

Background

Master's programs often require completion of a thesis. Thesis writing can be a complex and ambiguous process that may lead to prolonged completion or drop-out. Some master's programs offer alternatives to thesis writing.

A+ Inquiry Framework

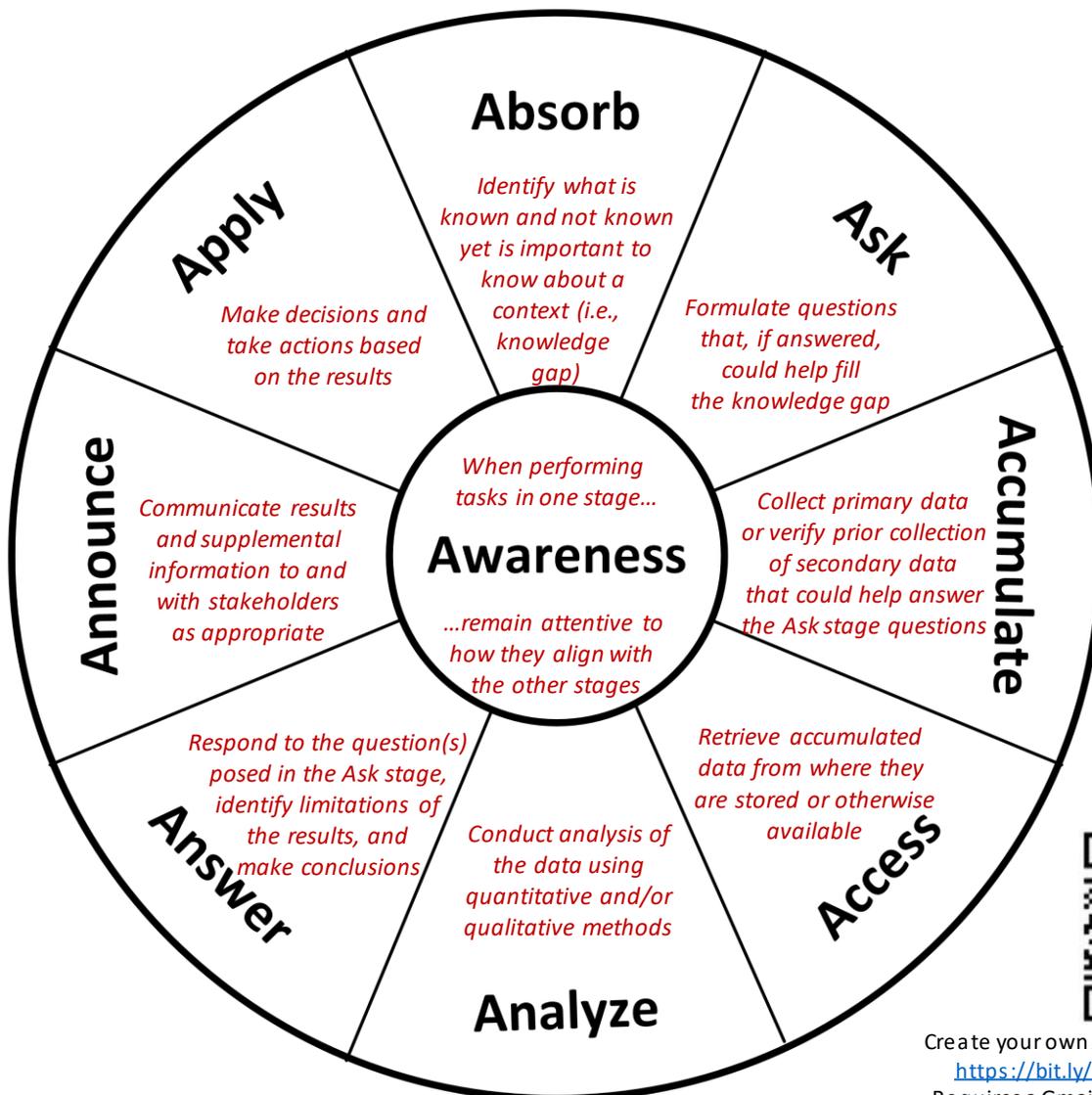
A+ Inquiry is a broadly applicable disciplined inquiry framework that synthesizes common stages of evaluation, assessment, and research. The model uses alliteration and visualization to promote understanding of inquiry stages and how they support one another. It may be utilized as a tool for planning or conducting a study, establishing common language for discussing inquiry processes, telling an evidence-based story, providing rationale for action, or diagnosing gaps in inquiry processes.

A+ Inquiry Capstone Course

Minot State University offers a 16-week A+ Inquiry capstone course as an alternative to a thesis for Master of Education students. The course requires students to write a proposal paper, form a committee and propose their study to their committee, obtain IRB approval, implement their study, write a final paper, and defend their study to their committee. Students are guided through the process with a formatted document template that includes more than 40 writing prompts aligned with A+ Inquiry stages.

Significance

A+ Inquiry stages align with sections of a traditional five-chapter thesis as well as elements of established higher education assessment frameworks. By designing and implementing a personally and professionally relevant study in the A+ Inquiry capstone course, students meet the requirements of their graduate program as they gain disciplined inquiry knowledge and skills that are transferrable and applicable to higher education assessment initiatives.



Create your own A+ Inquiry Scenario
<https://bit.ly/aplusinquirybuilder>
 Requires a Gmail or Google account



Cultivating Graduate-Level
Assessment Skills Through an
A+ Inquiry Thesis Alternative

Nathan C. Anderson
Daniel R. Conn
Kaydra D. Weigel



Presenters



Nathan C. Anderson, Ph.D.
Director of Institutional Assessment
Minot State University



Daniel R. Conn, Ed.D.
Associate Professor and Department Chair
Teacher Education and Kinesiology
Minot State University



Kaydra D. Weigel, M.Ed.
Talent Development Consultant
Noridian Healthcare Solutions



Learning Goals

-  Identify stages of the *A+ Inquiry* framework
-  Identify guiding questions relevant to each stage of the *A+ Inquiry* framework
-  Describe how *A+ Inquiry* stages align with postsecondary assessment frameworks
-  Describe how the *A+ Inquiry* stages align with common sections in a thesis paper
-  Describe requirements for completing a Master's level *A+ Inquiry* capstone course



"Tell me and I forget. Teach me and I remember. Involve me and I learn."

Benjamin Franklin

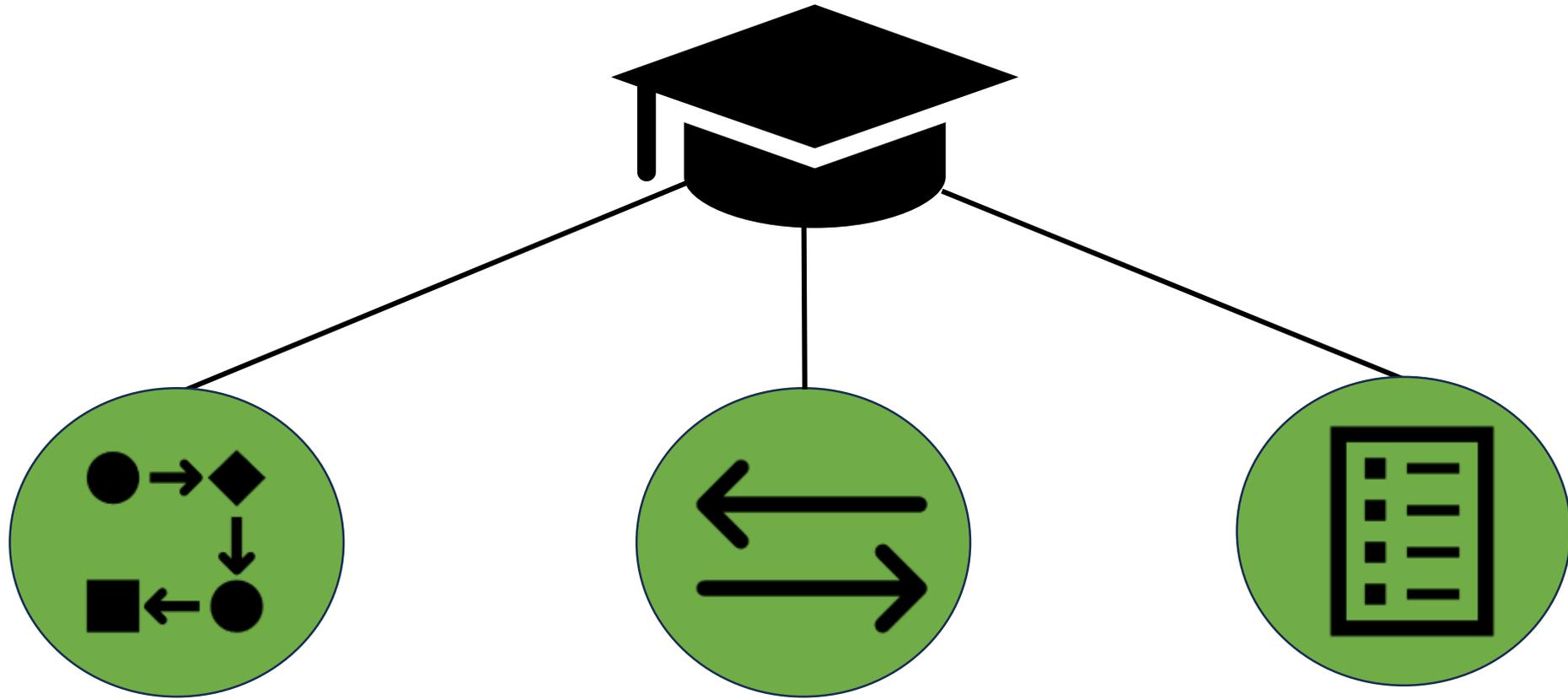
*A+ Inquiry
Capstone
Course*

Develop Transferrable
Disciplined Inquiry
Knowledge and Skills

Higher Education
Assessment



Why A+ Inquiry?



Zahl et al. (2023)

- "...the culminating evaluation for many graduate programs has faced the most scrutiny and scholars have called for a replacement that includes more authentic measures of student learning. This is particularly true of the dissertation" (p. 143).
- "The capstone project...is another alternative to a dissertation. These projects are associated with higher levels of student learning because of the applied learning in real-world practice" (p. 144).
- "At their core, these authentic assessment projects require the application of content knowledge and skills within real world-settings to demonstrate competence and mastery of learning within a specific field" (p. 145).



A+ Inquiry's Purpose

Synthesize common stages of disciplined inquiry processes
(e.g., assessment, evaluation, research)

