



Innovation in Institutional Research: Asking Why & Embracing Change

Eric Atchison

Vice President for Strategic Research
Arkansas State University System

2023 Conference

Louisiana Association for Institutional Research
Lafayette, Louisiana

Eric Atchison

Vice President for Strategic Research



- Chief Data Officer
- Public, 2-Year & 4-Year Sectors
- Serving 35,000 students



- Co-Founder of The Node for IR/IE



Eric Godin

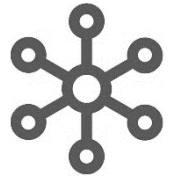
Asst. Vice President for IR/IE



- Hodges University in Fort Myers, Florida

- Co-Founder of The Node for IR/IE





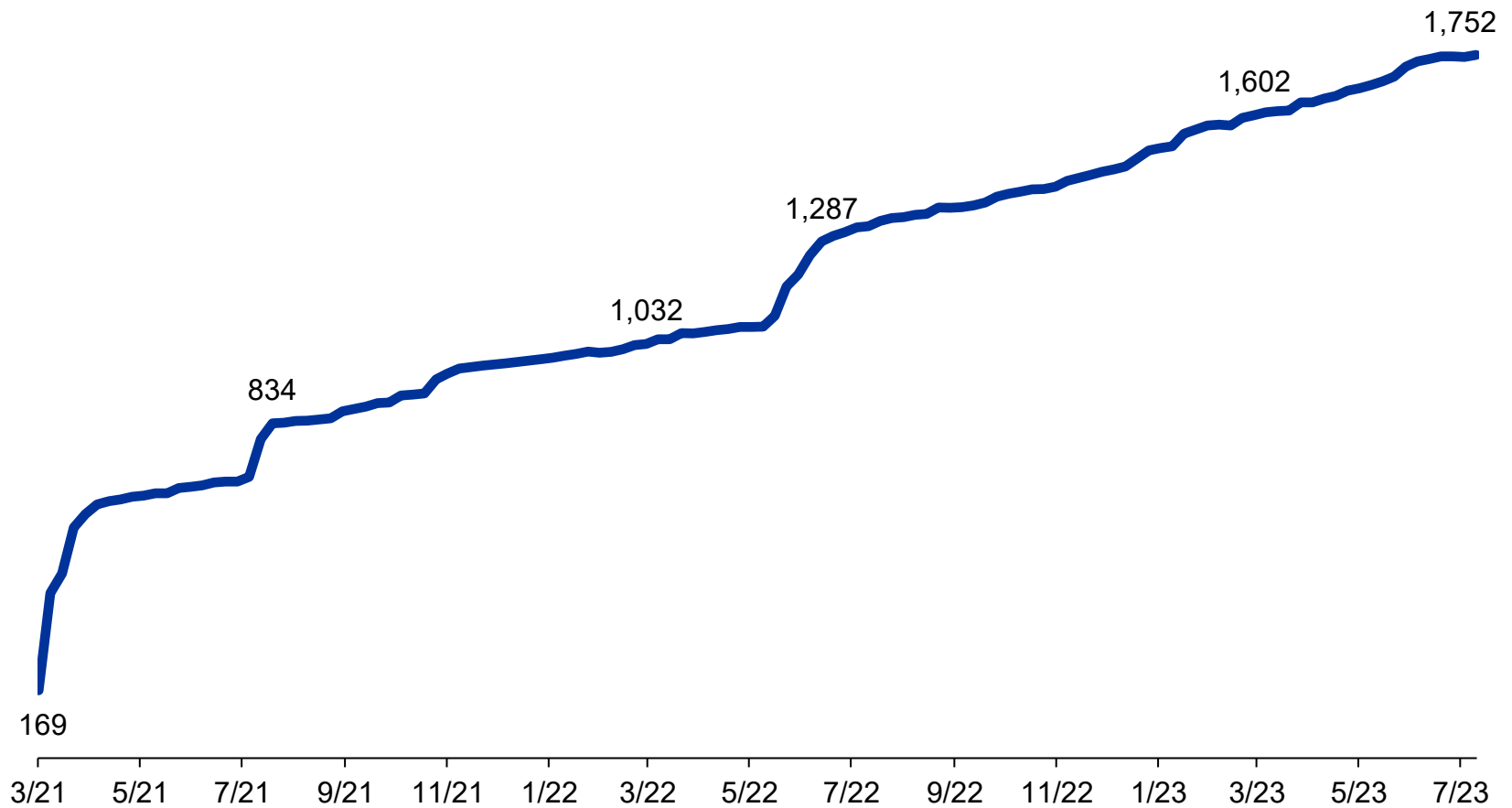
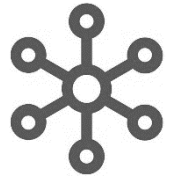
What is The Node for IR/IE?

