

Assessing Freshman

Thesis Statements

Edward Eckel
November 3, 2017




Outline

- What is my project?
- Rubric development – Halting steps
- Using the rubric – An example
- Questions



My project

- 2016/17 Academic year
 - Research subjects – 33 freshman students in IEE1020 Technical Communications
 - WMU HSIRB Approval #16-04-36
 - Assessment Fellows Grant (WMU)
- 



How do freshman engineering students come up with topics and thesis statements for their research papers?

How focused are those final thesis statements?

Three Data Collection Methods


- A biweekly survey given to students as they researched and wrote their papers
- An end-of-semester qualitative interview
- Assessment of thesis statements from final papers.

➤ Fall 2016: 6

➤ Spring 2017: 23


Figure 2: Rubric for Analyzing Student Research Topics

	Exemplary – 3 points	Developing – 2 points	Beginning – 1 point
Researchability	Final topic selection is able to be challenged, examined, or analyzed by a novice researcher with a variety of readily available resources (both scholarly and popular) in a feasible amount of time.	Final topic selection is able to be challenged, examined, or analyzed by a novice researcher, but there are potential issues around feasibility and/or access of information resources. There may be too much or too little information available on this topic, only one kind of source that addresses this topic (i.e. only scholarly or only popular), or other issues with time and access.	Final topic selection is not researchable because the topic cannot be challenged, examined, or analyzed by resources readily available to a novice researcher in a feasible amount of time.
Appropriate Breadth (12-13 pages)	Topic is manageable for a 12-13 page research paper. The student defines who is affected, what aspect of the issue they will deal with, what time frame they will be researching, and where their issue is present.	Topic is too broad or narrow for a 12-13 page paper, but the student has defined some areas of their subject. The topic is somewhat manageable for this assignment but requires further specificity/development in 2 areas (who, what, when, where).	Topic is so broad or narrow that it is not manageable for a 12-13 page research paper; the student does not specifically define various aspects of their subject (who, what, when, where). Extensive revision is required.
Topic-Related Vocabulary and Language Context	Topic-related vocabulary is used to provide language context for the topic. Useful search terms can be derived from topic statement.	Topic-related vocabulary is used to provide some language context. However, it is either not well-defined or not helpful for developing search terms from topic statement.	Topic-related vocabulary is not used and, therefore, language context is not established. No search terms can be derived from topic statement.
End Result as Arguable Topic	Final topic statement is thesis-driven and contains an argument. Student can proceed to the research process but may have to reflect back on the scope of the assignment.	Final topic statement is general. Asks a "how" or "why" question that could lead to analysis or the development of an argument. Revision and further definition required before proceeding to the research process.	Final topic statement is too general and/or not argument-driven. Asks a yes/no or "factual" question that does not facilitate analysis or argument. As it stands, the resulting paper would be solely information-based.



Rinto, Bowles-Terry & Santos, A. J. (2016).

- Looked at first-year students' paper topics for:
 - Researchability (given library resources)
 - Appropriate breadth
 - Language context
 - Presence of an arguable topic



Rinto, Bowles-Terry & Santos, A. J. (2016).

- Beginning – 1 point
- Developing – 2 points
- Exemplary – 3 points



Rubric Team

- Carrie Leatherman - Natural Sciences
- Michael Duffy - Music, Dance and Fine Arts
- LuMarie Guth - Business

Reviewer Initials:

Date:

33 Purpose and Audience The purpose of this paper is to show the advantages and disadvantages of using nanotechnology in cancer research. There are different ways that nanotechnology can be used and those will be covered in this paper. The effectiveness and safety of nanotechnology will be compared to the practices used for treating cancer today. This paper is for the general understanding and education about nanotechnology in the field of cancer research and is written for the general public. Most terms that are unfamiliar will be defined for the ease of the reader and for clarification.

what are they?

what types of cancer

Rubric Category	Score (points)	Notes
Researchability	3	While topic is not well-specified, this is researchable given current library resources.
Appropriate Breadth (12-13 pages)	1	Student does not specify which types of cancer, nor does he/she specify what specific nanotechnology techniques will be covered.
Topic-Related Vocabulary and Language Context	1	Not enough just to use cancer or nanotechnology. There are specific techniques to refer to. drug delivery nano medicine nano particles
End Result as Arguable Topic	1	No real argument

Page 1

Topic: Hydrogen

Assessment: 1

Appropriate Breadth (12-15 pages)

Topic Related Vocabulary and Language Context

End Result as Appropriate Topic

Notes: Hydrogen is a gas and is used in many ways. It is a clean fuel and is used in many ways. It is a clean fuel and is used in many ways.

Page 2

Topic: Hydrogen

Assessment: 1

Appropriate Breadth (12-15 pages)

Topic Related Vocabulary and Language Context

End Result as Appropriate Topic

Notes: Hydrogen is a gas and is used in many ways. It is a clean fuel and is used in many ways. It is a clean fuel and is used in many ways.

Page 3

Topic: Hydrogen

Assessment: 1

Appropriate Breadth (12-15 pages)

Topic Related Vocabulary and Language Context

End Result as Appropriate Topic

Notes: Hydrogen is a gas and is used in many ways. It is a clean fuel and is used in many ways. It is a clean fuel and is used in many ways.

Page 4

Topic: Hydrogen

Assessment: 1

Appropriate Breadth (12-15 pages)

Topic Related Vocabulary and Language Context

End Result as Appropriate Topic

Notes: Hydrogen is a gas and is used in many ways. It is a clean fuel and is used in many ways. It is a clean fuel and is used in many ways.



Colleague suggestions

- Revise rubric – remove "Researchability"
- Write down "tacit" or unspoken criteria
- Provide sample language



Using the Rubric: An example



Participant 47

The purpose of this paper is to research and prove that if countries in South America don't make crucial changes to the foundation and growth of their aviation infrastructures, they will continue to fall behind economically in a world where many countries thrive due to aviation profitability. Aviation sector growth in the continent has creaked to a near halt as each country resides in a state of economic and political turmoil.



Participant 47

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- Carrie, Michael, LuMarie
- Dr. David Reinhold and Office of Undergraduate Student Assessment
- Erin Rinto (and colleagues) for use of rubric



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References



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Challenges

- Reliability
- Validity
- Resolving differences in scoring among scorers
 - Moskal and Leydens (2000)
 - Johnson et al (2005)
 - Kim (2011)