Identify a need
for more
information

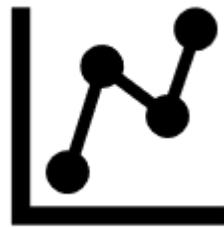
Formulate
questions to
guide a study

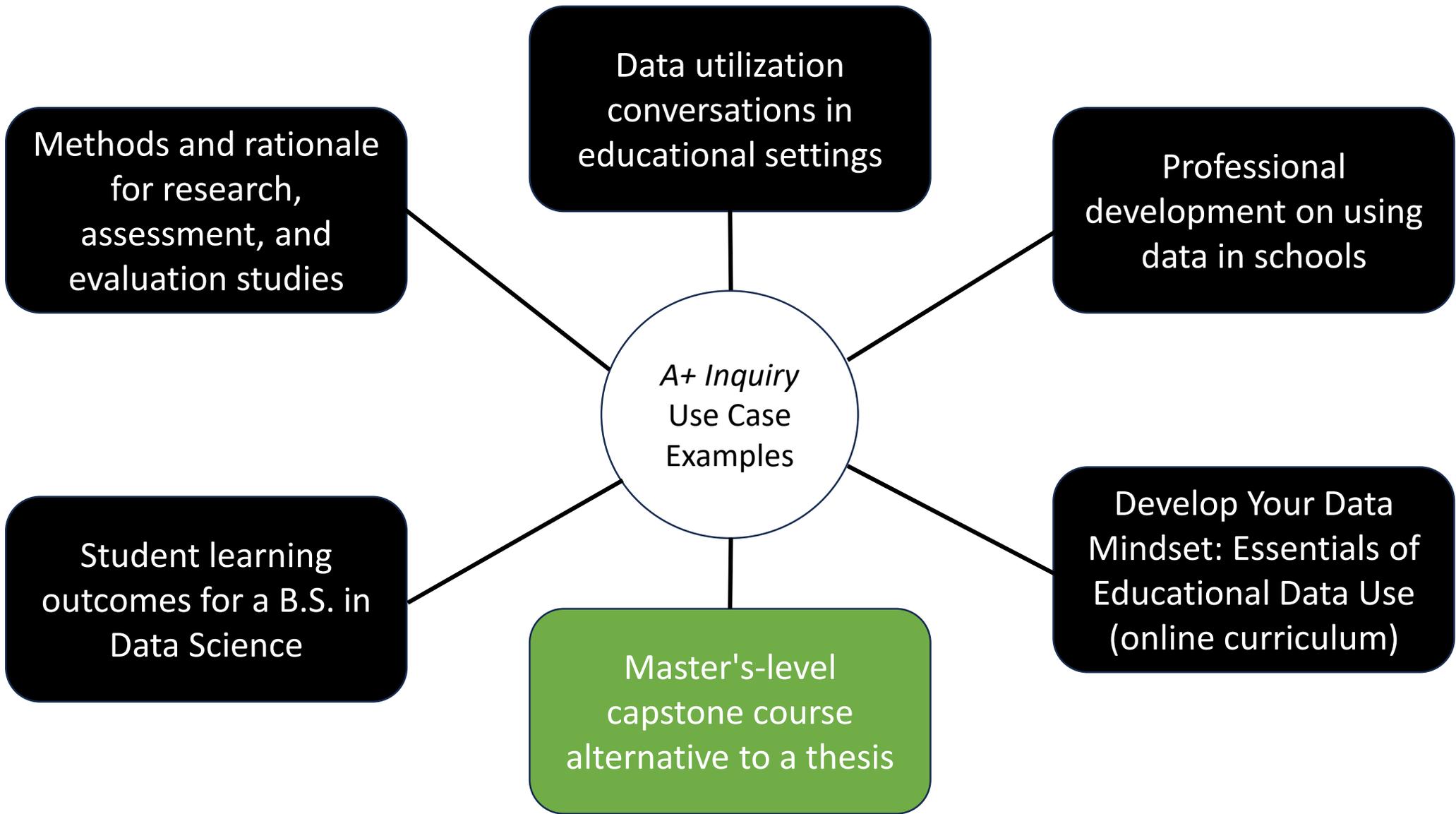
Collect data

Analyze data

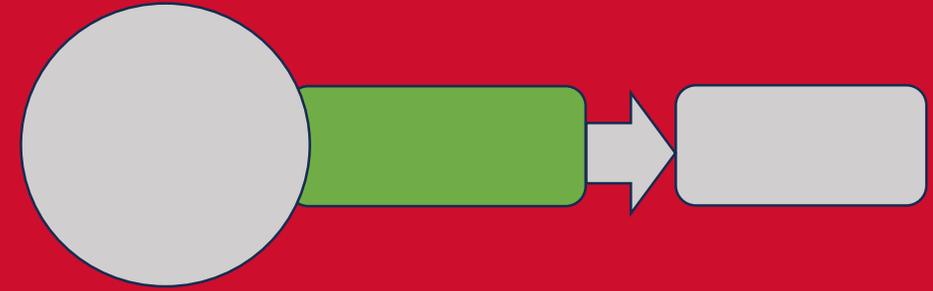
Share results
with
stakeholders

Use results to
inform
decisions





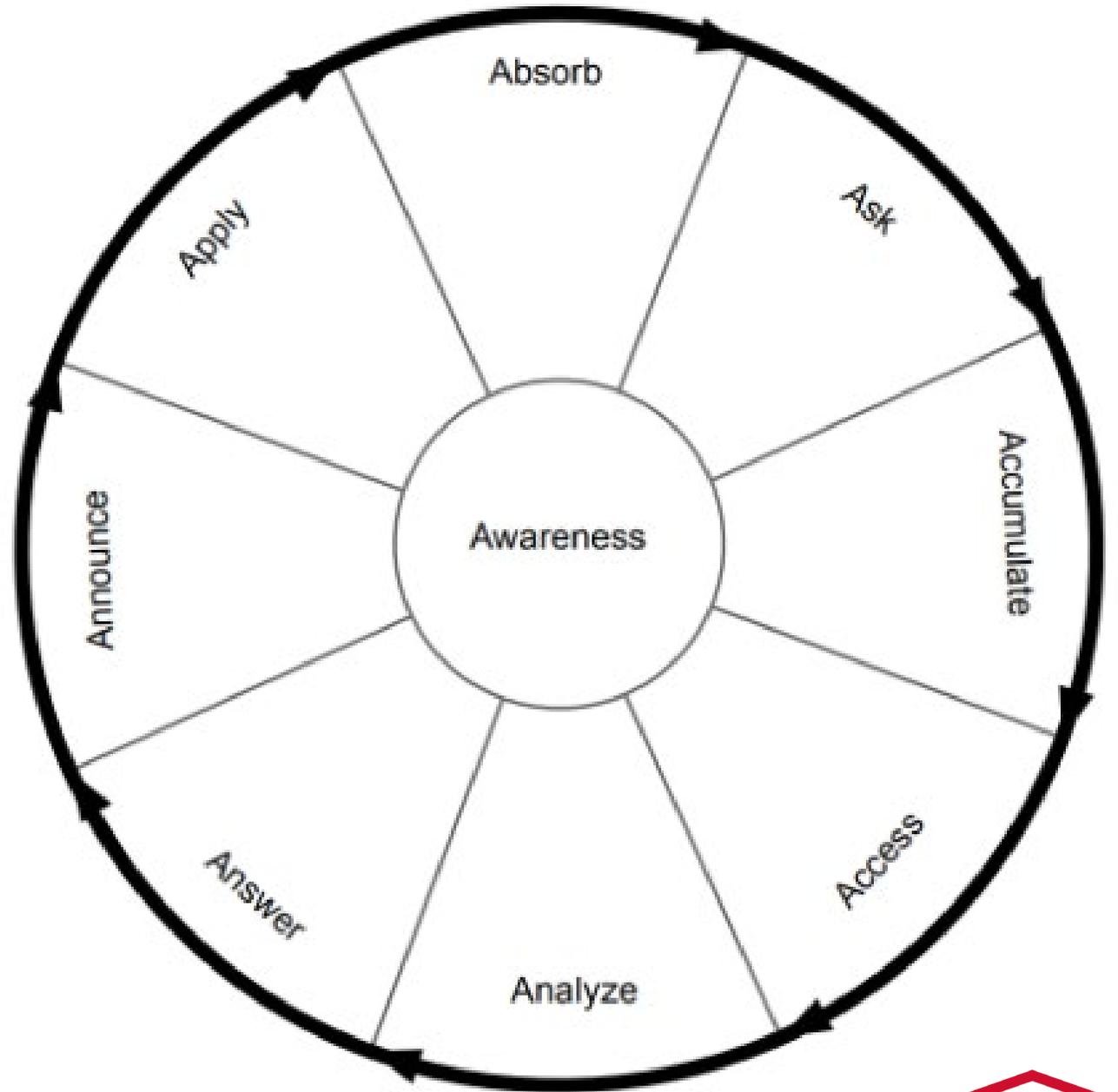
Develop Transferrable Disciplined Inquiry Knowledge and Skills



- Identify stages of the *A+ Inquiry* framework
- Identify guiding questions relevant to each stage of the *A+ Inquiry* framework

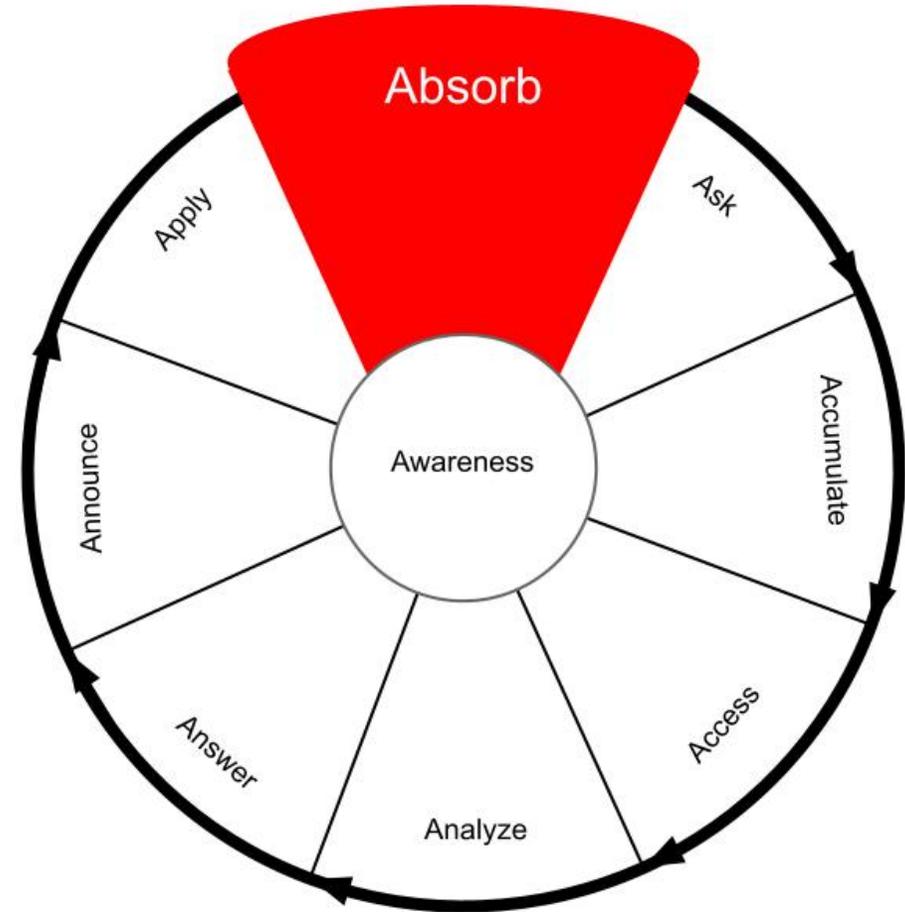


A+ Inquiry



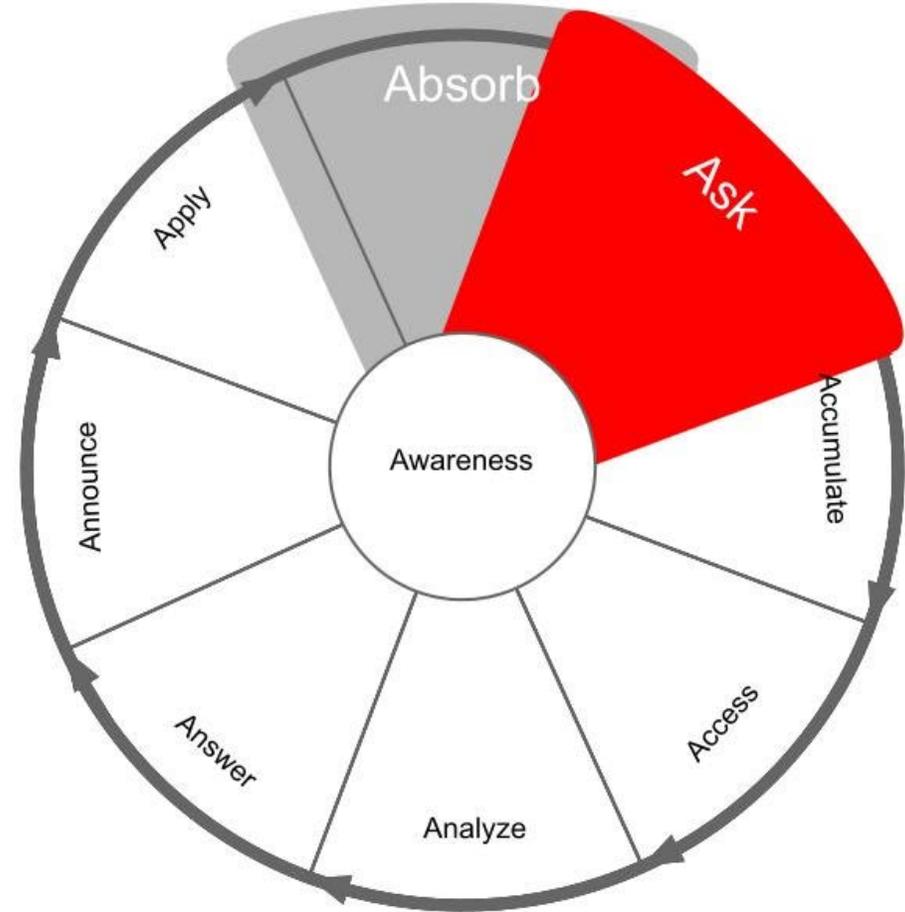
Absorb

- > What is already known about the context?
- > What is the knowledge gap that needs to be filled?
- > Why is it important to fill the knowledge gap?



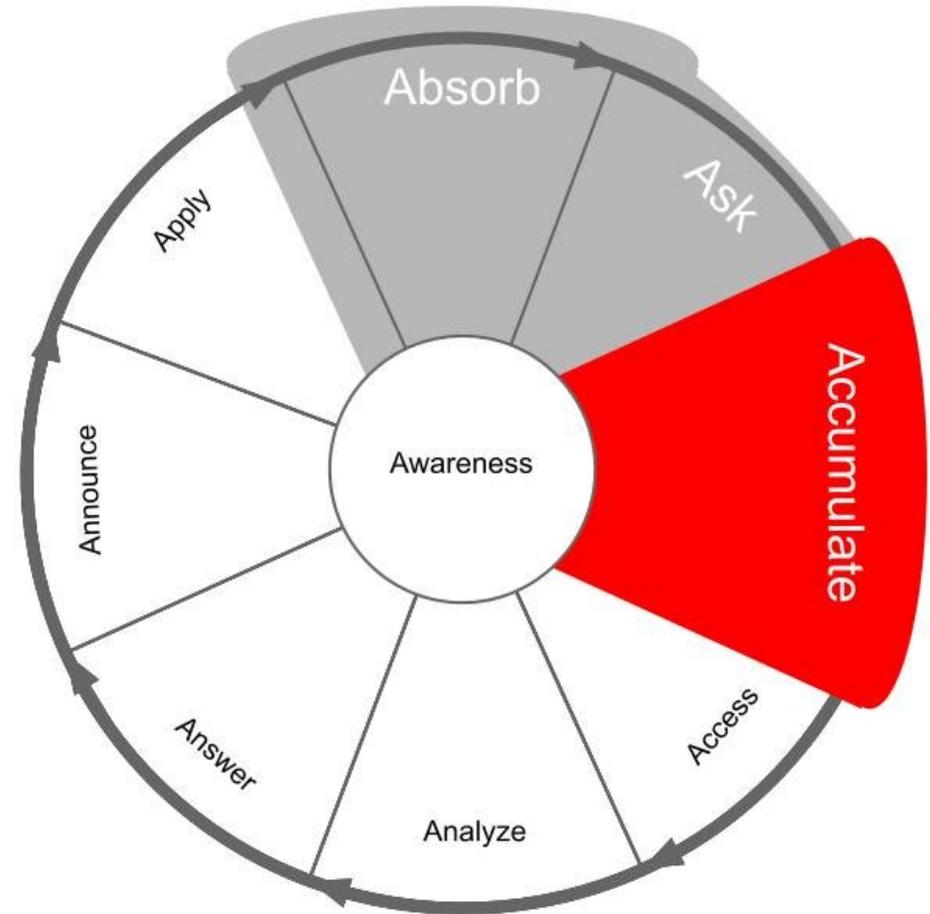
Ask

> What questions, if answered, could be formulated to help fill the knowledge gap?



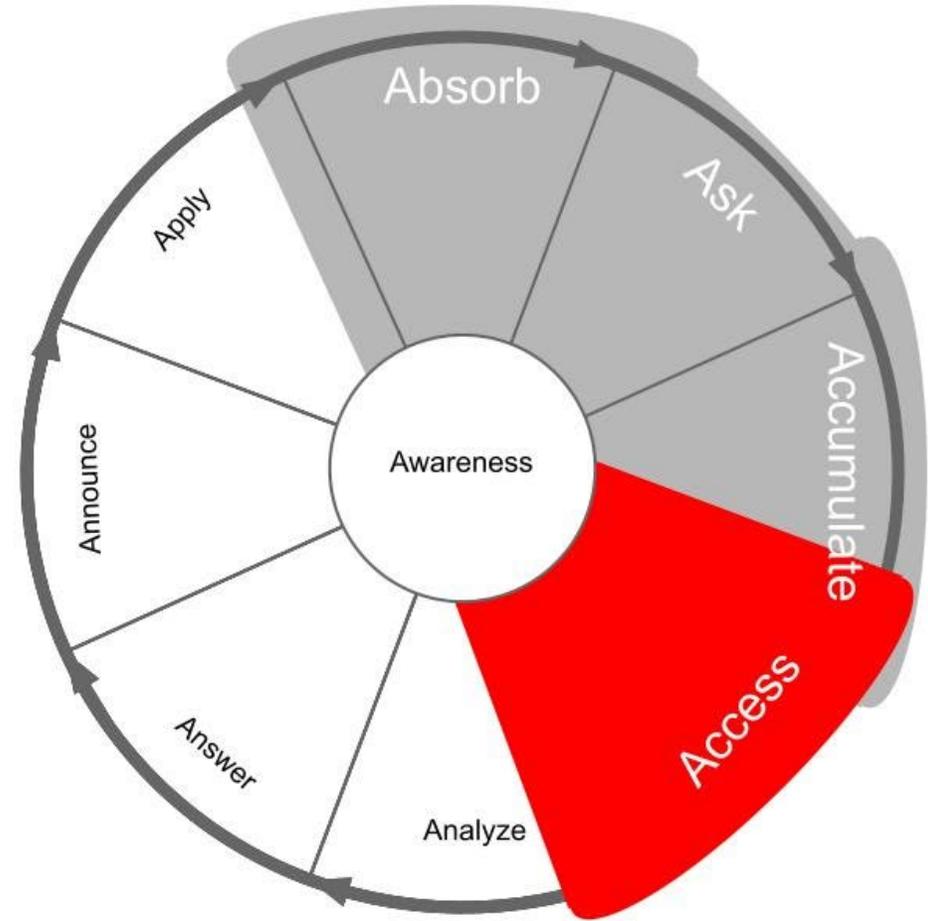
Accumulate

- > What data are required?
- > Do the data need to be collected or have they already been collected?
- > What is the setting?
- > What instrument is utilized?
- > What is the collection procedure?



