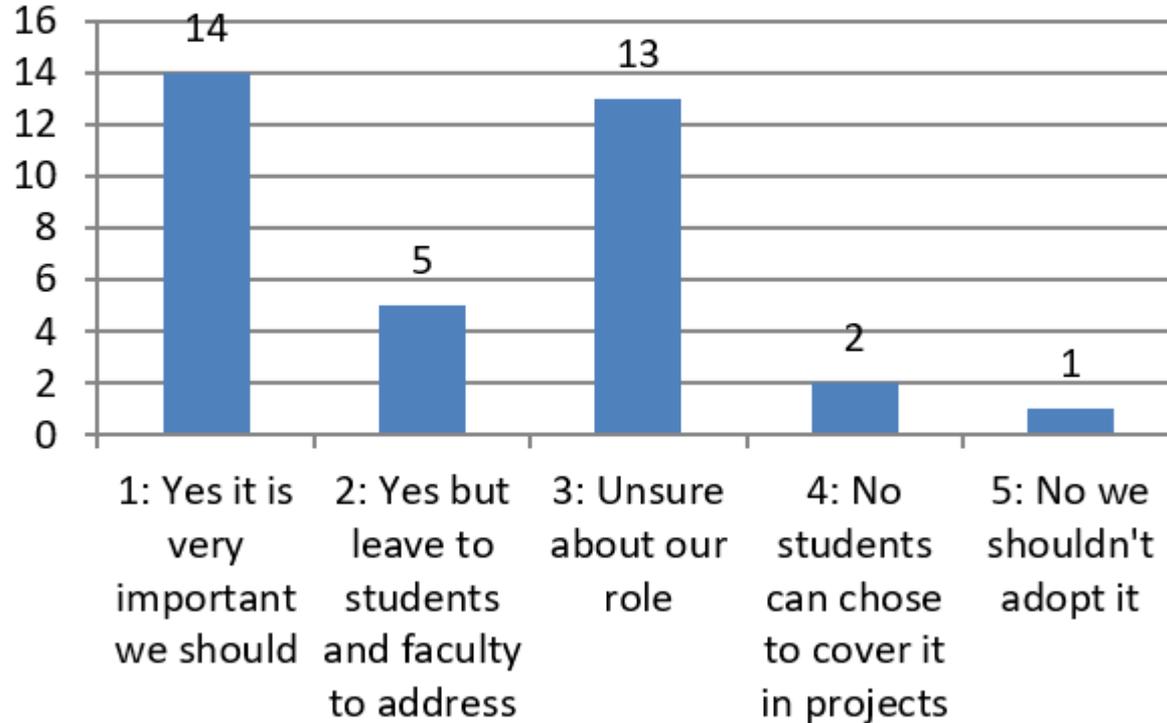# NAPA Survey of Public Affairs Schools/MPA Programs Teaching Artificial Intelligence Topics

