

Quality Initiative Faculty Exploration Group Kick Off Meeting

4:30-6:00 p.m. - Sep 27, 2016

LRC 650

QI Proposal sent to attendees prior to meeting

Place paper & pens on tables

- I. Welcome (Todd Huspeni et al., Refer to PowerPoints, 5 min.)
  - a. Introduction of Group
  - b. Review of Project and Quality Initiative
  - c. Introduction of Key Objectives
- II. Group Discussion 1 (Dona Warren et al., Refer to Word Document, 30 min.)
  - a. What Critical Thinking is, How Students Demonstrate it, and Challenges
  - b. What Might Help and How You Would Like to Benefit from This Initiative
  - c. What You Are Doing Now
- III. Argument Mapping (Dona Warren et al., Refer to PowerPoints, 25 min.)
- IV. Group Discussion 2 (Dona Warren et al., Refer to Word Document, 15 min.)
- V. Wrap Up (Todd Huspeni et al., Refer to PowerPoints, 15 min.)
  - a. D2L Resources
  - b. Next Meetings
  - c. Feedback Card

# GROUP DISCUSSION 1

## WHAT CRITICAL THINKING IS, HOW STUDENTS DEMONSTRATE IT, AND CHALLENGES

### CRITICAL THINKING

- “a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.”  
AACU (2009). "AACU Critical Thinking Value Rubric." From <https://www.aacu.org/value/rubrics>.
- "purposeful, reflective judgment which manifests itself in reasoned consideration of evidence, context, methods, standards, and conceptualizations in deciding what to believe or what to do.”  
Facione, P. (2015). "Critical Thinking What It Is and Why It Counts." from <http://www.insightassessment.com/Resources/Critical-Thinking-What-It-Is-and-Why-It-Counts>.
- "the disciplined mental activity of evaluating arguments or propositions that can guide the development of beliefs and taking action.”  
Huitt, W. (1998). "Critical Thinking an Overview." Educational Psychology Interactive.

### HOW STUDENTS DEMONSTRATE IT

#### (RESPONSES DRAWN FROM SPRING 2016 SURVEY)

- Analyzing, summarizing, and assessing information and arguments
- Being open to multiple perspectives
- Posing key questions and identifying or designing ways to answer those questions
- Forming judgments and drawing conclusions based on appropriate information
- Defending judgments and conclusions with strong arguments
- Effectively communicating judgments, conclusions, and arguments

### CHALLENGES TO TEACHING CRITICAL THINKING (RESPONSES DRAWN FROM SPRING 2016 SURVEY)

- Students tend to be “fact focused,” wanting to know the right answers rather than the reasons and resistant to exploring multiple perspectives.
- Students have difficulty reading long and complex material, tend to read for information rather than connections, and tend not to read critically.
- Students can be reluctant to take a stance on controversial issues, or reluctant to critically examine the stances that they do take.
- Students lack basic writing proficiency.
- It’s hard (almost impossible) to teach course content and critical thinking all at once.
- Giving meaningful feedback on student work appears inconsistent with maintaining a healthy work / life balance.
- Instructors are so busy with their current teaching load that there’s no time to rethink or revise a course.

## WHAT DO YOU FIND TO BE MOST CHALLENGING?

- Resistance to risks of re-examining positions. Not wanting to rethinking.
- Uncomfortable with middle position, gravitating toward polar positions.
- Empathy with other people's points of view.
- Instructors aren't trained in teaching critical thinking.
- Students are stuck in assumptions without understanding that they are assumptions.
- Lack of reflection upon actions or decisions.
- Using Toulmin, students have trouble identifying warrant.
- Students have difficult identifying assumptions.

## WHAT MIGHT HELP AND HOW YOU WOULD LIKE TO BENEFIT FROM THIS INITIATIVE

### WHAT MIGHT HELP

#### (RESPONSES DRAWN FROM SPRING 2016 SURVEY)

- Resources such as techniques and step-by-step methods to help encourage critical thinking, examples of how to revise assignments and quizzes to require critical thinking, assessment rubrics that make it easier and quicker to give useful feedback.
- Professional development sessions and workshops to support the integration of critical thinking into courses.
- Discussion groups to share concerns and ideas.

## HOW WOULD YOU LIKE TO BENEFIT FROM THE INITIATIVE?

- Cross-disciplinary conversations, especially for foundation level courses.
- The ability to assume that students know particular things.
- Learning ways to help students to see things that aren't (or maybe even are) immediately apparent to them – assumptions, inferences, etc.
- Exploring the possible differences between CT in different fields (STEM vs. other).