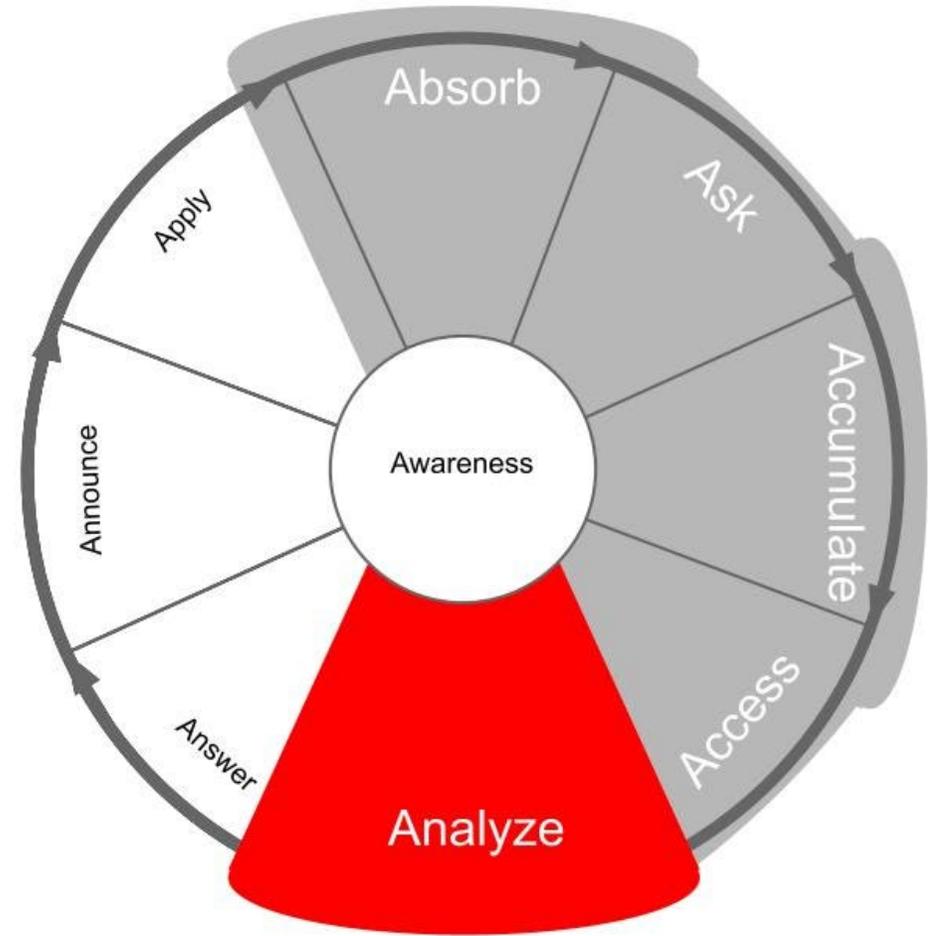
Access

- > Where are the data retrieved from after they have been collected in the Accumulate stage?
- > What is the procedure for retrieving the data in preparation for analysis?



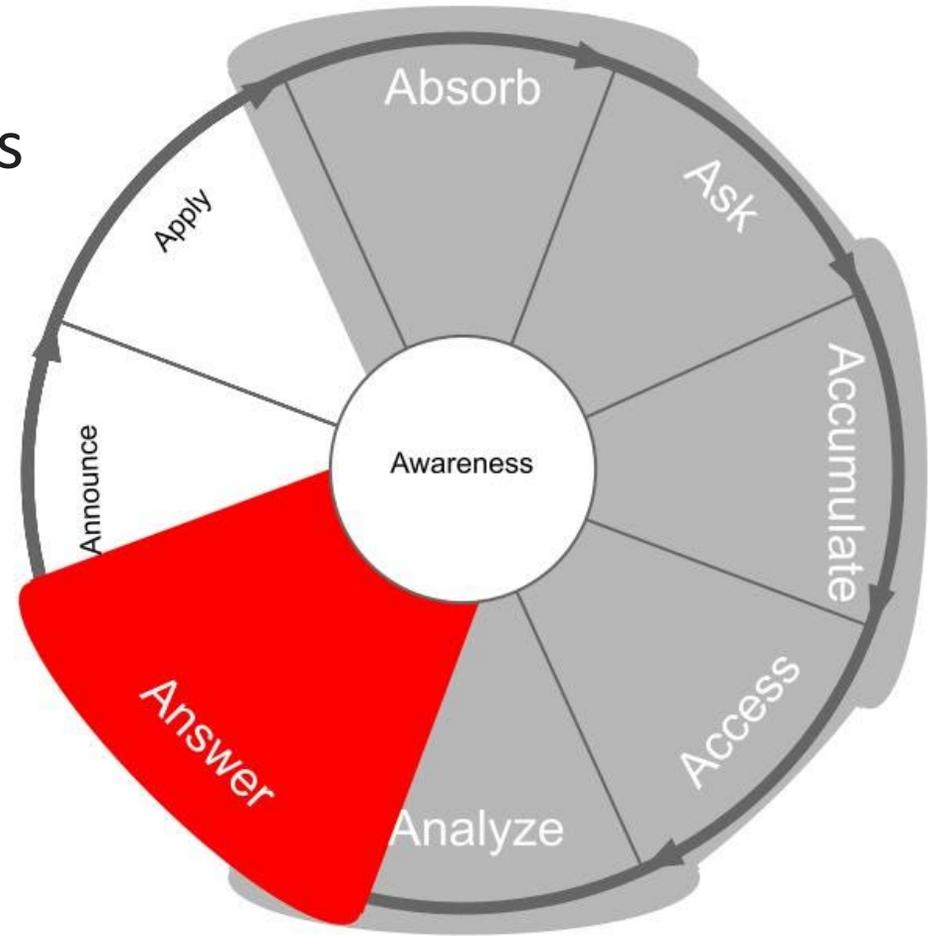
Analyze

- What quantitative and/or qualitative data analysis methods are implemented?
- What tools are required to analyze the data?



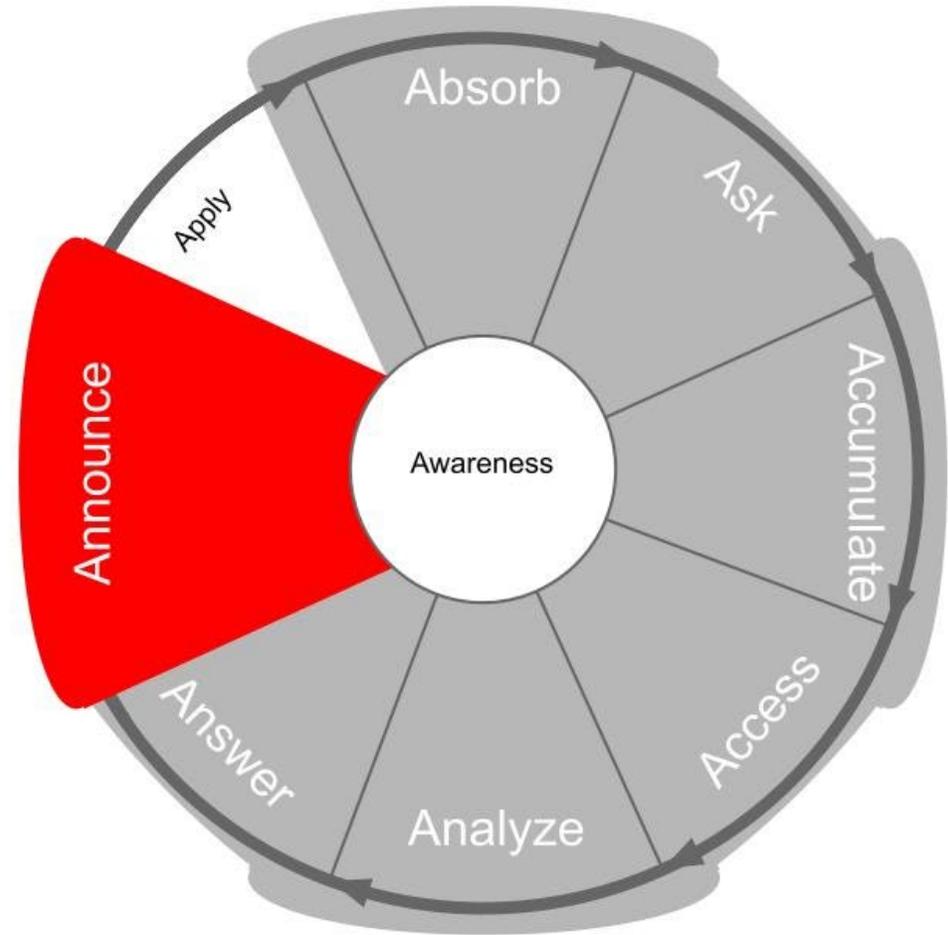
Answer

- > What are the answers to the questions that were posed in the Ask stage?
- > How do the answers relate to what was already known about the context?
- > What are limitations of the answers?
- > What are implications of the answers?



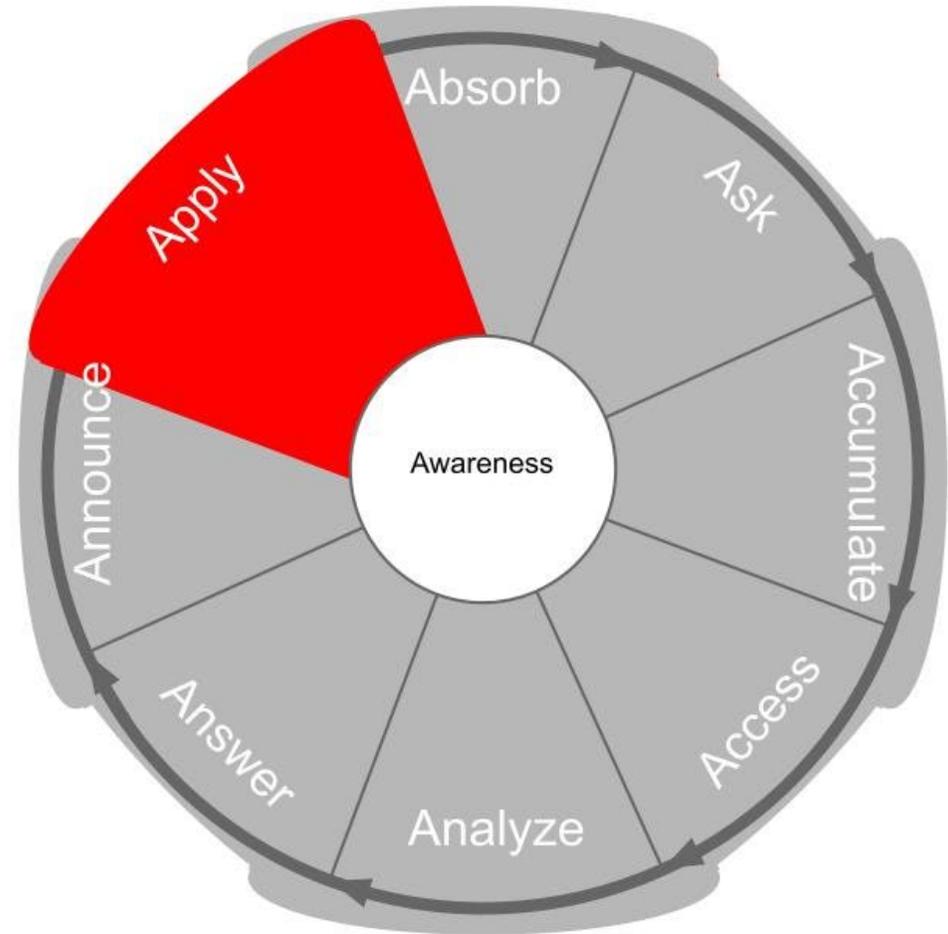
Announce

- > Which stakeholders may benefit by being informed about the results?
- > Which answers, limitations, and implications are important to communicate to each stakeholder?
- > What is the procedure for disseminating the results to, and/or discussing the results with, the stakeholders?



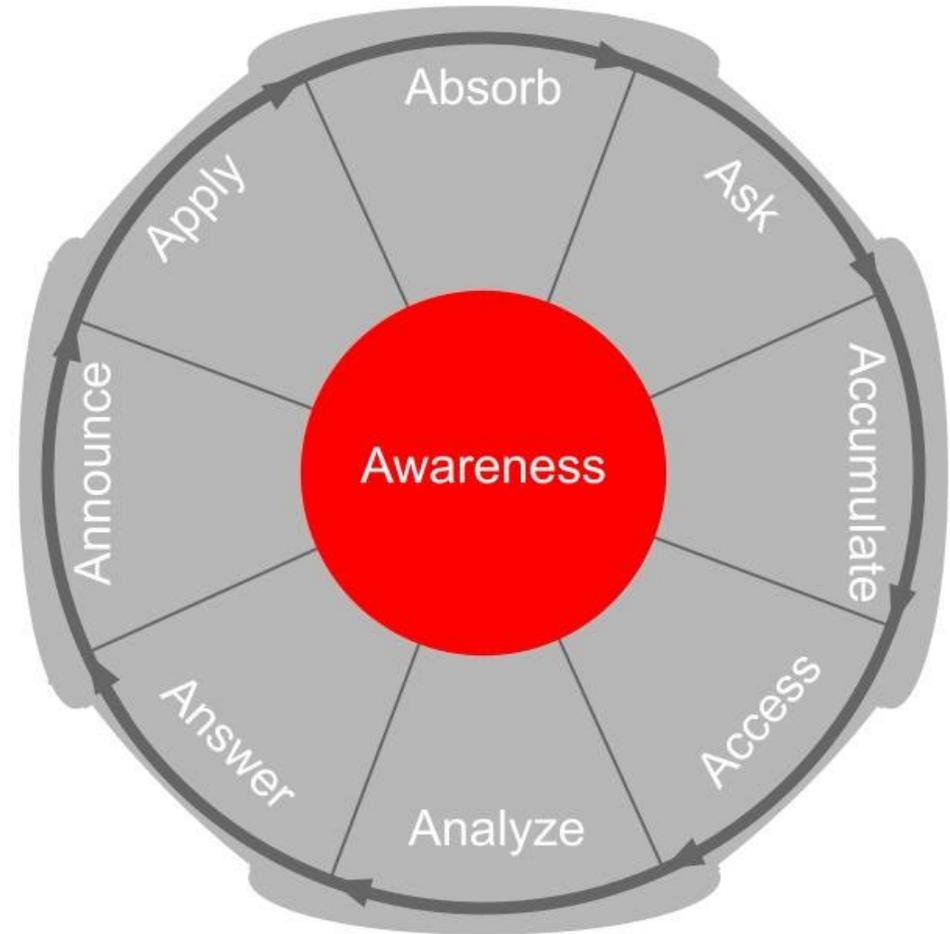
Apply

- > What decisions or actions are informed by the results that were revealed in the Answer stage?
- > Why are the decisions or actions important to implement?
- > What cautions are considered when making decisions or taking actions based on the results?



Awareness

Are you attentive to how a task in one stage aligns with the other stages?