Question 2: To what extent is AI being introduced into existing curriculum?
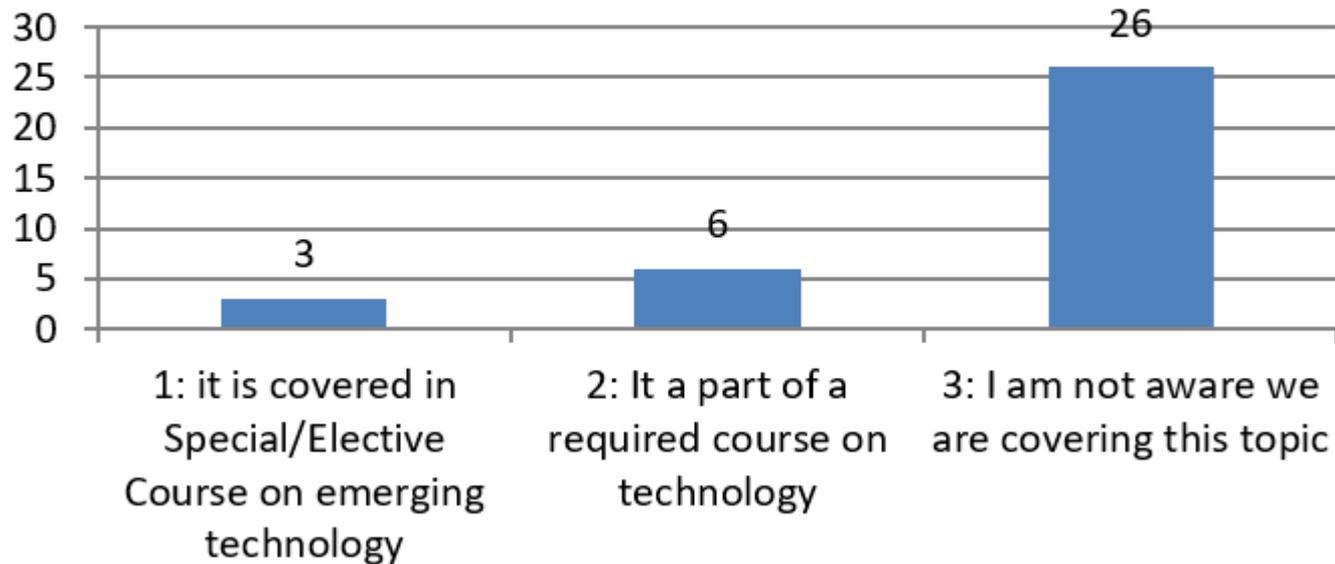
- 1: it is covered in Special/Elective Course on emerging technology — 3
- 2: It a part of a required course on technology — 6
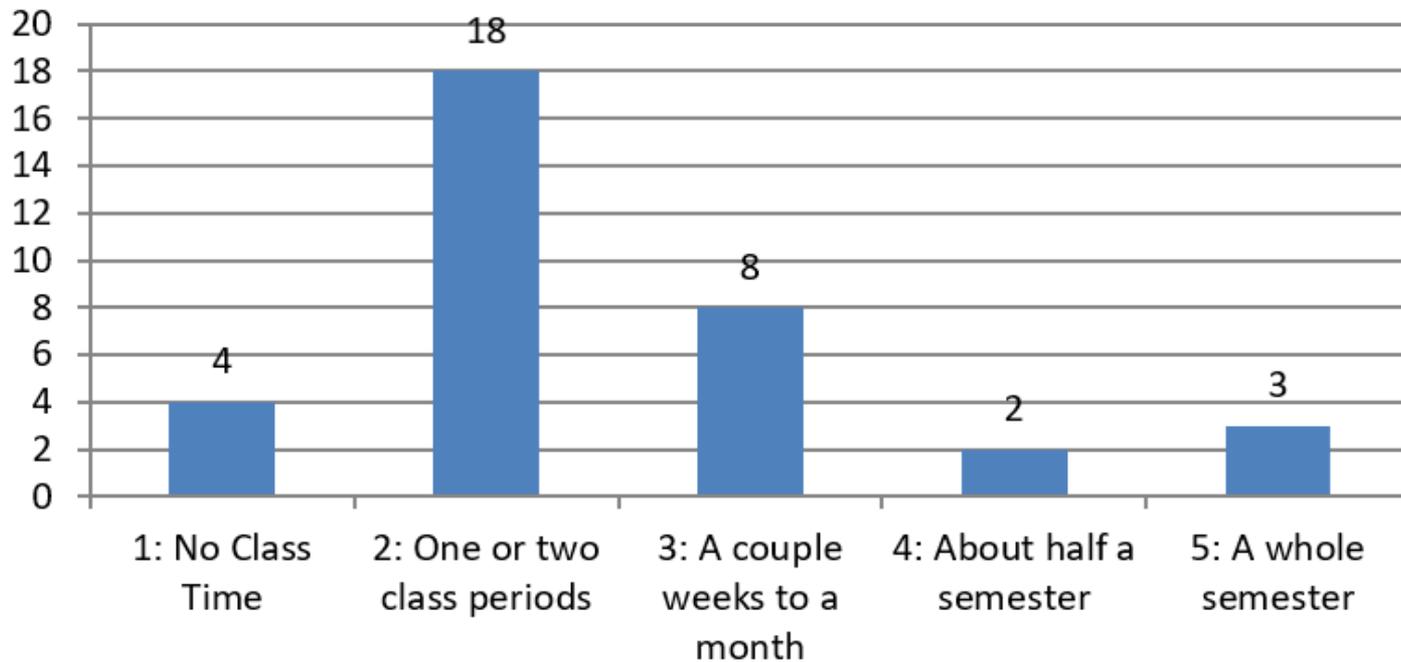- 3: I am not aware we are covering this topic — 26