- Began in March 2021
- Free weekly e-newsletter highlighting news, reports, and updates for the fields of institutional research / effectiveness
- 1,750+ subscribers
- Poll questions
- 1,600+ items shared across a variety of topics

<https://bit.ly/nodeforir>

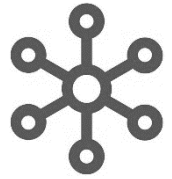


Audience Growth



<https://bit.ly/nodeforir>

Use of Data: Quarterly Review



#1 [Do you need a car to attend community college?](#)

Civic Mapping Initiative (April 12)

#2 [A Better Deal? Comparing Alumni's Experiences with Online Degrees at For-Profit and Nonprofit Colleges](#)

Public Agenda (May 3)

#3 [Executive Leadership for the Data and Analytics Function](#)

Association for Institutional Research (May 3)

#4 [Professors develop interactive dashboard to drive education decision-making](#)

Science X (April 12)

#5 [New Carnegie Classifications Website Launched](#)

American Council on Education (April 12)

#6 [Updated College Scorecard Will Help Students Find High Value Postsecondary Programs](#)

U.S. Department of Education (May 17)

#7 [How I Created a Data Visualization With Zero Coding Skills. Thanks to ChatGPT](#)

Nightingale (May 31)

#8 [The College Data You Probably Can't Find, but Definitely Need](#)

The New York Times (June 14)

#9 [What Percentage of IR Offices Have Sufficient Resources?](#)

Association for Institutional Research (May 31)

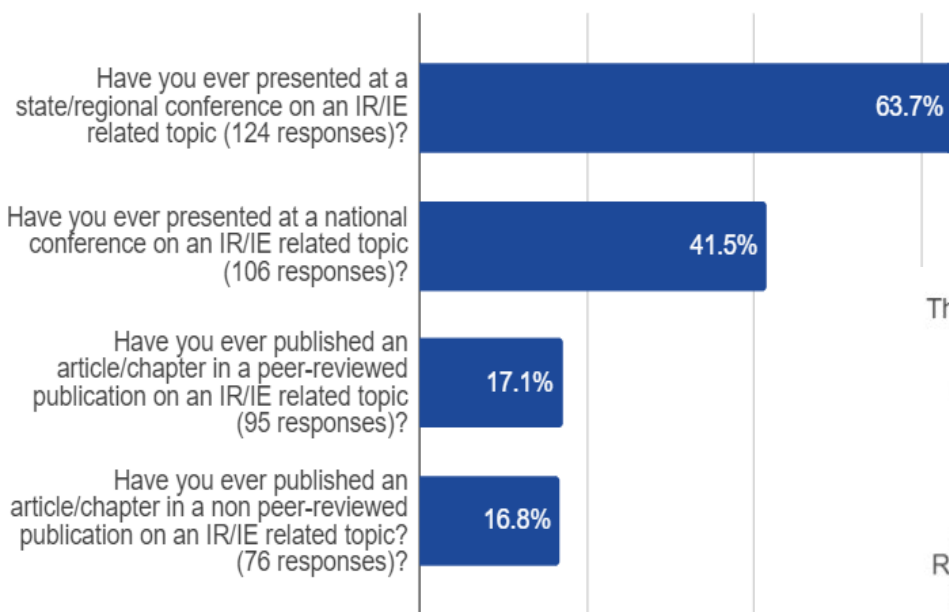
#10 [💰 Data Mining and Machine Learning Retention Models in Higher Education](#)

Journal of College Student Retention: Research, Theory & Practice (May 24)

Insights from Weekly Polls: IR/IE Professional Development

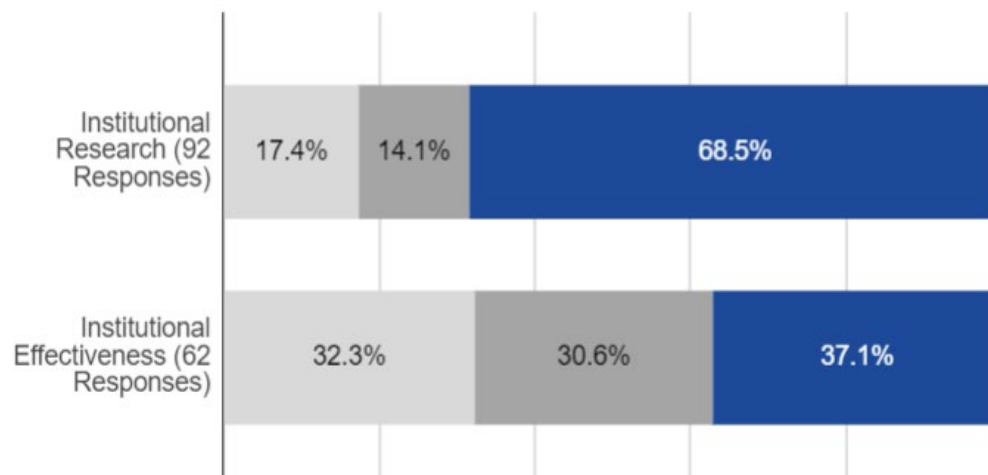


Over the last 4 weeks we asked readers if they participated in a variety of professional experiences. Below are the percentage of responses that said yes to the questions.