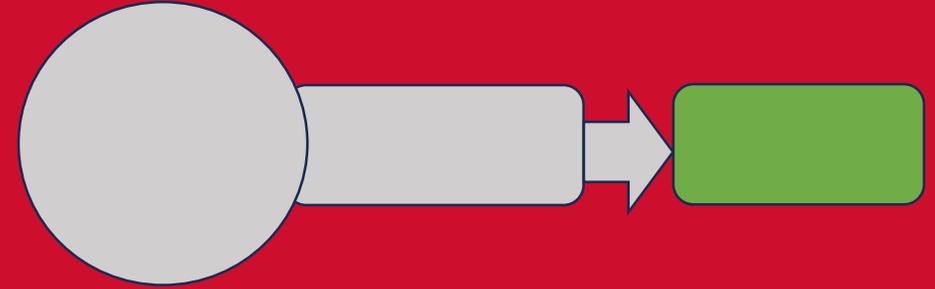


Activity – Turn and Talk

- > Which stages of the *A+ Inquiry* framework do you tend to implement in your work?
- > What are examples of other assessment, evaluation, or research frameworks that have similar stages?



Implement *A+ Inquiry* in Higher Education Assessment



Describe how *A+ Inquiry* stages align
with postsecondary assessment frameworks



Assessment Framework Alignment

**Academic
Assessment
Cycle**

Gustafson et al.
(2014)

**Elements of
Good
Assessment**

Pike
(2002)

Research Cycle

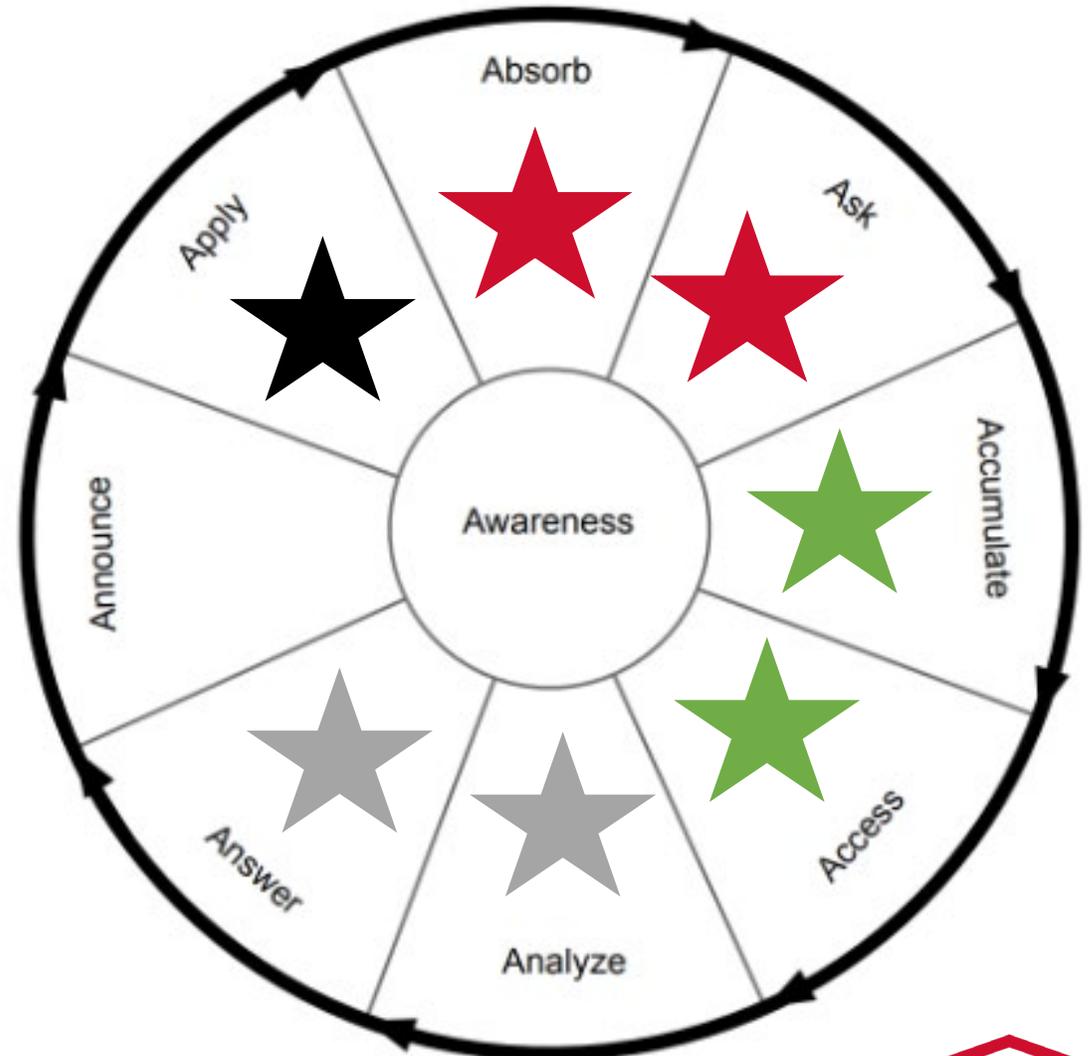
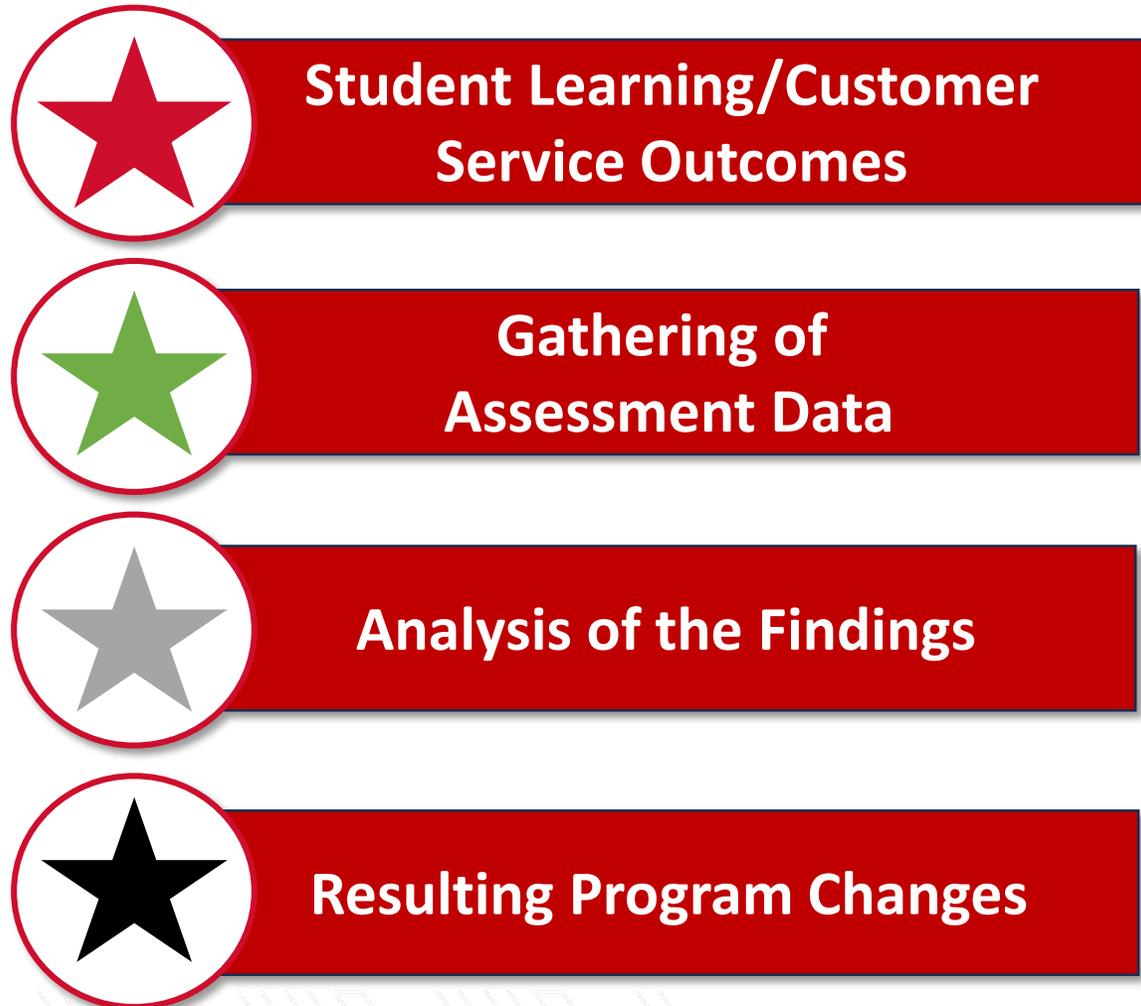
Shermis and
Daniels's
(1991)

**Assessment
Skills
Framework**

Horst and
Prendergast's
(2020)

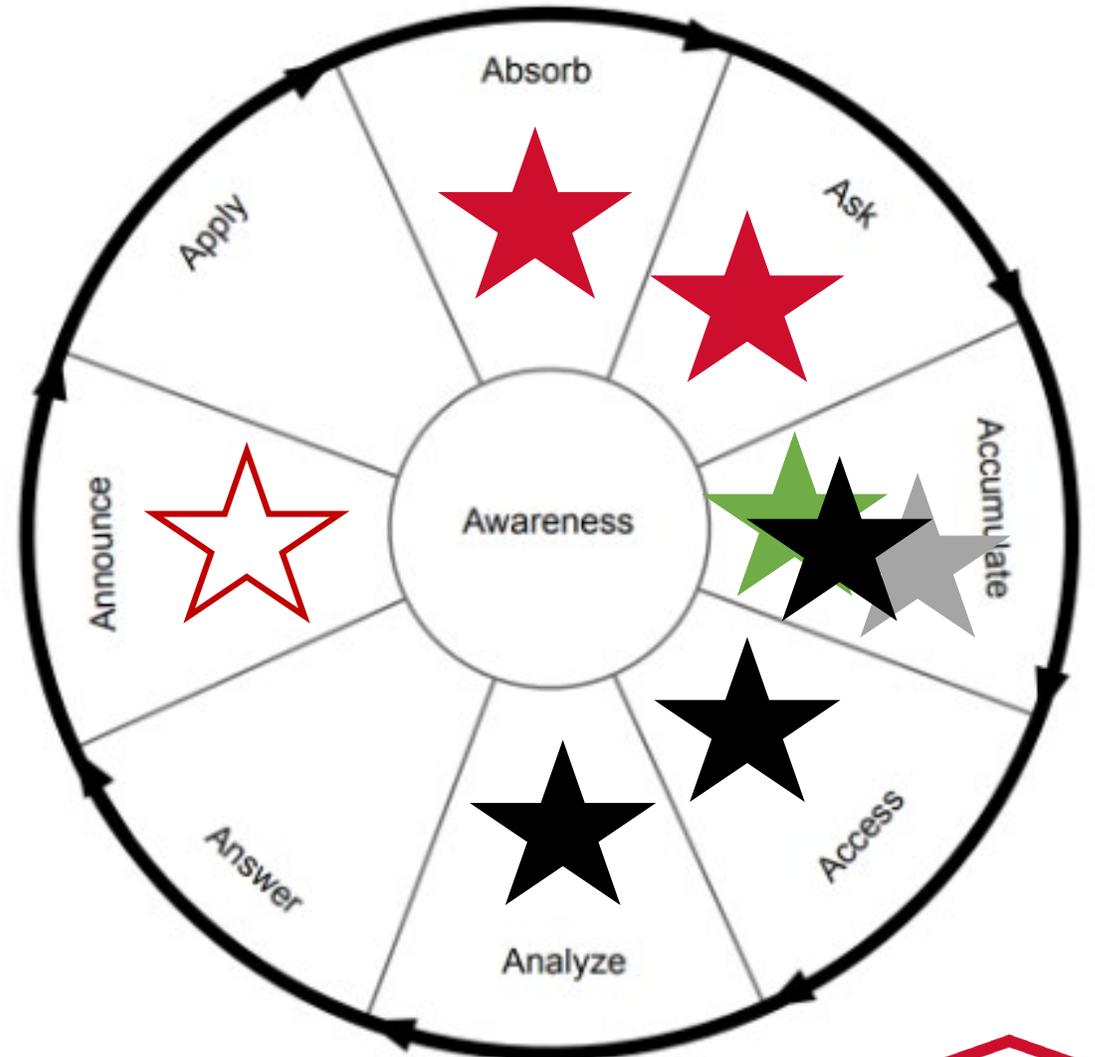


Gustafson et al. (2014)



Pike (2002)

-  Asking Good Questions
-  Selecting Representative Participants
-  Using Appropriate Measures
-  Identifying Appropriate Methods
-  Communicating Results



Shermis and Daniels's (2002)

1. State the general issue or problem (Absorb)
2. Find out what others have learned (Absorb)
 - a. Define the target population (Accumulate)
3. Specify the objectives/hypotheses (Absorb, Ask)
 - a. Specify sample design (Accumulate)
4. Define the operational plan and specify variables (Accumulate)
 - a. Implement the sample selection procedures (Accumulate)
5. Data collection strategies (Accumulate)
6. Data analysis preparation (Access, Analyze)
7. Analyze data and interpret results (Analyze, Answer)
8. Prepare reports, presentations, press release (Analyze, Answer)
9. Disseminate and help others use results (Announce, Apply)



Horst and Prendergast's (2020)

- Prerequisite knowledge (**Awareness**)
- Foundational assessment knowledge and skills (**Awareness**)
- 1. Specify student learning outcomes (**Absorb**)
- 2. Create and map programming to outcomes (**Absorb**)
- 3. Select and design instruments (**Accumulate**)
- 4. Examine implementation fidelity (**Awareness**)
- 5. Collect outcomes information (**Accumulate**)
- 6. Analyze data, interpret and report results & maintain information (**Analyze, Answer, Announce**)
- 7. Use results to improve student learning (**Apply**)
- 8. Assessment in practice – additional skills for assessment (**Awareness**)



Cicchino et al. (2023)

1. Learning is designed based on student learning objectives or outcomes
(Apply --> Absorb)
2. In the context of redesigned learning, students demonstrate knowledge and skills by creating assessable artifacts (Accumulate)
3. Standards and evaluation tools are created to evaluate these artifacts and those tools are normed across reviewers (Accumulate)
4. Student achievement of the learning objectives is evaluated (Accumulate)
5. Assessment data is analyzed (Analyze)
6. Interventions (adjustments to design and delivery of learning activities) are planned and implemented (Apply)



Activity

> Sample Scenario - Program Outcome Assessment

Students in Dr. Datta's INQ 490 course write a capstone paper with an instrument section relevant to quantitative data collection. Dr. Datta scores the instrument section of each student's paper on a 4-point scale using the Disciplined Inquiry Capstone Project Rubric. A score of 3 or above represents success. Dr. Datta submits a score for each student in an online form. The scores are automatically compiled in a spreadsheet upon submission. *

- Absorb
- Ask
- Accumulate
- Access
- Analyze
- Answer
- Announce
- Apply
- Awareness