## WHAT YOU ARE DOING NOW

### WHAT ARE YOU CURRENTLY DOING TO TEACH CRITICAL THINKING?

- Introduce students to different arguments in order to break fixation with facts.
- Looking at domino-ing effects. What are we trying to effect? What might we effect by accident?
- Looking at context.
- Case studies, assign student roles.
- Social media to find bad arguments and contrast with better information.

## GROUP DISCUSSION 2

HOW DO YOU THINK THAT ARGUMENT MAPPING MAY APPLY OR SUPPLEMENT WHAT YOU ARE DOING?

- Lucidchart
- Empathize with different points of view
- Looking beyond the facts
- Models and choices of models
- Breaking down positions, reasons

# Quality Initiative Faculty Exploration Group Kick Off Meeting

September 27, 2016



# WELCOME

- Introduction of Group
- Review of Project and Quality Initiative

# KEY OBJECTIVES

- Discuss your experiences teaching critical thinking and how you would like to benefit from this initiative
- Learn about a specific approach to teaching critical thinking
- Form connections with colleagues who share similar interests
- Learn about October and November meetings

# Group Discussion 1



# Argument Mapping

- Tupperware doesn't need to fundamentally change your diet.
- **You can use piece of Tupperware even if you don't buy the entire set.**



tupperware by asgw (2013) <https://www.flickr.com/photos/aidanwojtas/13620509065/>

Attribution (<http://creativecommons.org/licenses/by/2.0/>)

Photo Attribution by PhotosForClass.com

# ARGUMENT SCHEMA

- Learning involves the acquisition and automation of schema – cognitive constructs that organize elements of information and the relationships between those elements. (Sweller 1994).
- Students appear to lack well-developed argument schema.
- Arguments can be represented graphically in a way that exposes their structure (Harrell and Wetzel 2015) thereby reducing cognitive load and easing the acquisition of argument schema. (Hoffmann 2011).

Harrell, M. and D. Wetzel (2015). Using Argument Diagramming to Teach Critical Thinking in a First-Year Writing Course. The Palgrave Handbook of Critical Thinking in Higher Education. M. Davies and R. Barnett. New York, Palgrave Macmillan US: 213-232.

Sweller, J. (1994). "Cognitive Load Theory Learning Difficulty and Instructional Design." Learning and Instruction 4: 295-312.

Hoffmann, M. (2011). Cognitive Effects of Argument Visualization Tools. Argumentation: Cognition and Community. F. Zenker: 1-12.

Diagram	Meaning	Diagram	Meaning
$\begin{array}{c} 2 \\ \downarrow \\ 1 \end{array}$	<p>Idea 2 is a reason to believe idea 1.</p> <p>“2 therefore 1.” “1 because 2.”</p>	$\begin{array}{c} \underline{2 + 3} \\ \downarrow \\ \underline{a + 4} \\ \downarrow \\ 1 \end{array}$	<p>‘a’ is an unstated subconclusion.</p>
$\begin{array}{c} 3 \\ \downarrow \\ 2 \\ \downarrow \\ 1 \end{array}$	<p>Idea 3 is a reason to believe idea 2. Idea 2 is a reason to believe idea 1.</p> <p>“3 so 2. Therefore 1.” “1. After all, 3 so 2.”</p>	$\begin{array}{c} \underline{2 + a} \\ \downarrow \\ 1 \end{array}$	<p>‘a’ is an unstated premise.</p>
$\begin{array}{c} \underline{2 + 3} \\ \downarrow \\ 1 \end{array}$	<p>Ideas 2 and 3 jointly constitute a reason to believe idea 1.</p> <p>“2 and 3. Therefore 1.” “1 because 2 and because 3.”</p>	$\begin{array}{c} 3 \\ \swarrow \downarrow \\ 2 \\ \downarrow \\ 1 \end{array}$	<p>Idea 2 is a reason to believe Idea 1. Idea 3 is a reason disbelieve to idea 2.</p>
$\begin{array}{c} 2 \quad 3 \\ \swarrow \quad \searrow \\ 1 \end{array}$	<p>Idea 2 and idea 3 independently constitute reasons to believe idea 1.</p> <p>“1. After all 2. Furthermore 3.” “2 therefore 1. Besides 3.”</p>	$\begin{array}{c} 3 \\ \swarrow \downarrow \\ \underline{2 + a} \\ \downarrow \\ 1 \end{array}$	<p>Idea 2 is a reason to believe Idea 1. This assumes that ‘a’ is true. Idea 3 is a reason to disbelieve idea ‘a’.</p>