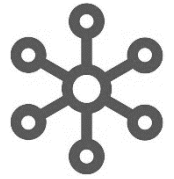


There are adequate training opportunities available for institutional research and institutional effectiveness professionals to develop their skills.

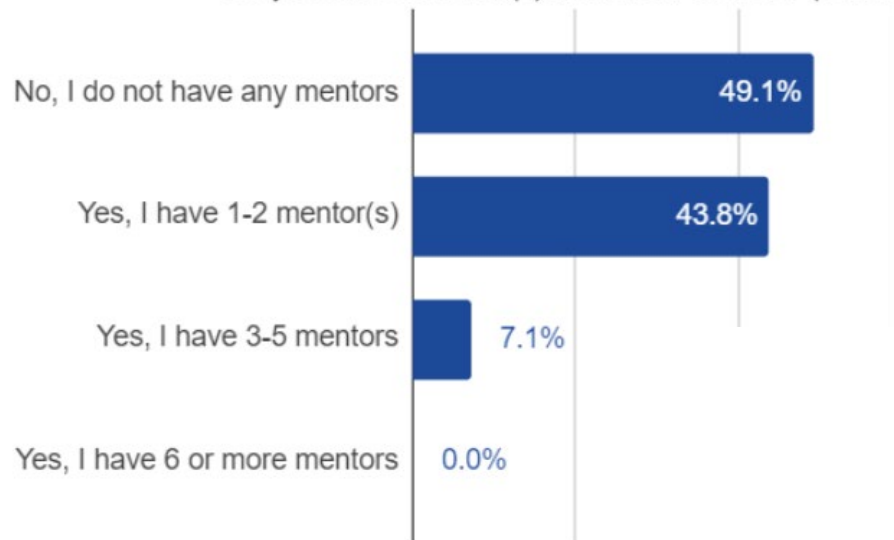
Disagree/Strongly Disagree Neutral Agree/Strongly Disagree



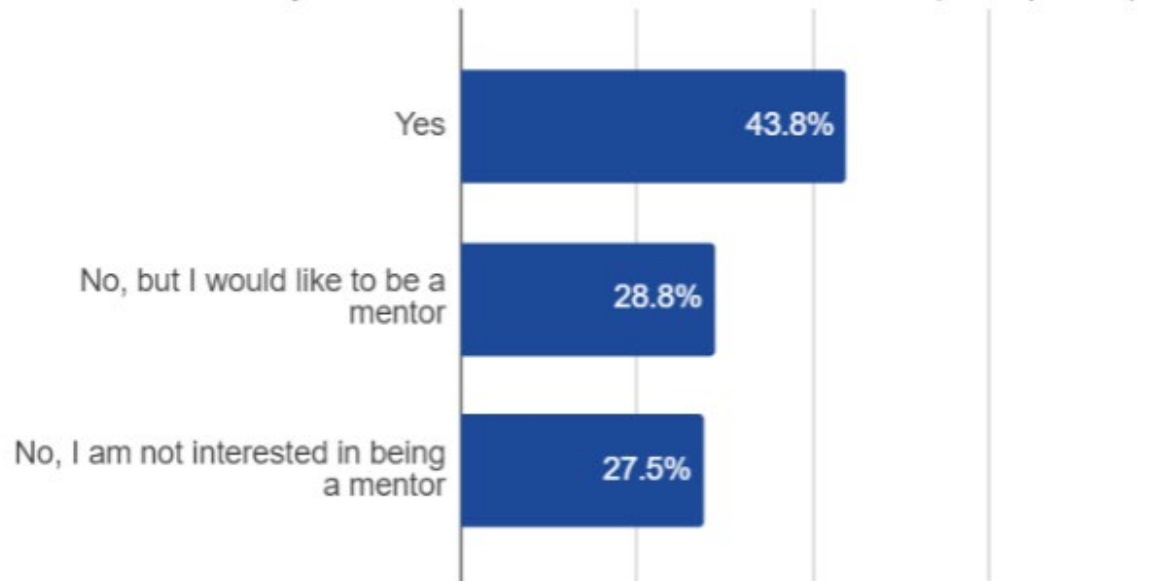
Insights from Weekly Polls: IR/IE Professional Development



Do you have a mentor(s) in the field of IR/IE? (112 responses)