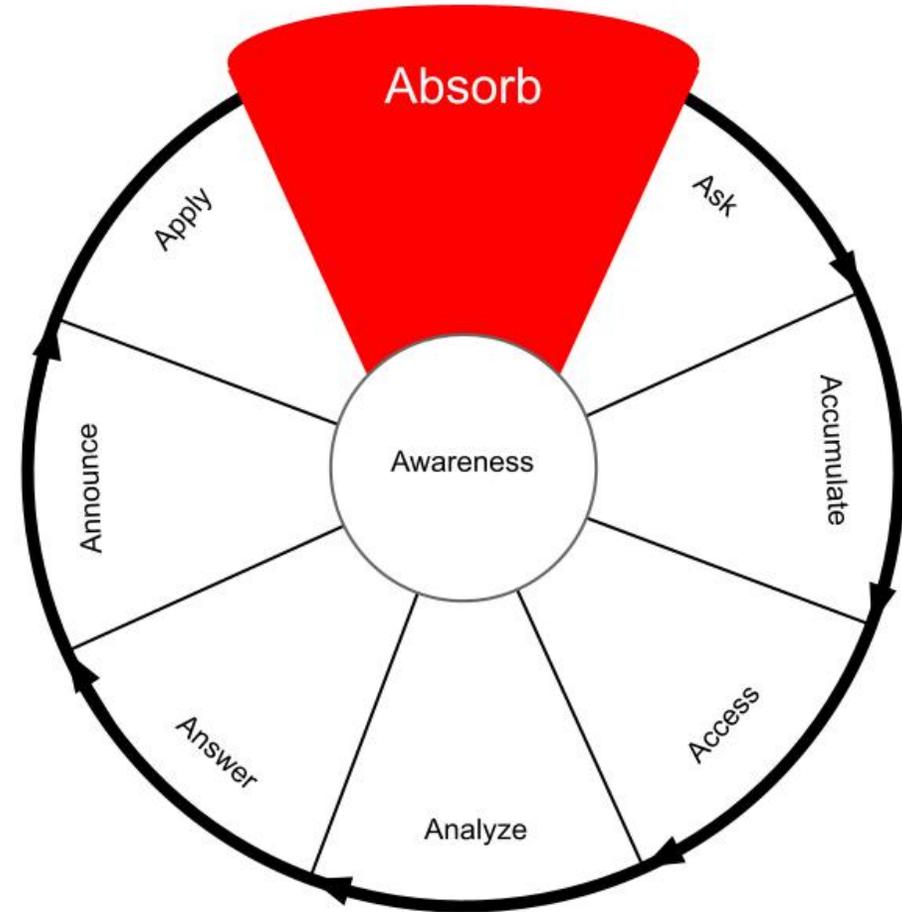
Absorb

Known:

- BS Disciplined Inquiry program
- Student Learning Outcome (SLO) 3.1:
Develop a plan for collecting quantitative data.
- Target: 80% achieve success in describing a data collection instrument in their plan

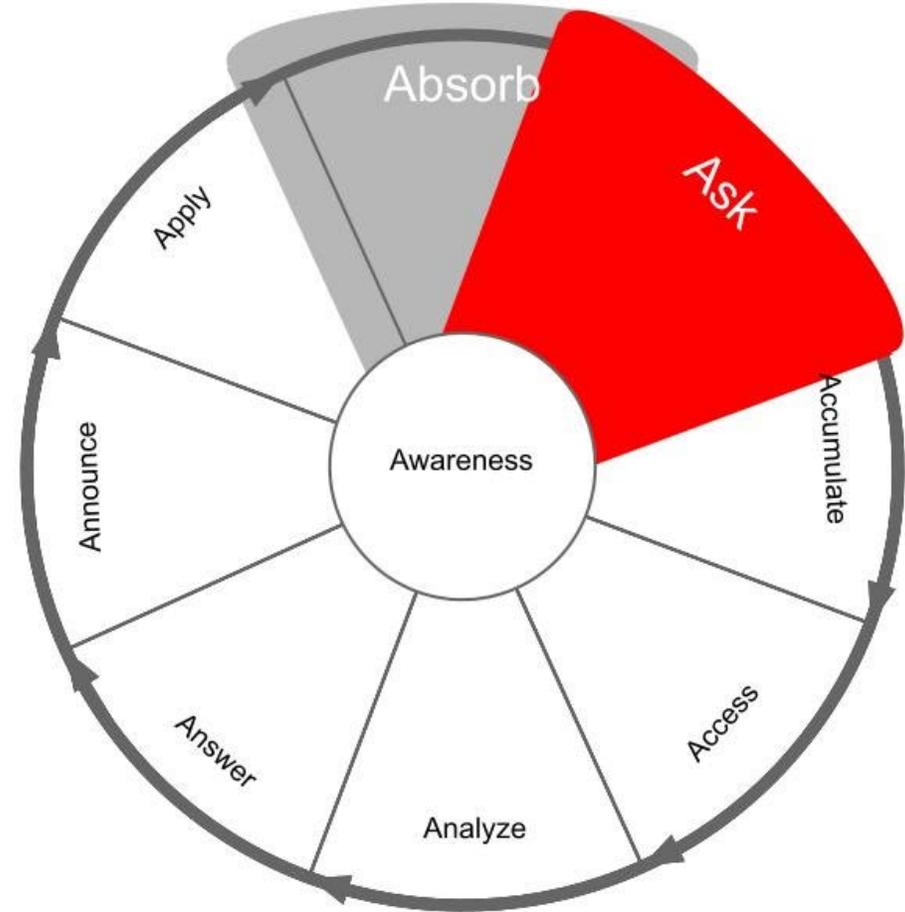
Not known:

- Extent to which SLO 3.1 is being achieved



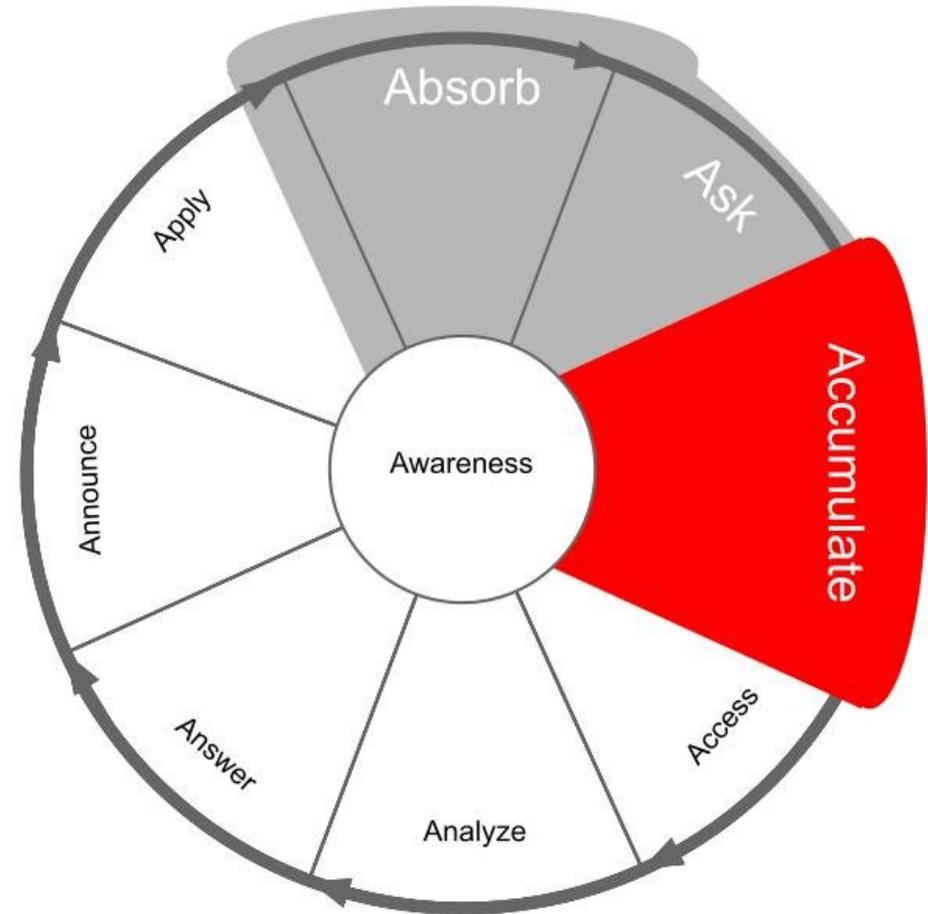
Ask

> To what extent is the target being achieved?



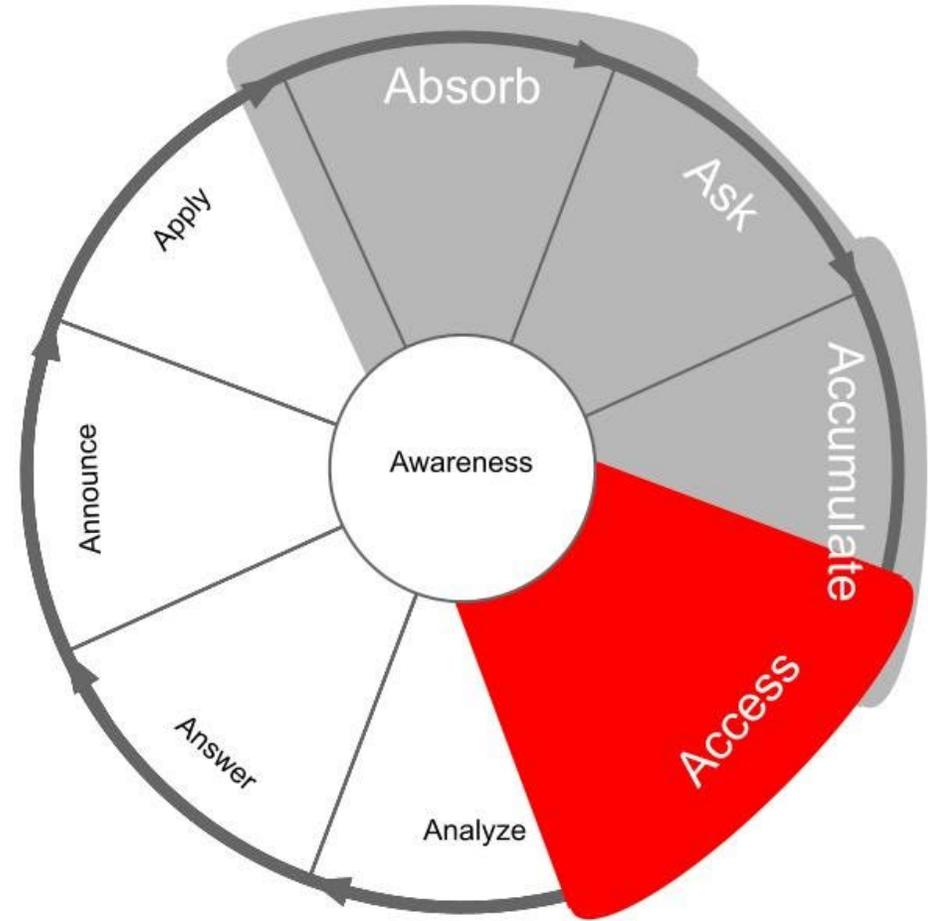
Accumulate

- INQ 490 course
- Students write a capstone paper with a quantitative data instrument section
- Score the instrument section on a 4-point scale using the Disciplined Inquiry Capstone Project Rubric
- Score of 3 or above represents success
- Submit a score for each student in an online form
- Scores are automatically compiled in a spreadsheet upon submission



Access

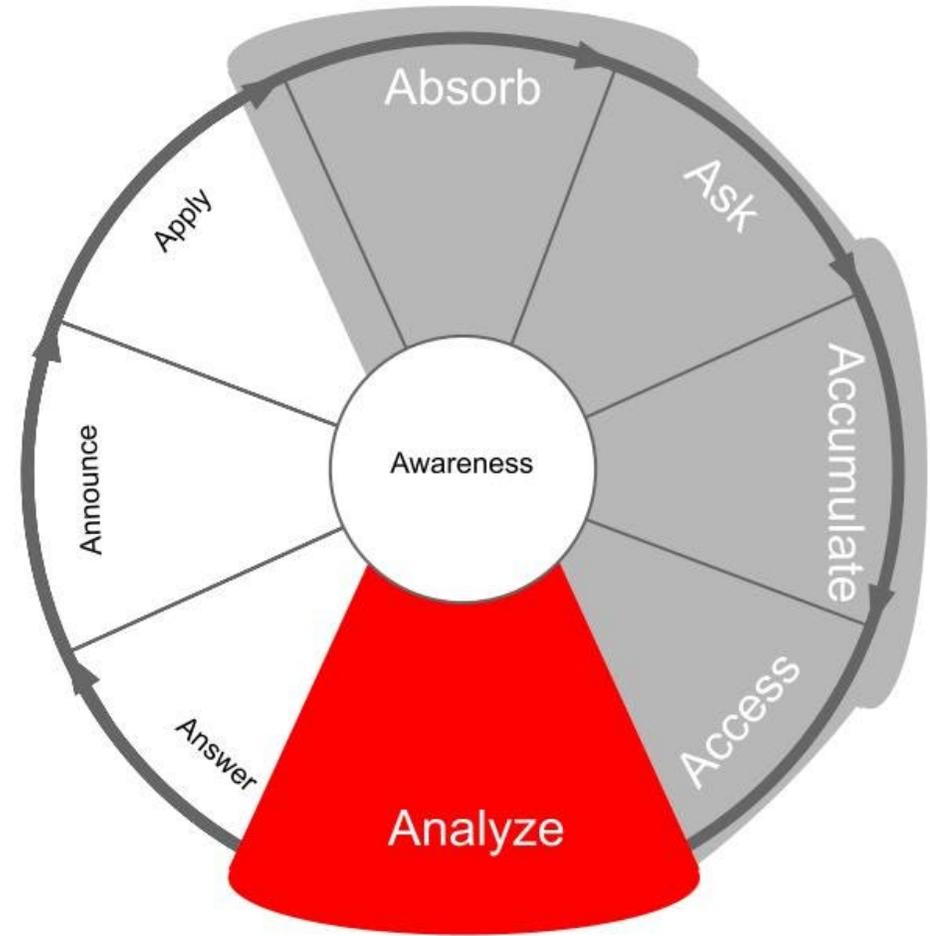
- Retrieve the rubric scores from the spreadsheet where the scores were automatically stored



Analyze

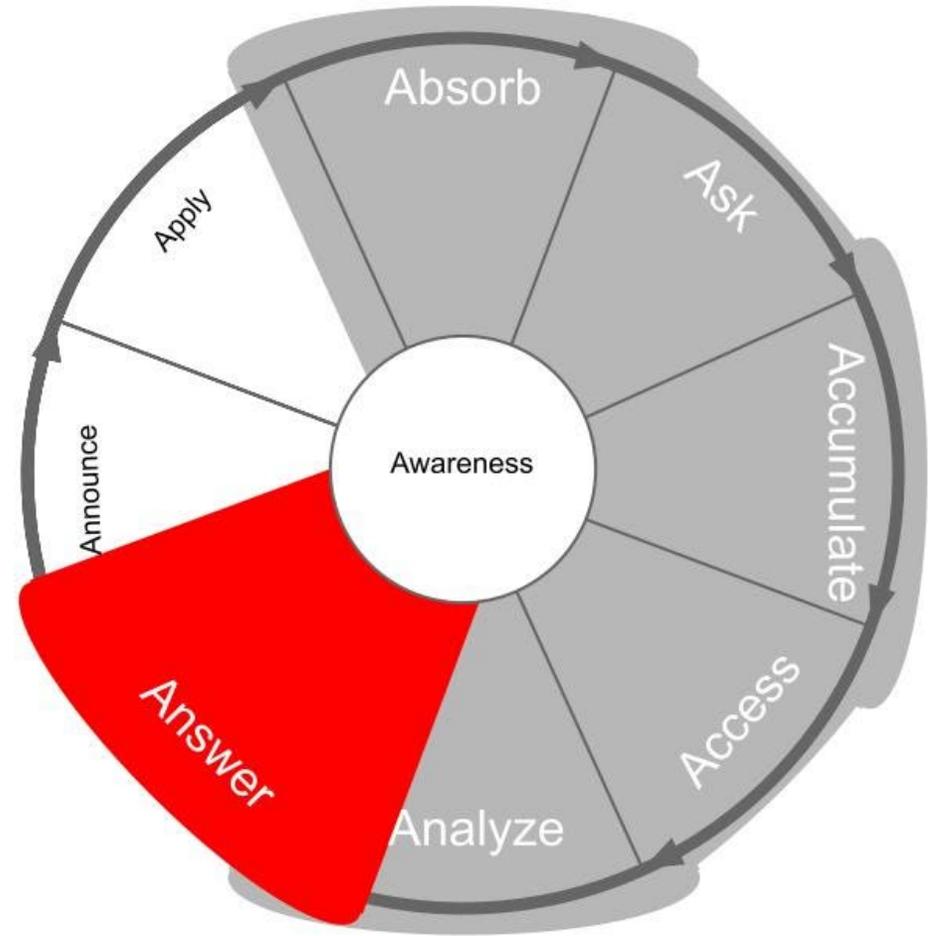
> $\frac{\text{\# students 3 or higher}}{\text{\# students assessed}} = \% \text{ success}$