Diagram	Passage	Diagram	Passage
$\begin{array}{c} 2 \\ \downarrow \\ 1 \end{array}$	<p>"2. <u>Online classes allow students to learn at times that are convenient for them.</u> Therefore 1. <u>they're perfect for working adults.</u>"</p>	$\begin{array}{c} 2 + 3 \\ \downarrow \\ a + 4 \\ \downarrow \\ 1 \end{array}$	<p>"2. <u>Online classes don't teach higher level thinking skills.</u> 3. <u>College classes should teach higher level thinking skills.</u> And 4. <u>only college classes should transfer in.</u> Therefore, 1. <u>online classes shouldn't transfer in.</u>" (a = Online classes shouldn't be college classes.)</p>
$\begin{array}{c} 3 \\ \downarrow \\ 2 \\ \downarrow \\ 1 \end{array}$	<p>"1. <u>Traditional college students should be discouraged from taking online courses.</u> After all, 2. <u>online courses retard social integration</u> because 3. <u>they can be completed without meeting other students in the class.</u>"</p>	$\begin{array}{c} 2 + a \\ \downarrow \\ 1 \end{array}$	<p>"1. <u>Online classes are apt to engage the students</u> because 2. <u>they lend themselves to gamification.</u>" (a = Students are engaged by gamification.)</p>
$\begin{array}{c} 2 + 3 \\ \downarrow \\ 1 \end{array}$	<p>"2. <u>Online classes allow students to work at their own pace</u> and 3. <u>students tend to learn better when they can work at their own pace</u> so 1. <u>online courses can enhance student learning.</u>"</p>	$\begin{array}{c} 3 \\ \swarrow \searrow \\ 2 \\ \downarrow \\ 1 \end{array}$	<p>"Some people argue that "1. <u>online classes are apt to engage the students</u> because 2. <u>such courses lend themselves to gamification.</u> That's clearly mistaken, though, because 3. <u>nothing that's graded can really be gamified.</u>"</p>
$\begin{array}{c} 2 \quad 3 \\ \swarrow \searrow \\ 1 \end{array}$	<p>"2. <u>Online courses are inexpensive to run</u> so 1. <u>they're a good choice for most colleges.</u> 3. <u>They tend to attract students, too.</u>"</p>	$\begin{array}{c} 3 \\ \swarrow \searrow \\ 2 + a \\ \downarrow \\ 1 \end{array}$	<p>"The fact that 2. <u>online classes lend themselves to gamification</u> is taken to show that 1. <u>online classes are apt to engage the students.</u> But this argument fails because 3. <u>students are insulted by the gamification of education.</u>" (a = Students are engaged by gamification.)</p>

- Some sentences will need to be ignored or rephrased.
- Some sentences will need to be divided into their component parts and some ideas will emerge from summarizing longer passages.
- Not all inference connectors will be signaled with words like “therefore” and “because.”
- Some elements will be poorly communicated.

It's hard to find a black chicken in the dark.  
But it's even harder if you don't know what a chicken looks like.