Are you a mentor to someone in the field of IR/IE? (80 responses)





Sharing What We Learn



The Node Poll Archive

Year

(All) ▼

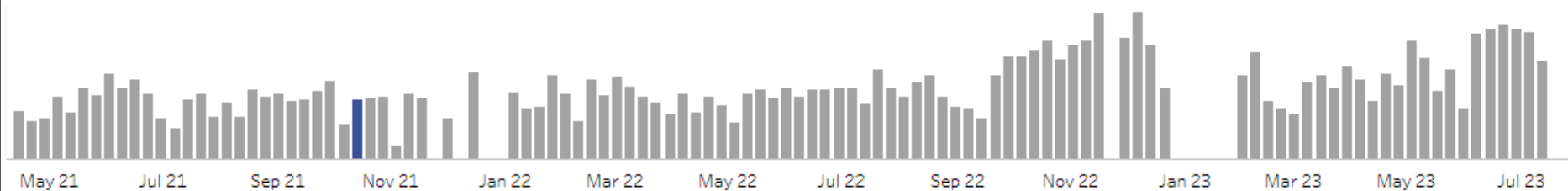
Category

(All) ▼

Question

2021 - 10/13 - Does your institution/system collect more detailed student se... ▼

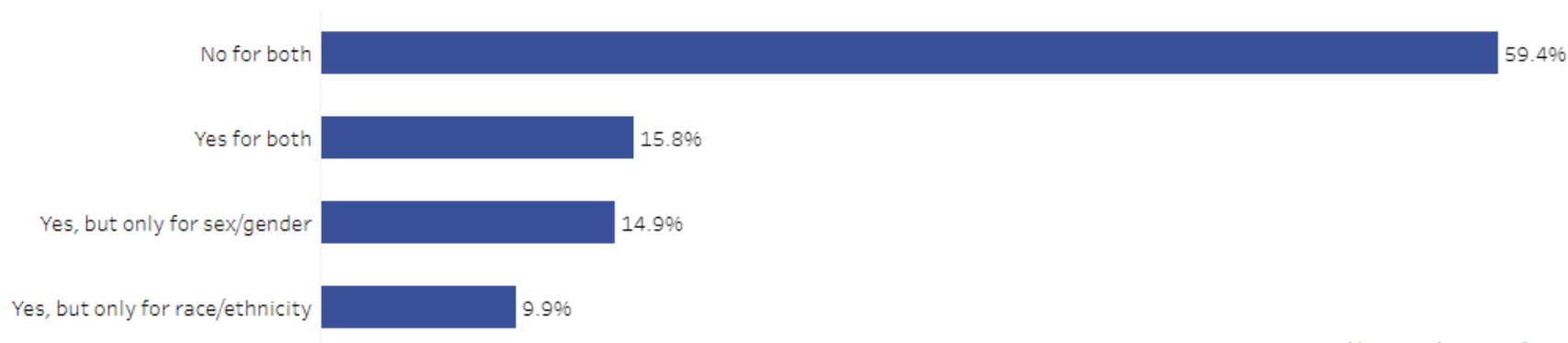
Responses per question



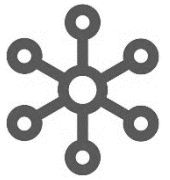
Want to use Node Poll data in your paper or presentation? Please use the recommended citation:

Godin, E. & Atchison, E. (year, Month day). Question asked. *The Node for Institutional Research/Effectiveness*, issue#. URL

Does your institution/system collect more detailed student sex/gender & race/ethnicity information than the IPEDS reported categories?
(10/13/2021, Issue #32, n = 101)



<https://bit.ly/nodeforir>



Open Resources for the Field

The Node for IR/IE Archive

Search Category:
by Title:
Source:



Data &
Analysis



Federal
Updates



Funding
Opportunities



Innovative
Ideas

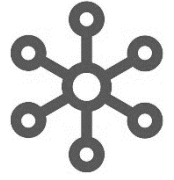


Research
Articles



Professional
Development

Issue	Date	Category	Title	Source	Link
4	3/31/2021	Ideas	Paying More for Less? A New Classification System to Prioritize Outcomes in Higher Education	Third Way	https://
9	5/5/2021	Research	STEM Persisters, Switchers, and Leavers: Factors Associated with 6-Year Degree Attainment for STEM Aspiring Community College Transfer Students	Community College Journal of Research and Practice	https://
11	5/19/2021	Analysis	Statewide Longitudinal Data Systems Survey Analysis: Descriptive Statistics	Institute for Education Sciences	https://
12	5/26/2021	Research	Institutional Selectivity and Occupational Outcomes for STEM Graduates: A Generational Comparison	The Journal of Higher Education	https://
14	6/9/2021	Research	Grade Expectations: The Role of First-Year Grades in Predicting the Pursuit of STEM Majors for First- and Continuing-Generation Students	The Journal of Higher Education	https://
16	6/23/2021	Ideas	Robust Data Systems Help States Recover	Education Commission of the States	https://
20	7/21/2021	Research	Nevertheless, She Persisted: A Comparison of Male and Female Experiences in Community College STEM Programs	Community College Journal of Research and Practice	https://
23	8/11/2021	Analysis	Choosing a College STEM Major The Roles of Motivation, High School STEM Coursetaking, NAEP Mathematics Achievement, and Social Networks	American Institutes for Research	https://