> $\% \text{ success} - \% \text{ target} = \% \text{ point difference}$



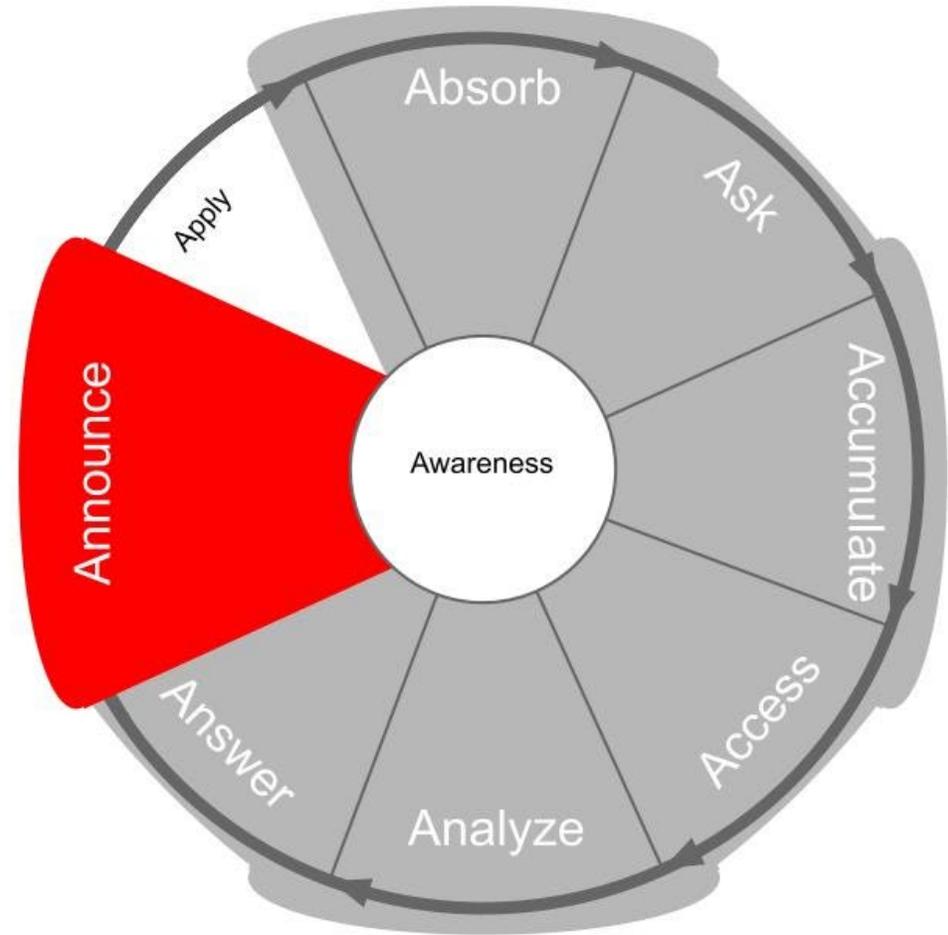
Answer

- > Describe the extent to which the actual % is above or below the target %
- > Describe limitations and implications



Announce

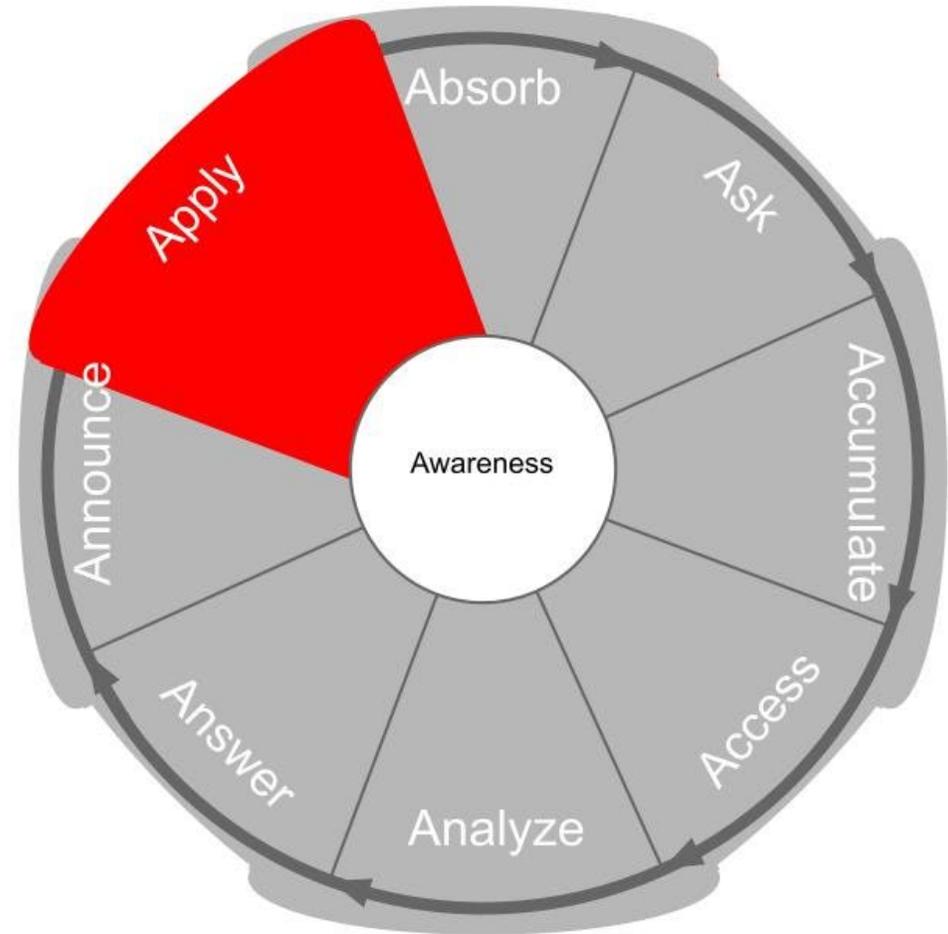
- Disseminate results to:
- Program faculty via email and report at a meeting
- Broader campus via yearly program assessment report
- External program reviewers via a self-study report



Apply

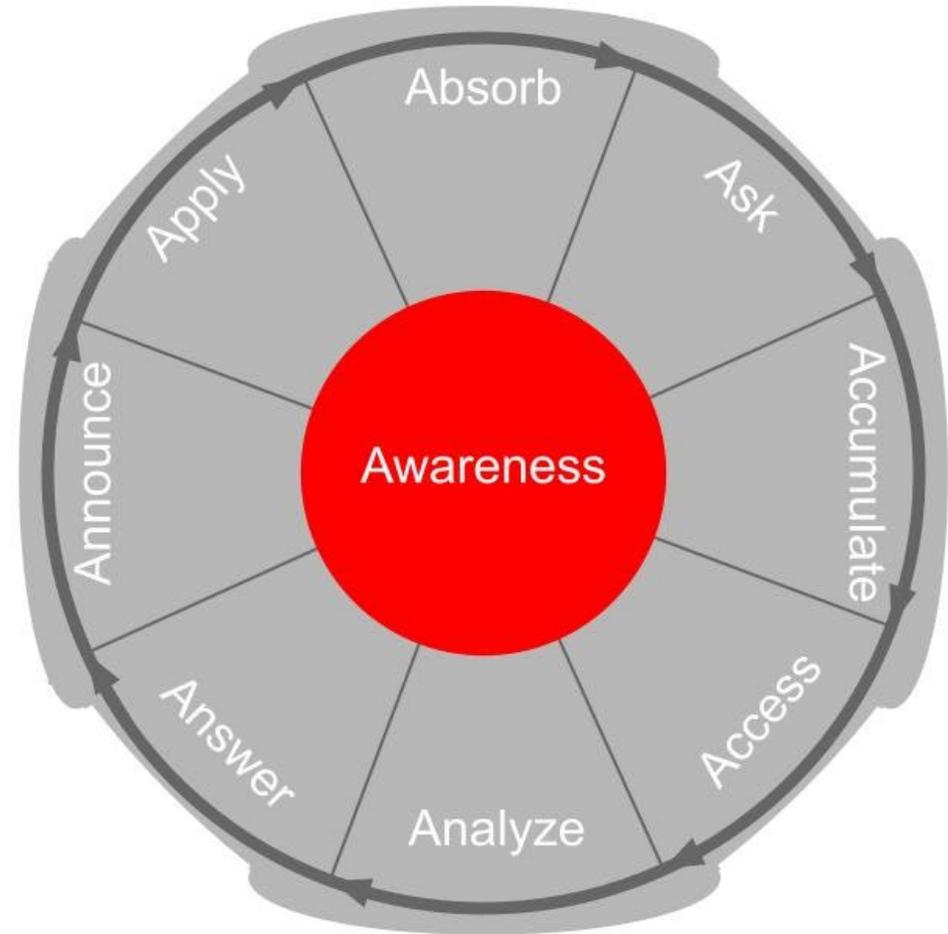
Use results to make decisions relevant to program:

- > Content
- > Delivery
- > Assessment

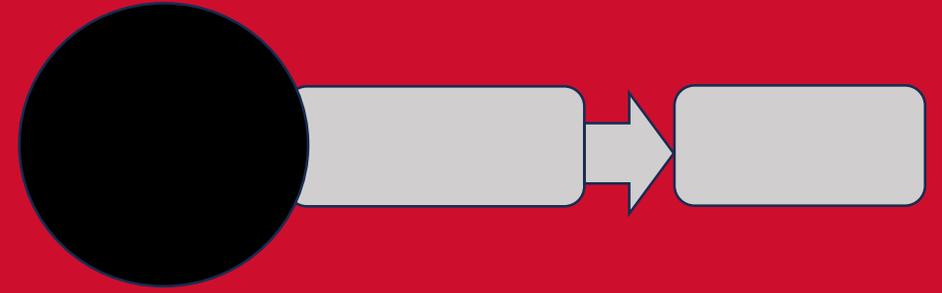


Awareness

> All stages of the outcomes assessment process were addressed and collectively served a common purpose



Provide an *A+ Inquiry* Course as a Thesis-Alternative



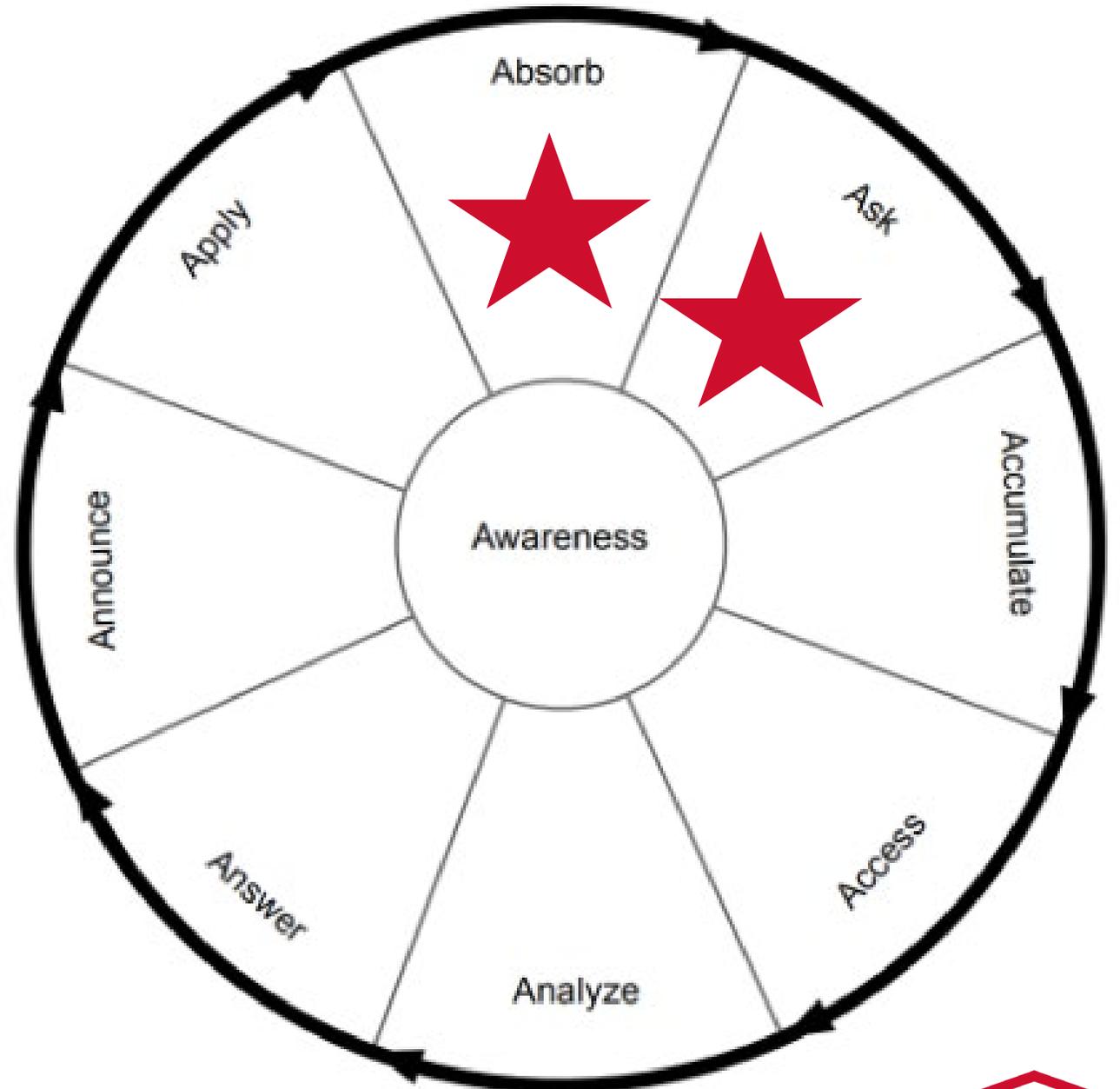
- »» Describe how the *A+ Inquiry* stages align with common sections of a thesis paper
- »» Describe requirements for completing a Master's level *A+ Inquiry* capstone course