NAPA Survey of Public Affairs Schools/MPA Programs Teaching Artificial Intelligence Topics

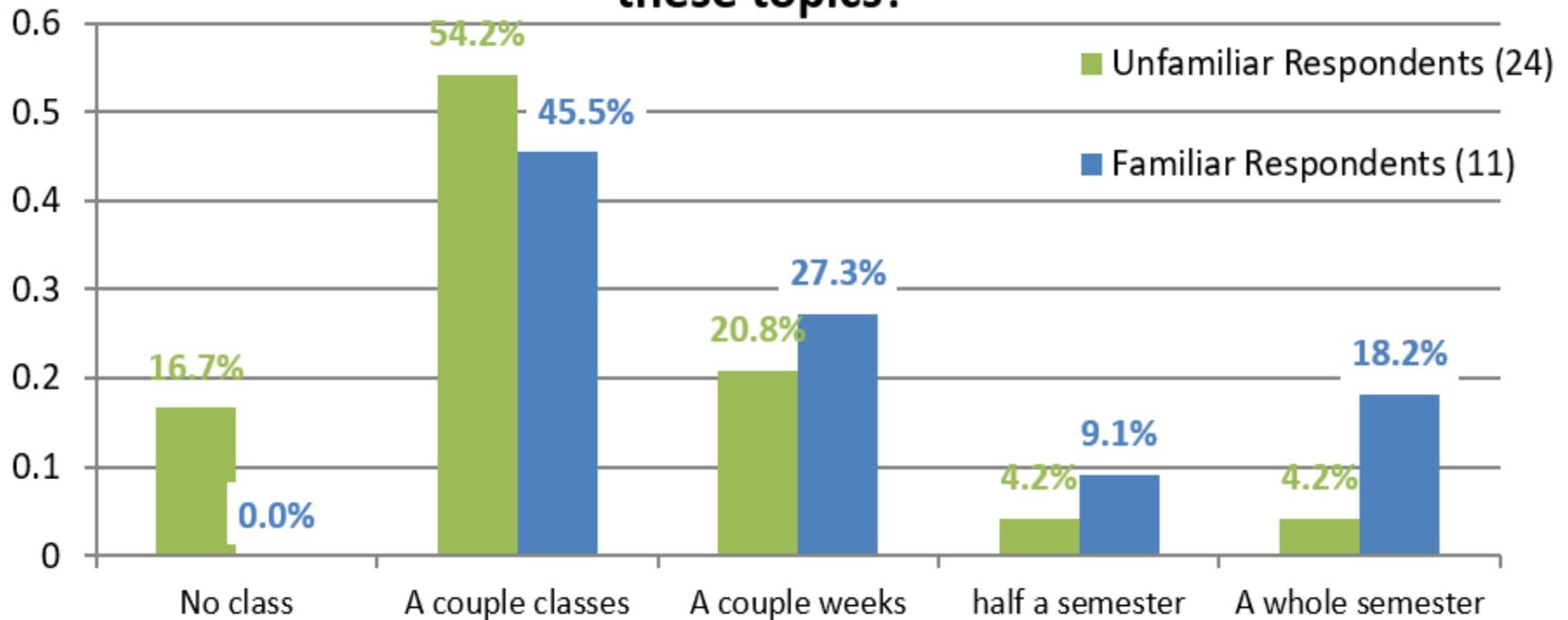## Should schools of public affairs cover AI and related topics?