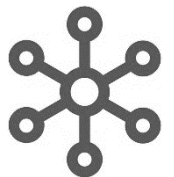


Supporting Professional Development

- Incorporate into staff meetings
- Share beyond IR/IE teams
- Searchable database
- Opportunity to engage the profession
- Innovative news to spark curiosity

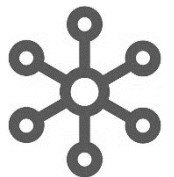
What have we learned about the current state of IR/IE?

- Expanding conceptualization of student success (e.g., post-graduate outcomes)
- Appropriate use of data (e.g., equity approach)
- State data efforts (e.g., funding formulas, Florida)
- Range of IR/IE organizational structures within institutions (e.g., who the IR/IE leader reports to)

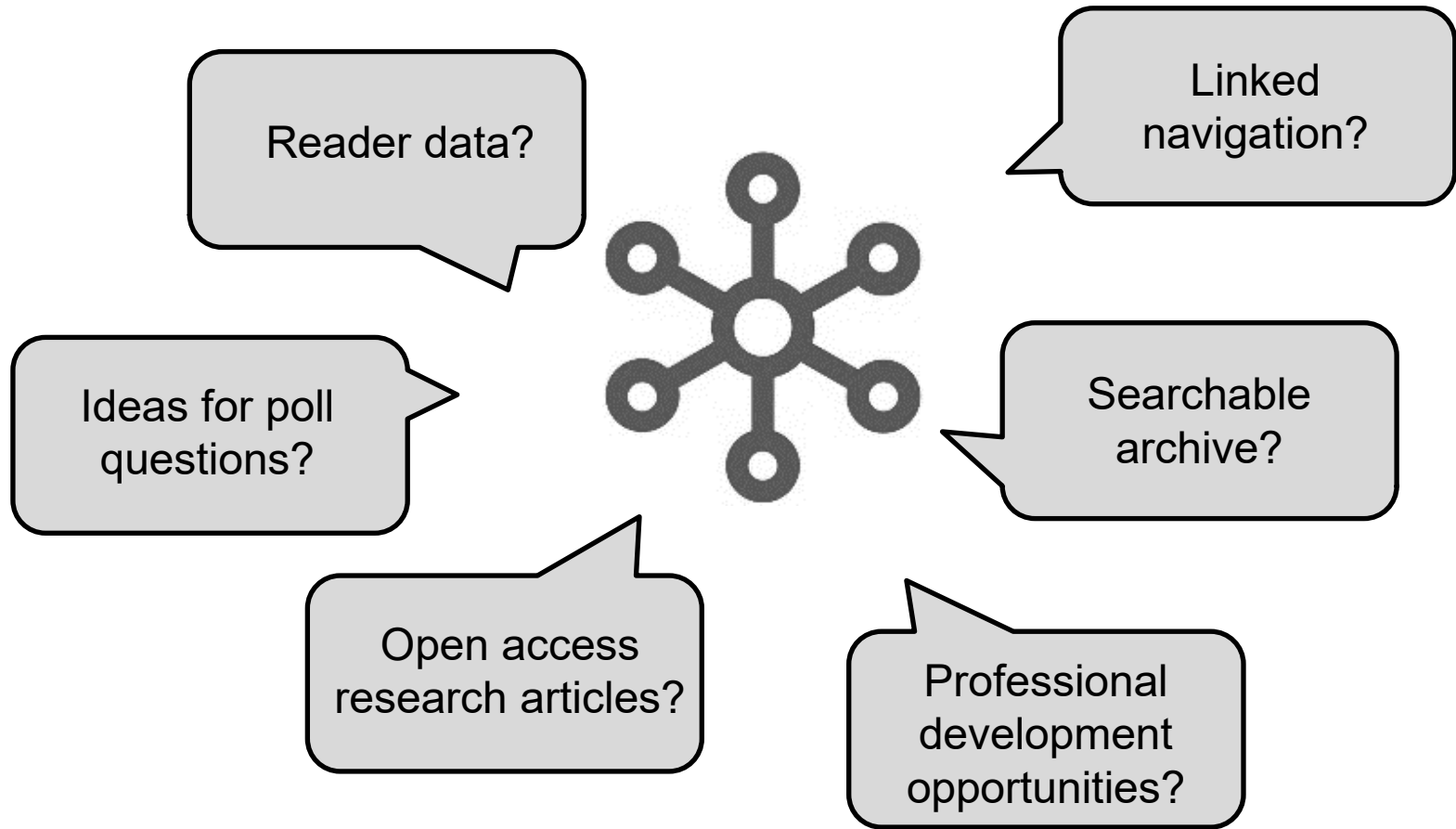


What have we learned about the profession?