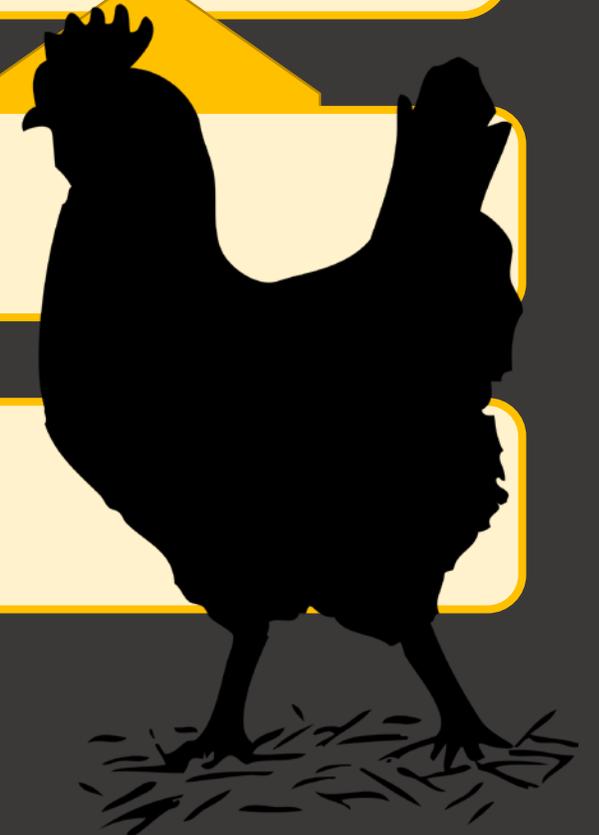
Understanding  
Arguments

Evaluating  
Arguments

Constructing  
Arguments

Grasp of Argument Schema

Visual Representation of Argument Structure



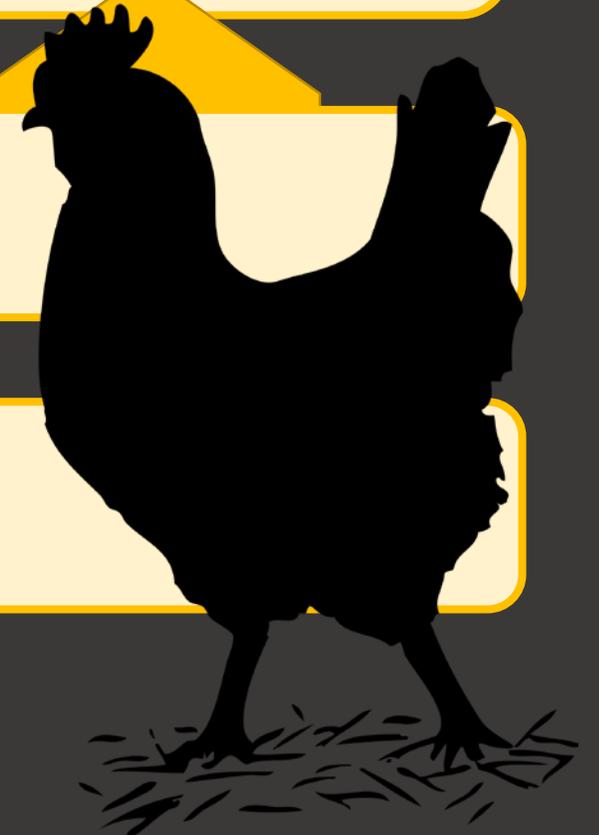
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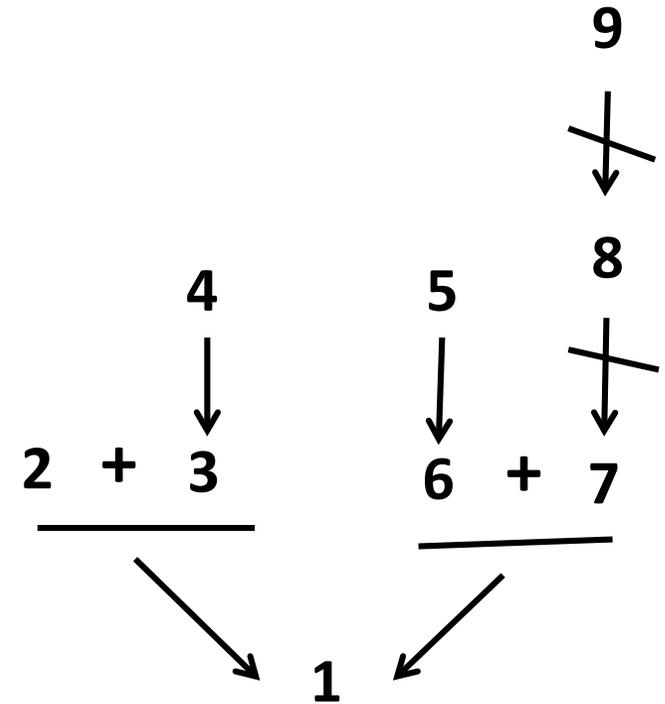