Bar chart values:
- 1: Yes it is very important we should — 14
- 2: Yes but leave to students and faculty to address — 5
- 3: Unsure about our role — 13
- 4: No students can chose to cover it in projects — 2
- 5: No we shouldn't adopt it — 1

National Academy of Public Administration®

What barriers do you see in trying to cover topics associated with AI?
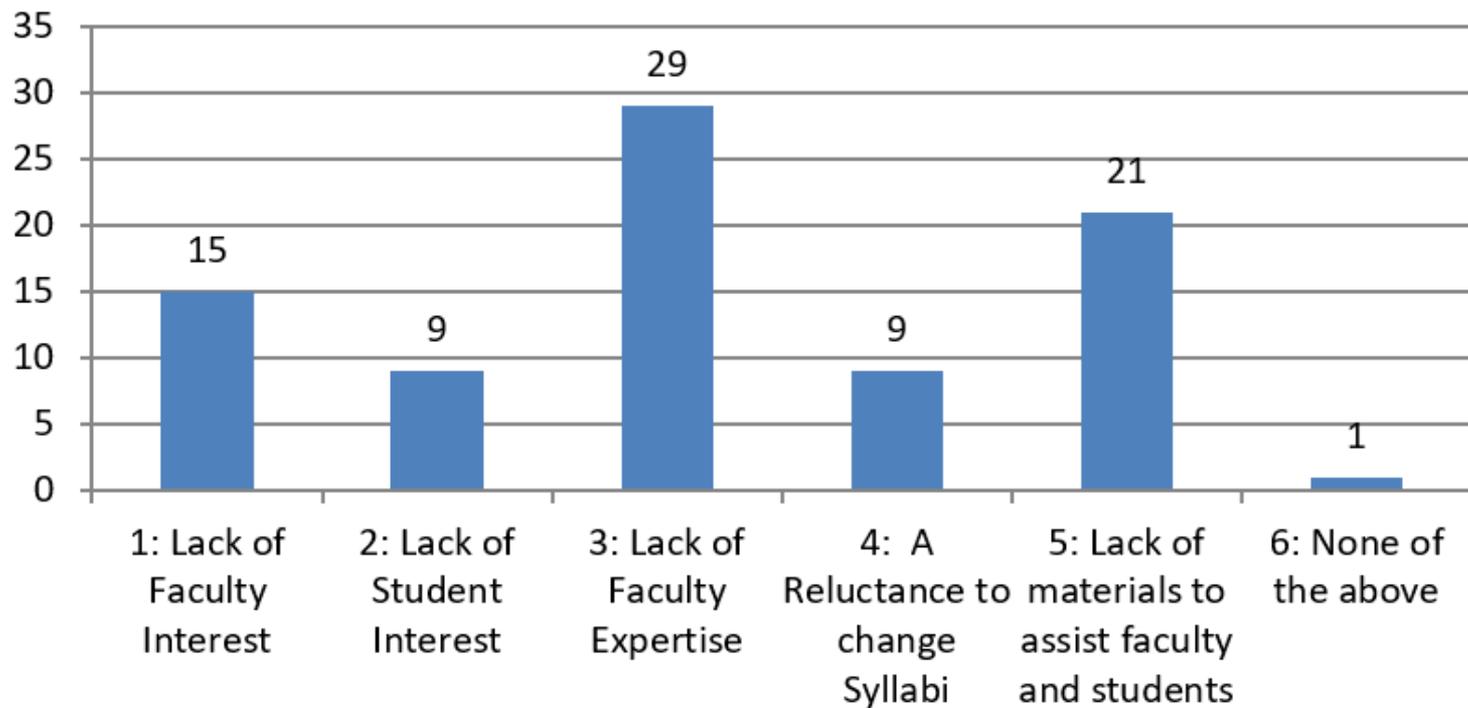
Proposed AI Course Module

- **Unit 1:** What is AI? A brief introduction

- **Unit 2**: How to use AI: A survey of existing or possible practices in Public Administration

- **Unit 3:** Ethical Issues: Bias, transparency, privacy, and other concerns

- **Unit 4:** The IT Infrastructure and the Changing Nature of Civil Service

- **Unit 5:** Project Development: How can a public agency implement a successful AI program?

- **Unit 6**: Action Research Project (Group or Individual)