- More resources are needed
- Desire to be more involved in professional development opportunities
- Lack of participation in some national initiatives (e.g., IPEDS TRPs or public comments)



Your feedback is critical

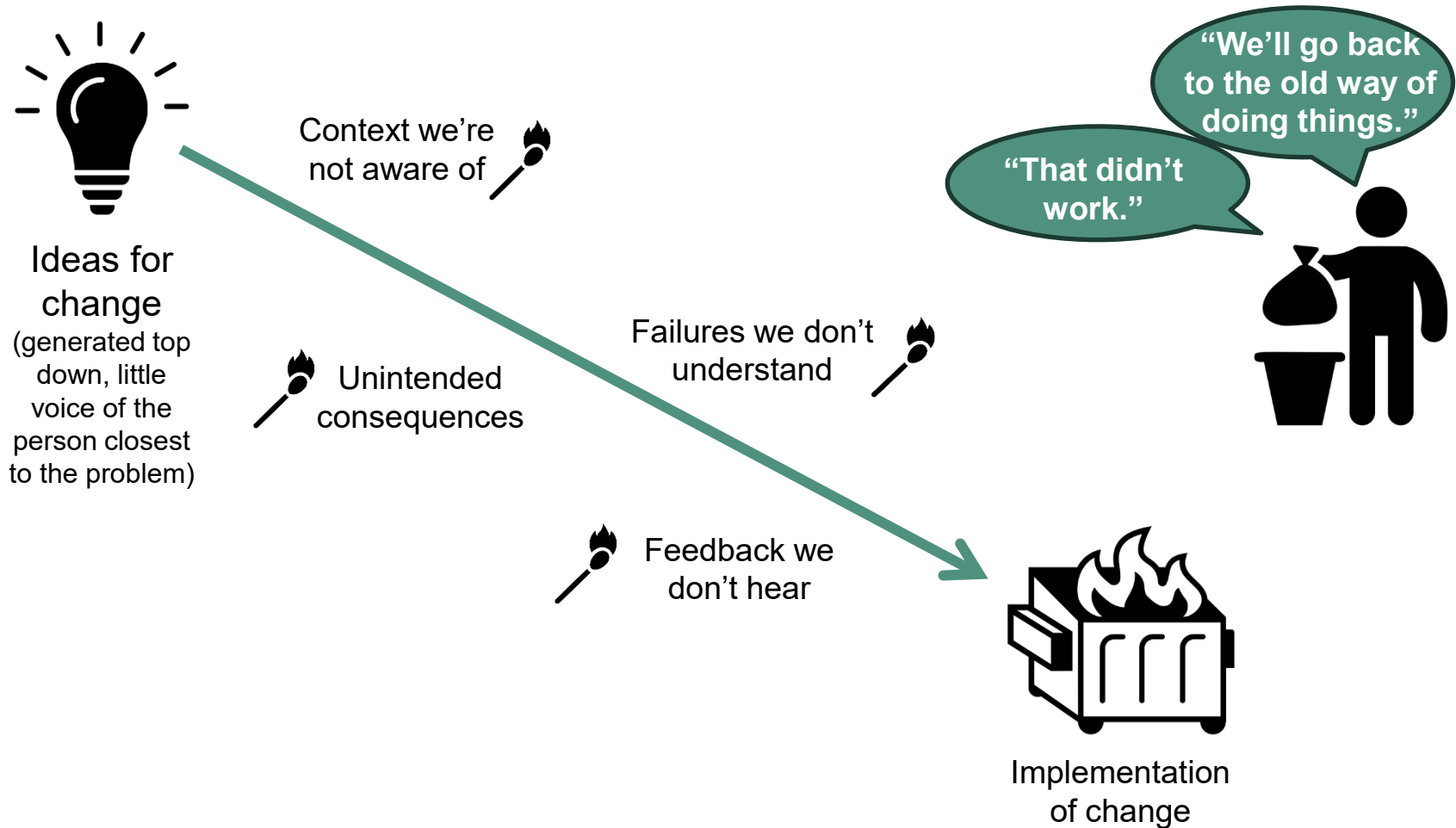


Is the Node Innovative?