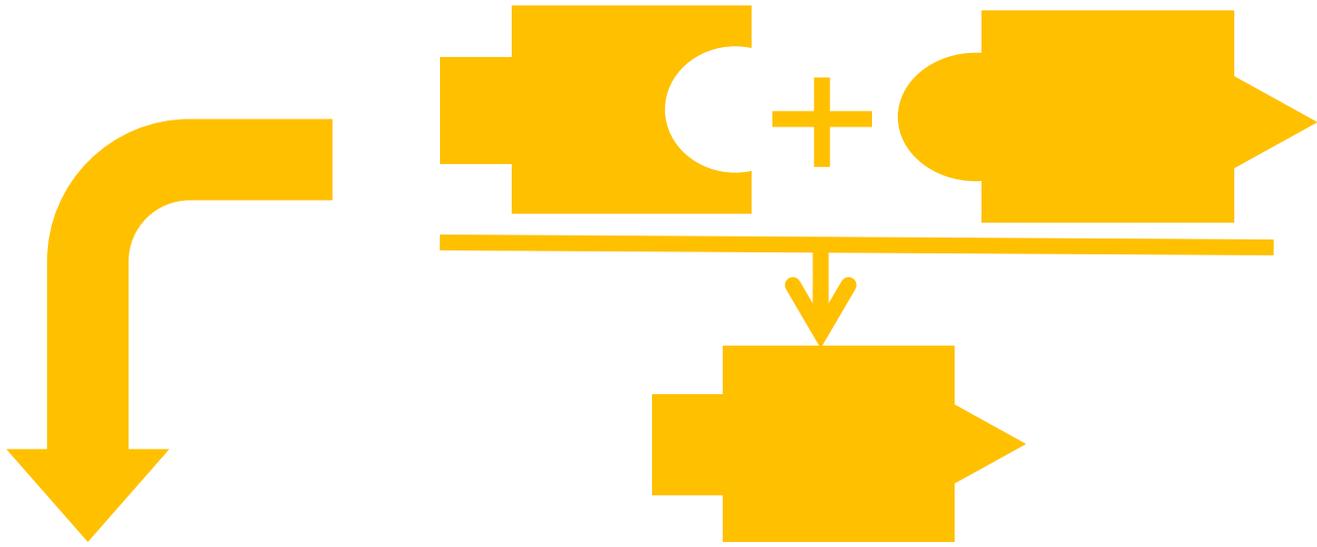
1. What is the main conclusion?
2. For all other ideas:
  - a. Is this idea important?
  - b. If so, how does it relate to what's gone before (support, rebuttal, added, or separate?)

“Not all students should go to college. For one thing, some students want to pursue vocational training and vocational training isn't best offered by colleges because most colleges focus on providing a broad education in the liberal arts. Furthermore, college is expensive so only students who have a good chance of succeeding should go. Not all students do have a good chance of succeeding. It's popular, of course, to deny this, and to say that all students can succeed in college, but that ignores that fact not all students are equally motivated.”

1. What is the main conclusion?
2. For all other ideas:
  - a. Is this idea important?
  - b. If so, how does it relate to what's gone before (support, rebuttal, added, or separate?)

“1. Not all students should go to college. For one thing, 2. some students want to pursue vocational training and 3. vocational training isn't best offered by colleges because 4. most colleges focus on providing a broad education in the liberal arts. Furthermore, 5. college is expensive so 6. only students who have a good chance of succeeding should go. 7. Not all students do have a good chance of succeeding. It's popular, of course, to deny this, and to say that 8. all students can succeed in college, but 9. that ignores that fact not all students are equally motivated.”





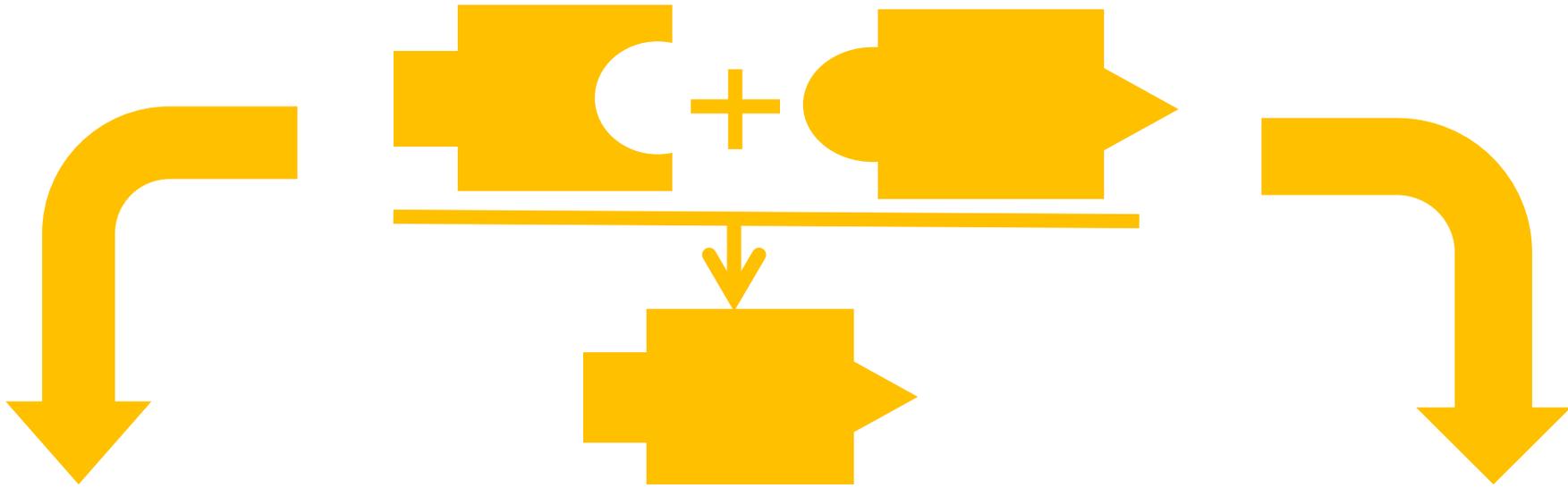
Only students who have a good chance of succeeding should go to college.