Thesis Alignment

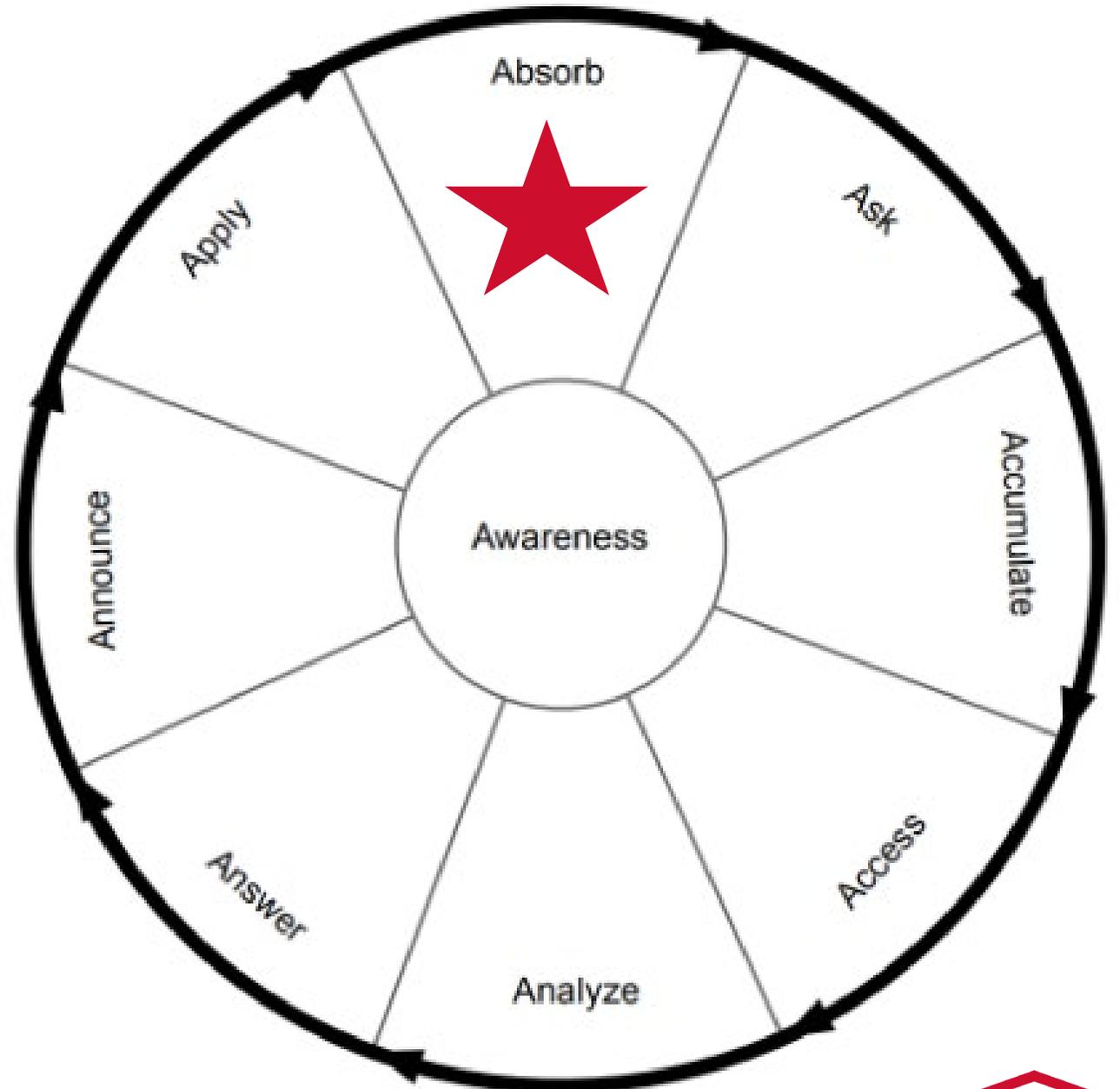
Chapter 1: Introduction

- Background of the problem
- Statement of the problem
- Significance of the study
- Research questions