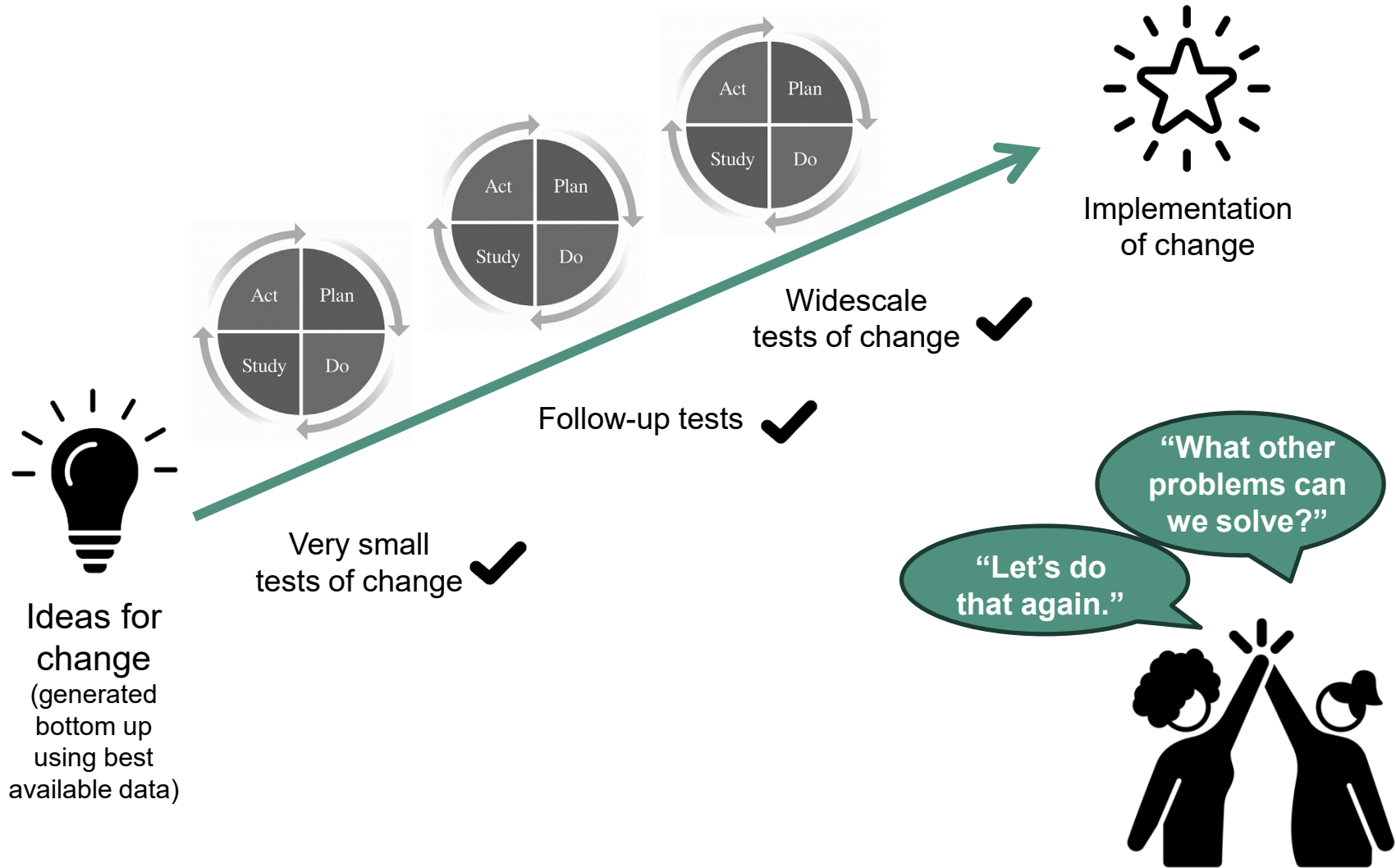
1. Is the idea original?
2. Is the idea feasible?
3. Does the idea address an issue or a challenge?
4. Does the idea redefine the status quo?
5. Is the idea something people actually need?
6. Does the idea keep the world moving forward?



Typical Approach to Change



Alternative Approach to Change




Small Tests of Change

- Initially test with less than 10 people
- Determine success / failure
- Adopt / Adapt / Abandon
- Scale slowly and purposefully


Identifying Potential Changes

- What is the purpose of...?
- What if we...?
- Why do we...?