+

Not all students do have a good chance of succeeding.



Not all students should go to college.



Only students who have a good chance of succeeding should go to college.

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Not all students do have a good chance of succeeding.

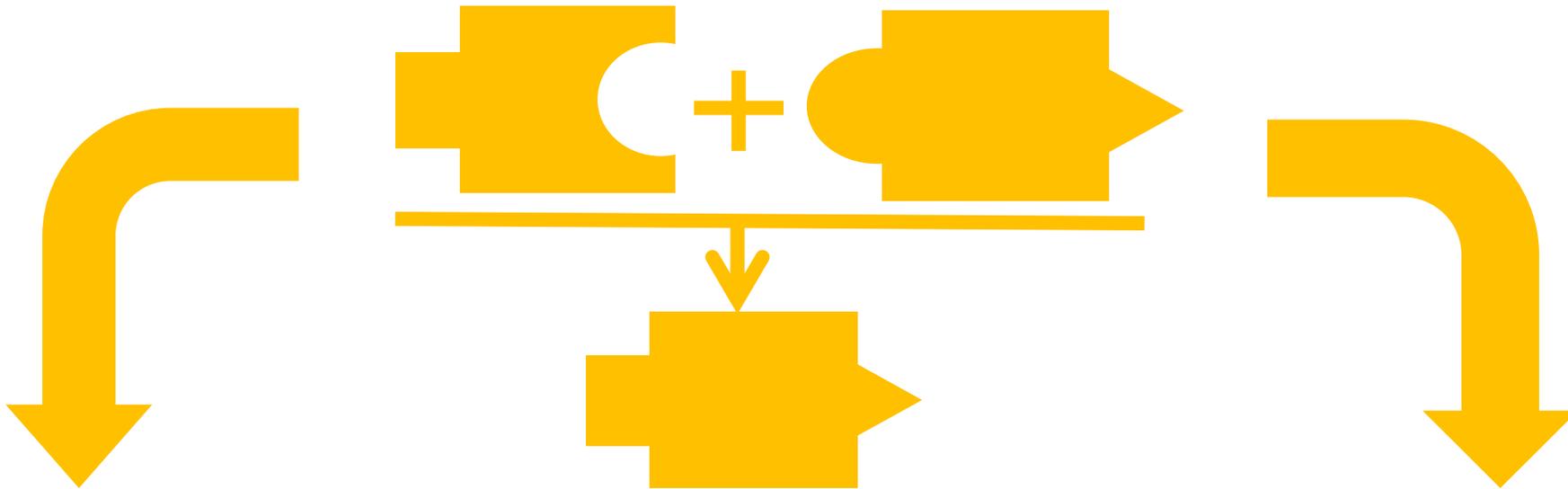
Not all students should go to college.

Most colleges focus on providing a broad education in the liberal arts.

+

If focus on providing a broad education in the liberal arts  
**then** vocational training isn't best offered by.

Vocational training isn't best offered by colleges.



Only students who have a good chance of succeeding should go to college.

+

Not all students do have a good chance of succeeding.