Thesis Alignment

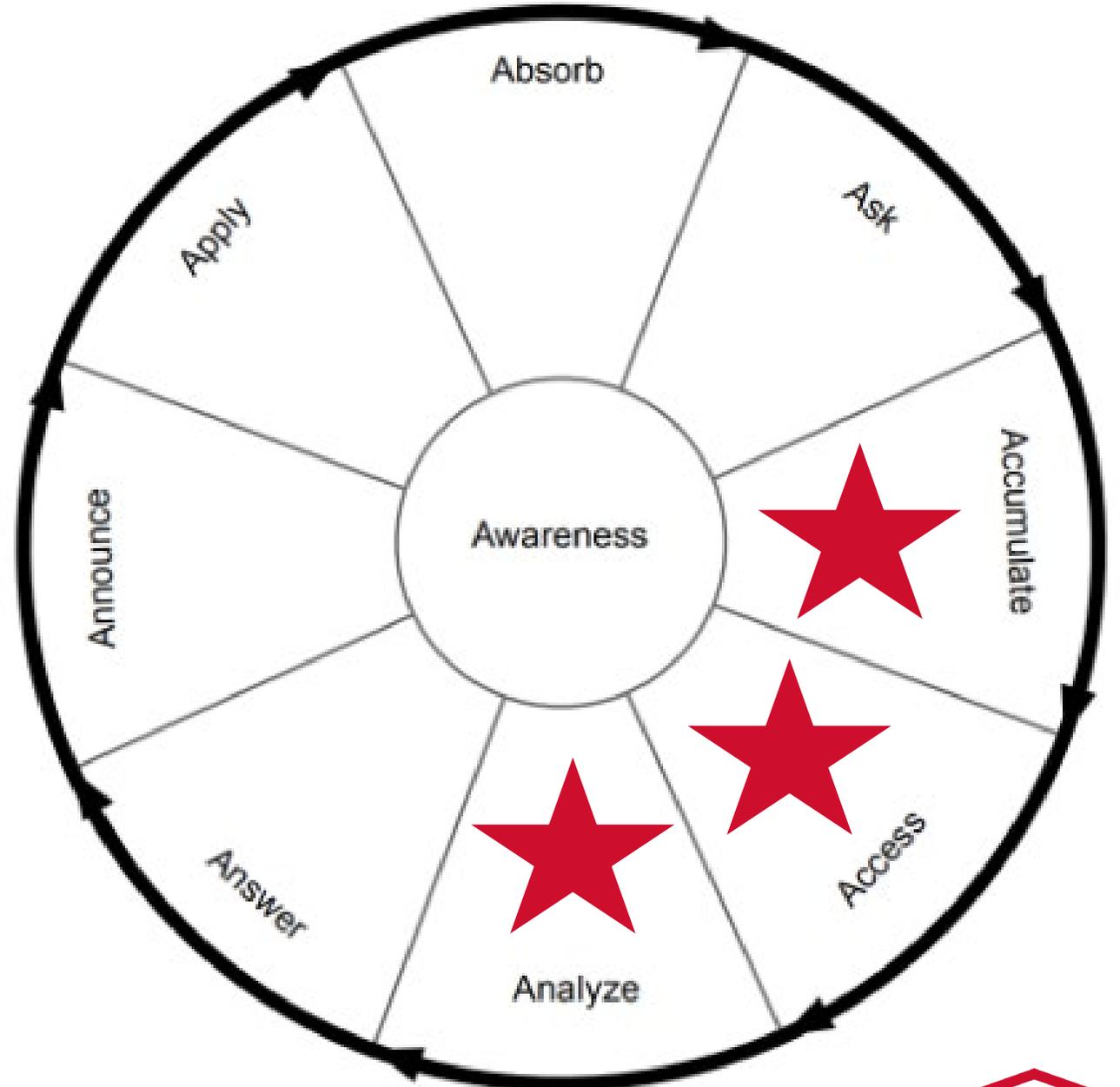
Chapter 2: Literature Review



Thesis Alignment

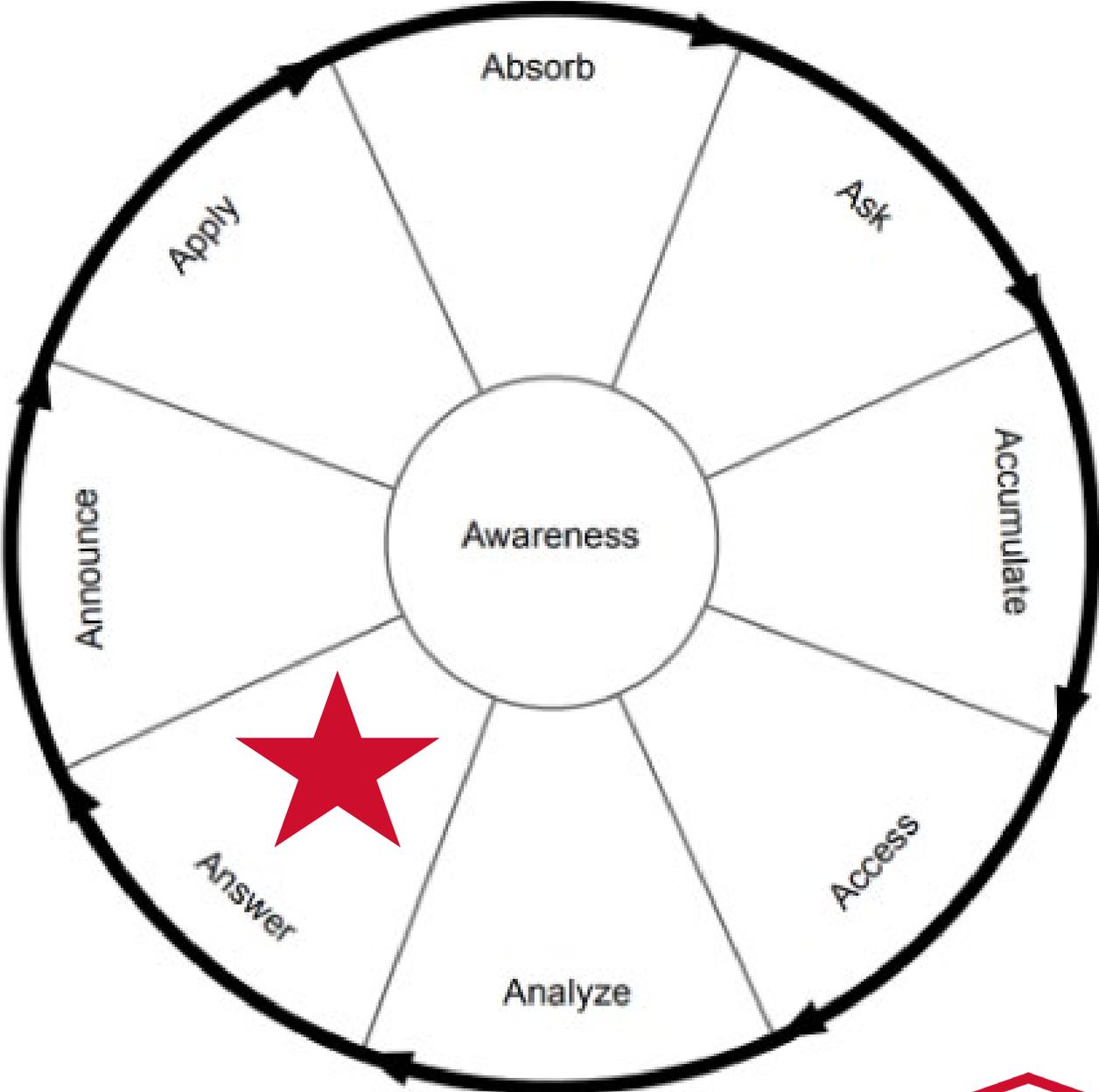
Chapter 3: Methods

- Setting
- Participants
- Instrument
- Procedure
- Data storage
- Data analysis



Thesis Alignment

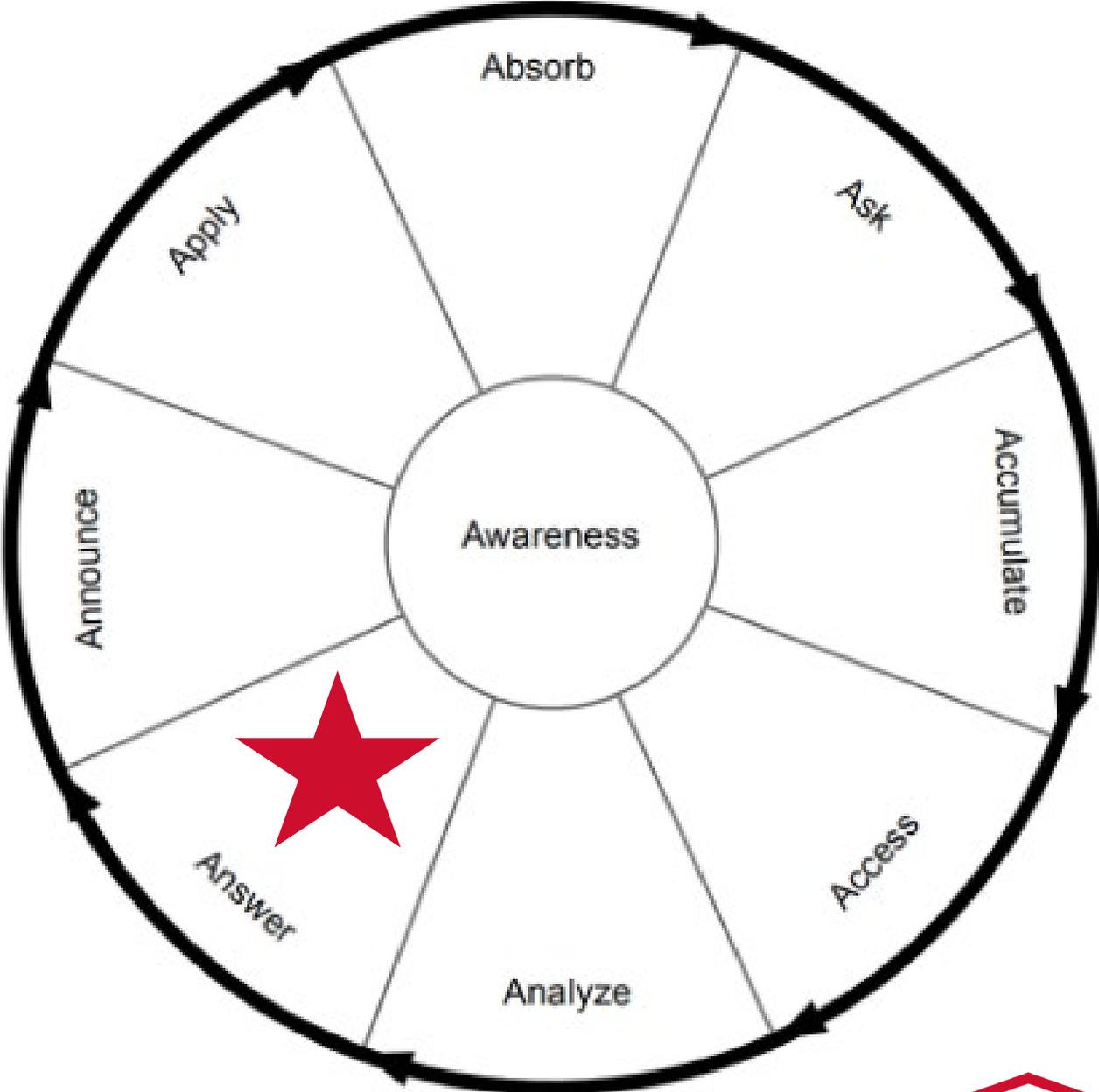
Chapter 4: Results



Thesis Alignment

Chapter 5: Discussion

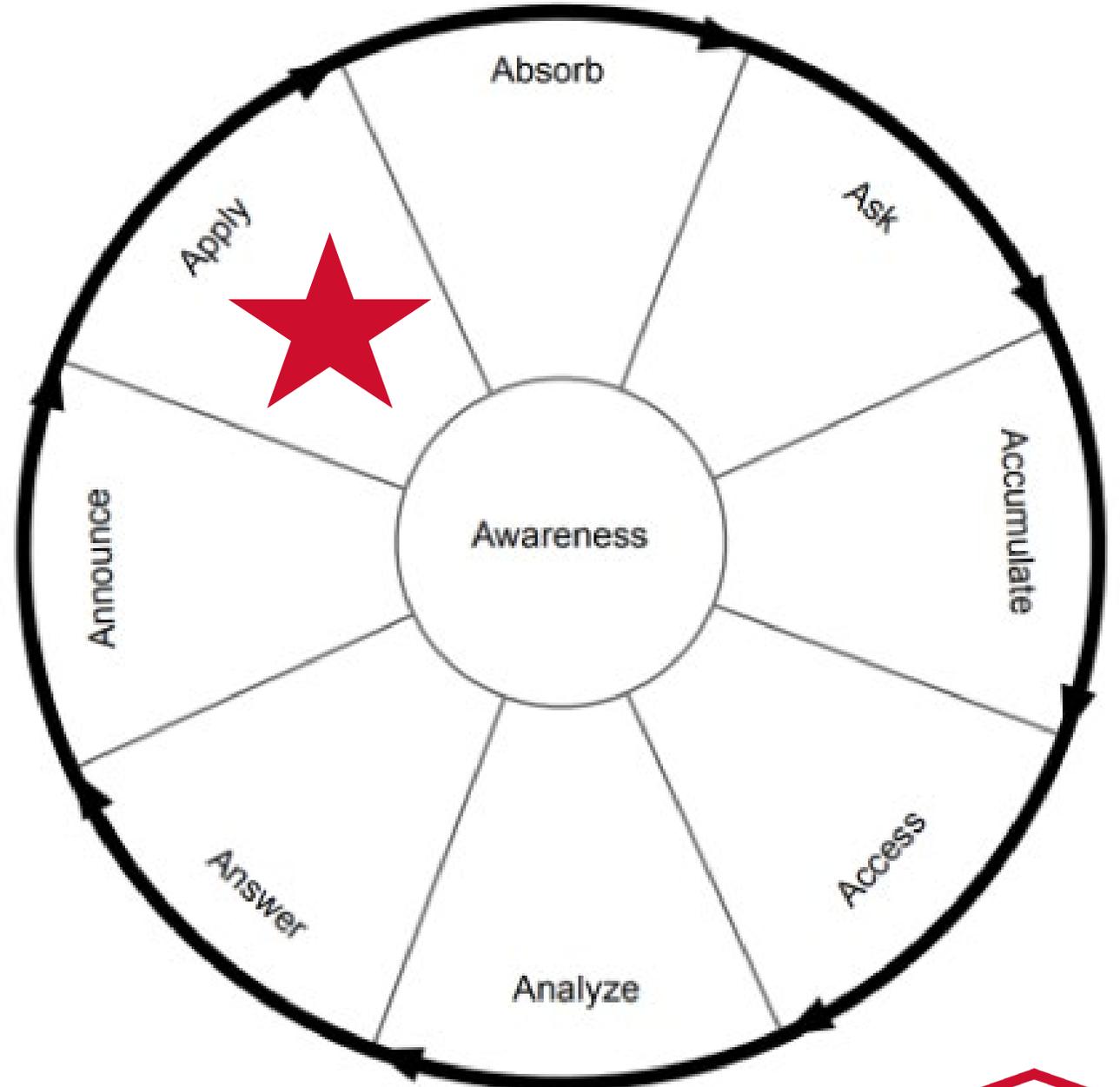
- Discussion
- Limitations
- Conclusions



Thesis Alignment

Chapter 5: Discussion

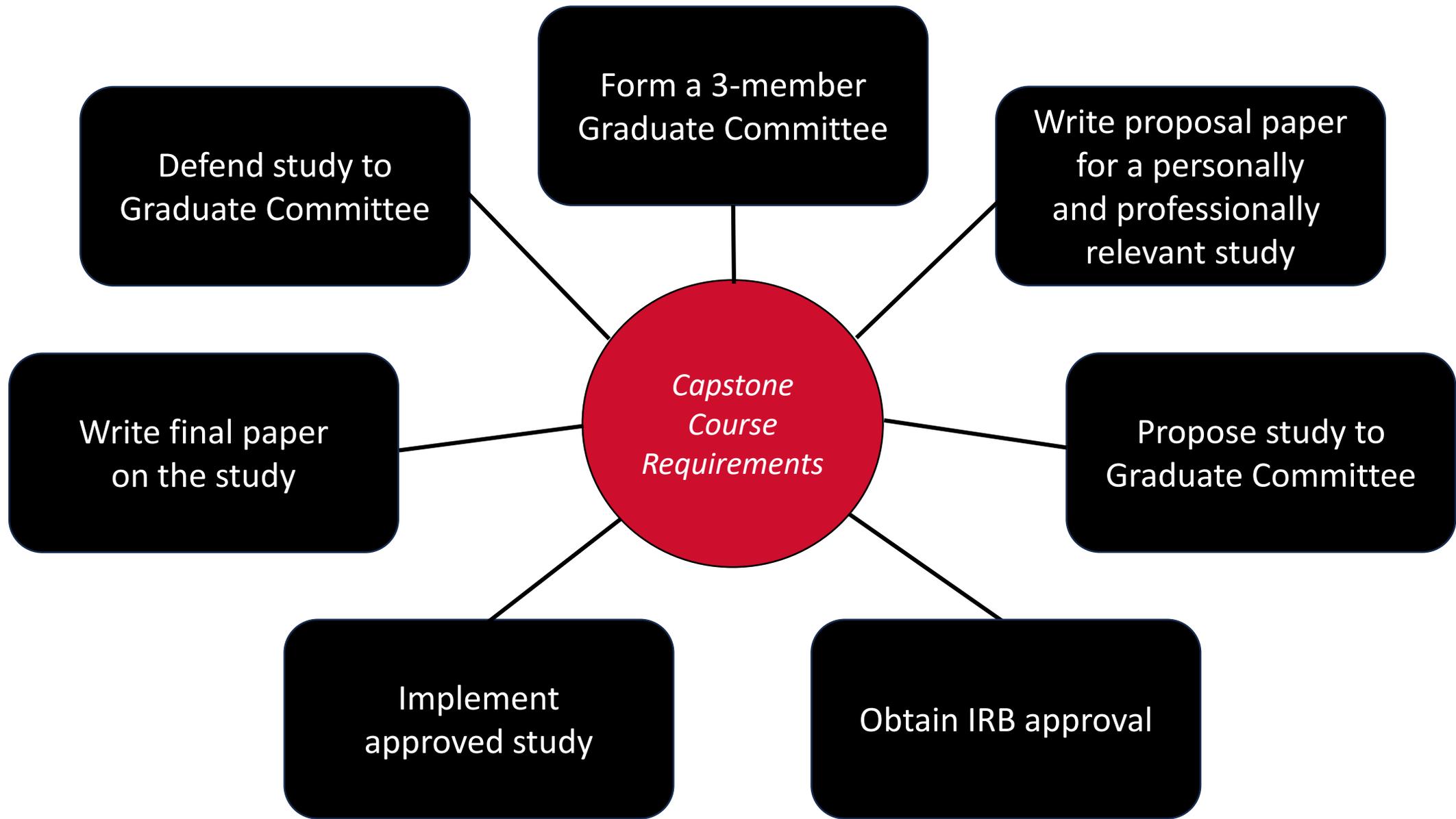
- Recommendations
 - Researchers
 - Practitioners



A+ Inquiry Capstone Course

Students demonstrate their capacity to plan and implement a complete disciplined inquiry process.





Capstone Course Outline

Week(s)	Description
1-5	Meet with the entire class for weekly discussions (expectations, A+ Inquiry stages, prepare for proposal and IRB)
6	Submit proposal paper and propose study
7-8	Obtain IRB approval for study
9-13	Conduct study
14-16	Prepare and submit final paper, defend study



A+ Inquiry Capstone Paper Template

**Student/
instructor
shared
Google Doc**

**Formatted
utilizing
A+ Inquiry
stages**

**Approximately
40 writing
prompts**



This section begins on a new page

Accumulate

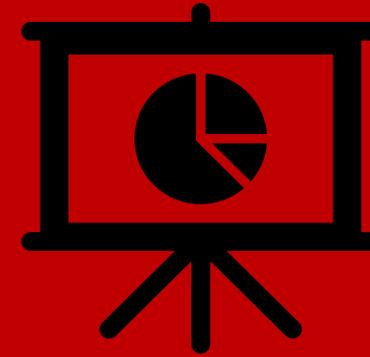
In the Accumulate stage, methods are described and implemented to collect quantitative and/or qualitative data that may be analyzed to answer the question posed in the Ask stage. If required data were already collected, details of the data are described and collection of the data is verified.

Participants

<<Describe characteristics of the participants from whom required data were or will be collected.>> For example, There will be [insert number of participants] participants in this study. They will be [Insert characteristics]. Include demographic details of participants as appropriate (e.g., Age, gender, grade level, race/ethnicity, language, disability, socioeconomic status, occupation, years of experience, etc.)



Student Feedback



It is honestly a very scary and nerve-wracking process to try to write a huge capstone paper or thesis...[instructor] made this daunting process approachable, relevant, and rewarding. [Instructor] scaffolded the writing process in a way that made each section attainable.

I view research so much differently than I used to and have a greater appreciation for a research project. This capstone project has provided me with thorough research skills I will take into my future studies and the education workplace.



Lessons Learned

> Offer flexible deadlines

- 16-weeks is a narrow window in some cases. Unexpected delays or other pressing obligations may arise for students as they are enrolled in the course. Students may extend their capstone project to subsequent semesters if they do not complete in 16-weeks.

> Stick to the essentials

- Some assignments from earlier iterations of the capstone course are no longer required (e.g., literature matrix, project plan); however, they are still presented and available as tools for students to consider using.



Lessons Learned

> Encourage foundational knowledge

- Enrolling in the capstone course before completing fundamental courses that address quantitative and qualitative research methods, literature reviews, and other related topics may steepen the learning curve in the course.

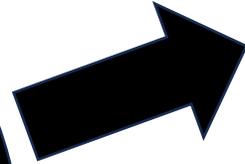
> Provide targeted supports

- Regularly scheduled one-on-one meetings help ensure that the unique needs of each student in the capstone course are supported.

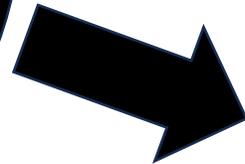


Potential Impact

Other
Graduate
programs
could use
A+ Inquiry
to...



Develop a similar capstone course



Develop a contextually-specific project
(e.g., adapt writing prompts to explicitly
represent higher education assessment)



Digital Tool



A+ Inquiry Scenario Builder

Requires Gmail or Google account



<https://bit.ly/aplusingquirybuilder>

Absorb

Existing knowledge of a context is acknowledged, and a knowledge gap (i.e., a need to know more about something) is identified. Guiding questions: What is already known about the context? What is the knowledge gap that needs to be filled? (i.e., What is not known but should be known about the context?) Why is it important to fill the knowledge gap?

Your answer

Ask

Questions are formulated that, if answered, will help close the knowledge gap that was identified in the Absorb stage. Guiding question: What questions, if answered, could be formulated to help fill the knowledge gap identified in the Absorb stage?

Your answer

Accumulate

Methods are described and implemented to collect quantitative and/or qualitative data

A+ Inquiry Scenario Builder

Select Scenario: Assessing faculty b... (1) | Timestamp (Date) | Edit | <https://docs.google.com>

Assessing faculty buy-in for a new program assessment system

1. Respond to the questions in the Google Form [HERE](#)
2. Return to this Looker Studio Report to view your responses
3. Select the Scenario and Timestamp from the dropdown menus
4. Click the URL in the edit field on this page to edit responses

Absorb	Ask	Accumulate	Access
Sample State University (SSU) had been piloting new institutional effectiveness software in response to a need for improving its academic yearly program assessment system. Faculty in the pilot programs provided positive feedback and other programs on campus expressed interest in using the system. SSU considered scaling it to all programs in the university, but they were not sure if there would be enough faculty buy-in across the institution to move forward with institution-wide utilization of the new system.	SSU assessment personnel converted the knowledge gap into the following question that could help guide a study for them to improve their understanding of how much faculty buy-in there would be for implementing the new system: To what extent do faculty on campus support transitioning from the current program assessment system to the piloted program assessment system?	SSU administered an online survey to faculty who attended a series of required presentations on the university's spring assessment day. One of the survey questions stated: If you have or were to be given the responsibility of preparing a yearly program assessment, would you prefer to use the new system being piloted or the existing system that most programs are currently using? There were three response options: Current system, New system, I don't know. Forty-two faculty submitted a response.	SSU retrieved the collected survey data from the response summary page on the online survey site in preparation for analysis.
Analyze	Answer	Announce	Apply
SSU analyzed the data by calculating the percentage of respondents who selected each response option to the survey question.	Most (83%, 35 out of 42) respondents indicated they would prefer to use the new system, which suggests there is buy-in from the majority of faculty. Limitations include that not all faculty responded to the survey and the results represent perception data at a single point in time.	SSU program assessment leadership disseminated and discussed the results with various assessment committees and other applicable faculty, staff, and administrators.	SSU used the results of this study and other relevant evidence as rationale to proceed with conceptualizing and implementing a plan to scale utilization of the new program assessment system across the institution.

www.aplusinquiry.com/resources

← → ↻ aplusinquiry.com/resources   



A+ Inquiry

[Home](#) [About](#) [Examples](#) **[Resources](#)** [Publications](#) [Contact](#)

Online Activities

[A+ Inquiry Stages Overview](#)

[A+ Inquiry Sample Scenario - Program Outcome Assessment](#)

Digital Tool

Use this tool to design a study or describe a study that has already been implemented through an *A+ Inquiry* lens. First, respond to the questions in the Google Form. Then, view your responses on the Google Looker Studio Report. You may edit your responses through a link on the dashboard after they have been submitted in the form.

[Google Form](#) (compile details of your study)

[Google Looker Studio Report](#) (view details of your study)

Capstone Paper Template



[Capstone Paper Template with Writing Prompts](#)

Learning Goals

-  Identify stages of the *A+ Inquiry* framework
-  Identify guiding questions relevant to each stage of the *A+ Inquiry* framework
-  Describe how *A+ Inquiry* stages align with postsecondary assessment frameworks
-  Describe how the *A+ Inquiry* stages align with common sections in a thesis paper
-  Describe requirements for completing a Master's level *A+ Inquiry* capstone course



Contact Us



Nathan C. Anderson, Ph.D.
nathan.c.anderson@minotstateu.edu
701-858-3064



Daniel R. Conn, Ed.D.
daniel.conn@minotstateu.edu
701-858-3267



Kaydra D. Weigel, M.Ed.
kaydradean@gmail.com
701-721-3403





Thank you!