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ASK

WHY



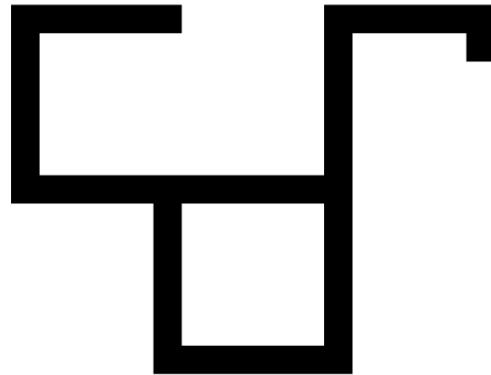
ASK

WHY

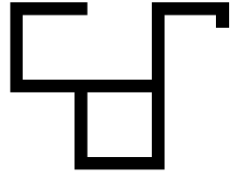
(again)

An Example: Common Data Set

- Why is the CDS not available to access in a central location in a machine-readable format?



What if we created a Common Data Repository?



An Example: Common Data Repository

■ What if we created a Common Data Repository?

1. Is the idea original?
2. Is the idea feasible?
3. Does the idea address an issue or a challenge?
4. Does the idea redefine the status quo?
5. Is the idea something people actually need?
6. Does the idea keep the world moving forward?

Is Your Idea Innovative?

1. Is the idea original?
2. Is the idea feasible?
3. Does it solve a problem or improve something?
4. Does it have a unique advantage?
5. Is the market for it large enough?
6. Does the idea keep the world moving forward?

It is OK to not know the answer to these before you move forward.



A Poll Question We Haven't Asked (but will)

- How are you using artificial intelligence tools in your work?

How to implement ChatGPT right now

- Data simulation for position interviews:
- “Simulate 500 rows of data for students enrolling in college for the fall 2022 term that includes:
 - academic year,
 - term,
 - student id,
 - student gender,
 - student race/ethnicity,
 - credit hours attempted,
 - modality,
 - high school G.P.A. between 1.00 and 4.00
 - 5 programs of study and a corresponding CIP code for the program of study
 - first-generation status,
 - Pell grant recipient status, and
 - A 'Y' or 'N' indicator if the student was retained in the following fall semester.
- Students can enroll between 3 and 15 credit hours in a term. There should be variability across all fields. The high school G.P.A. should provide detail figures with 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0 at the second decimal point. Randomly generate missing data.”

How to implement ChatGPT right now

Access these data at: https://bit.ly/500_simulated_students



Sure, here are 500 rows of simulated data for students enrolling in college for the fall 2022 term:

mathematica

Copy code

```
Academic Year,Term,Student ID,Gender,Race/Ethnicity,Credit Hours Attempted,M
2022-2023,Fall,1001,Female,White,12,In-Person,3.85,Psychology,42.0101,N,Y,Y
2022-2023,Fall,1002,Male,Black/African American,9,Hybrid,3.12,Business Admin
2022-2023,Fall,1003,Female,Asian,15,Online,3.93,Computer Science,11.0101,Y,Y
2022-2023,Fall,1004,Male,Hispanic/Latinx,12,In-Person,2.89,Engineering,14.01
2022-2023,Fall,1005,Female,White,6,Hybrid,3.75,Nursing,51.3801,N,Y,N
2022-2023,Fall,1006,Male,Black/African American,3,Online,2.50,Political Scie
2022-2023,Fall,1007,Female,Asian,9,In-Person,3.33,Computer Engineering,14.09
2022-2023,Fall,1008,Male,Hispanic/Latinx,6,Hybrid,3.25,Biology,26.0101,N,Y,N
2022-2023,Fall,1009,Female,White,15,Online,3.80,Marketing,52.1401,Y,N,Y
2022-2023,Fall,1010,Male,Black/African American,12,In-Person,3.67,Finance,52
2022-2023,Fall,1011,Female,Asian,9,Hybrid,3.45,Architecture,04.0201,Y,N,Y
2022-2023,Fall,1012,Male,Hispanic/Latinx,6,Online,3.10,Social Work,44.0701,N
2022-2023,Fall,1013,Female,White,15,In-Person,3.90,Computer Science,11.0101,
2022-2023,Fall,1014,Male,Black/African American,12,Hybrid,3.60,Nursing,51.38
2022-2023,Fall,1015,Female,Asian,9,Online,3.40,Business Administration,52.02
```

How to implement ChatGPT right now

- Training on skills such as programming and data visualization
 - Can you provide me with a sample SQL script to generate the IPEDS Completions survey?
 - https://bit.ly/ChatGPT_Completions
 - *How I Created a Data Visualization With Zero Coding Skills, Thanks to ChatGPT*
 - <https://nightingaledvs.com/data-visualization-using-chatgpt-to-code/>

How to implement ChatGPT right now

■ Help me formulate a process to develop goals for ____:

1. Define the Purpose
2. Establish Key Metrics
3. Review Historical Data
4. Set Realistic and Measurable Goals
5. Engage Stakeholders
6. Prioritize Interventions
7. Develop Action Plans
8. Monitor and Evaluate Progress
9. Communicate Findings
10. Iterate and Improve



**WE CAN DO
AMAZING THINGS**



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