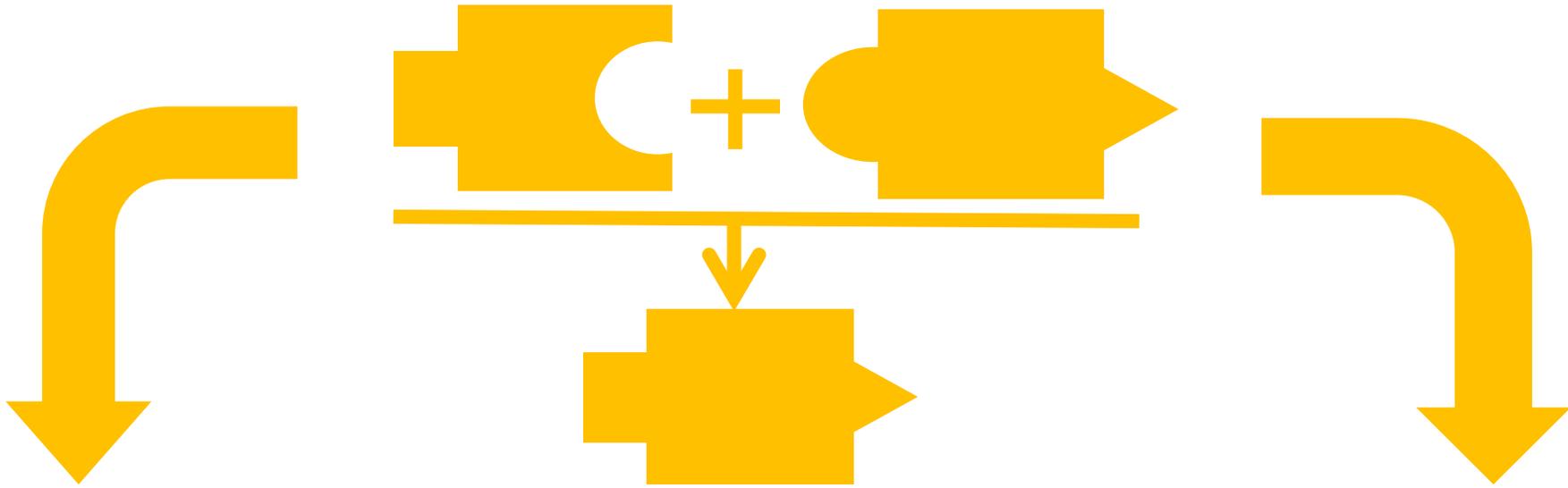
Not all students should go to college.

Most colleges focus on providing a broad education in the liberal arts.

+

If an institution focuses on providing a broad education in the liberal arts **then** vocational training isn't best offered by that institution.

Vocational training isn't best offered by colleges.



Only students who have a good chance of succeeding should go to college.

+

Not all students do have a good chance of succeeding.

Not all students should go to college.

Most colleges focus on providing a broad education in the liberal arts.

+

Vocational training isn't best offered by institutions that focus on providing a broad education in the liberal arts.

Vocational training isn't best offered by colleges.

Understanding  
Arguments

Evaluating  
Arguments

Constructing  
Arguments

Grasp of Argument Schema

Visual Representation of Argument Structure



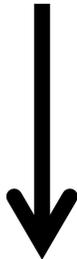
Premise

1. Is this true?
2. Could someone who doesn't already believe the conclusion think this is true?



Subconclusion

1. If Bob, a perfectly gullible and perfectly rational person, believed the ideas at the top of this inference, how likely would he be to believe the idea at the bottom?



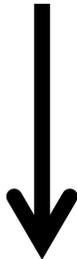
Ultimate Conclusion

1. What hidden premise is being assumed by this inference?
2. Is that premise true?
3. Could someone who doesn't already believe the conclusion think that this premise is true?

Premise



Subconclusion



Ultimate Conclusion

If you don't like this idea, don't just reject it. Instead, assess the reasoning for it.

If you decide that the argument is good then you should be inclined to accept the ultimate conclusion.

But if you decide that the argument is bad, you should not decide that the ultimate conclusion is false.

Understanding  
Arguments

Evaluating  
Arguments

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Grasp of Argument Schema

Visual Representation of Argument Structure



Justification of End

Here's why E is desirable.



End

We want E.

Justification of Means

Here's the connection between M1 and E.



Means

If we do M1 then we'll get E.

Justification of Comparison

Here are some facts about M1 and M2.



Comparison

M1 is a better way than M2 to get E.

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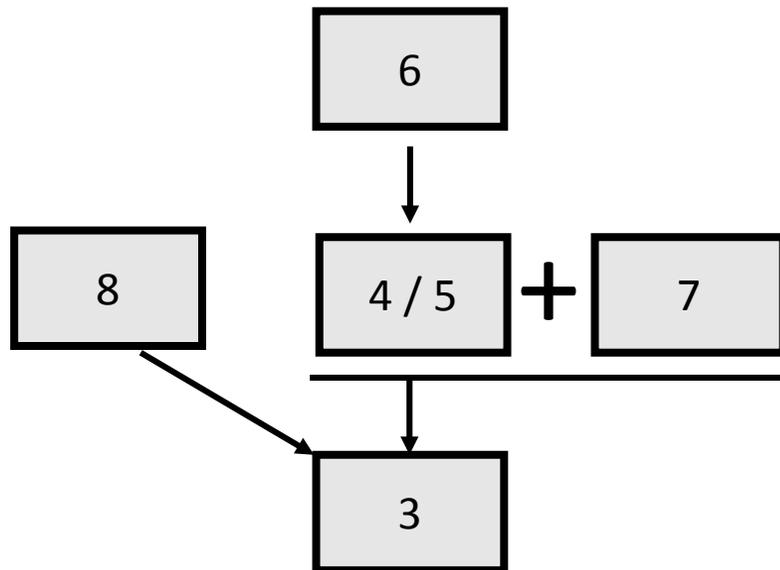
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Recommendation

We should do M1.

1. What is your question?
2. What are some possible answers?
3. What answer do you like best?
4. What's a reason to believe that answer to be true?
5. Is the reasons true? If not, can you revise it?
6. Is the reason acceptable to the audience? If not, what reason can you give to accept it?
7. Is the inference strong? If not, what missing reason is required?
8. Are there other, completely different sorts of reasons to believe that your answer is true?



1. What do you want to say first?
2. What do you want to say next?
3. How can you help your reader to see the connection between those ideas?

# Online Resources

Rationale

<https://www.rationaleonline.com/>

Truth Mapping

<https://www.truthmapping.com/>



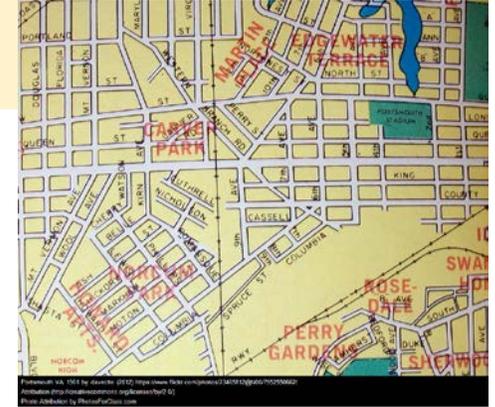
# Group Discussion 2



# WRAP UP

- D2L Resources
- Next Meetings
  - Noon, Friday, October 21, 2016  
Argument Mapping in more detail  
Form smaller FEGs of 2-8 (share ideas, create and share materials, present at conferences, etc.)
  - Noon, Friday, November 18, 2016  
Argument Mapping tutorial/practice  
Discuss role AM might play within discipline
- Feedback Card

Does argument mapping look like it may assist you in teaching CT to your students? If so, how so? If not, why not?



**Participants of Faculty Exploration Group (FEG) Meeting on Critical Thinking -- Tuesday, September 27, 2016**

	A	B	C
1	<b>FN</b>	<b>LN</b>	<b>Department</b>
2	Helena	Alden	Sociology and Social Work
3	Kele	Anyanwu	Education
4	Elia	Armacanqui-Tipacti	World Languages and Literature
5	Tobias	Barske	World Languages
6	Bob	Bell	Biology
7	Karyn	Biasca	Paper Science and Engineering
8	Mary	Bowman	English
9	Kym	Buchanan	Education
10	Ginny	Carlton	CNR/HDNRM
11	Dorothy	De Boer	Sociology & Social Work
12	Taylor	Easum	History and International Studies
13	Jonah	Elrod	Music
14	Cary	Elza	Communication
15	Sharon	Frazier	Nursing
16	Lauren	Gantz	English
17	Anne-Bridget	Gary	Art and Design, COFA
18	Daniel	Graf	Biology
19	Jeannie	Hill	Theatre & Dance
20	Todd	Huspeni	Academic Affairs
21	Kathe	Julin	Interior Architecture
22	Shiba	Kar	CNR
23	Julia	King	Communication Sciences & Disorders
24	Mary Jae	Kleckner	SBE
25	Vera	Klekovkina	World Lang. & Literatures
26	Christine	Koeller	Geography
27	Trisha	Lamers	TLC
28	Nancy	LoPatin-Lummis	General Education
29	Shanny	Luft	Philosophy
30	Wade	Mahon	English
31	Rochell	Maier	Military Science
32	Rob	Michitsch	CNR
33	Lynne	Niznik	COFAC advisor
34	Ismaila	Odogba	Geography/Geology
35	Jodi	Olmsted	SHCP
36	David	Ozsvath	Geography and Geology
37	Leslie	Plonsker	CSD
38	Michael	Rader	CNR
39	Krishna	Roka	Sociology
40	Justin	Rueb	Psychology
41	Cory	Rusch	None
42	Remya	Sarma-Traynor	World languages and literature
43	Cady	Sartini	CNR-Wildlife
44	Nancy	Shefferly	Biology
45	Cade	Spaulding	Communication
46	Robin	Tanke	Chemistry
47	Pam	Terrell	CSD
48	Susan	Turgeson	HPHD
49	Dona	Warren	Philosophy
50	Trish	Zdroik	Communication
51			
52	9/26/2016		