# **Annual Assessment Report**

Department: Political Science Academic Year: 2016-17 Date of Submission: September 5, 2017 Department Chair: Dr. Jesse Covington

I. Response to the previous year PRC's recommendations

Item: We did not see where the PRC offered	Response:
recommendations.	
Item:	Response
Item:	Response:
Item:	Response:
Notes:	

#### II A. Program Learning Outcome (PLO) assessment

If your department participated in the ILO assessment you may use this section to report on your student learning in relation to the assessed ILO. The assessment data can be requested from the Dean of Curriculum and Educational Effectiveness.

Program	Critical training
Learning	
Outcome	
Who is in	Tom Knecht
Charge	
/Involved?	
<b>Direct</b>	The Department applied the AAC&U's "Inquiry and Value Rubric" to assess upper-division student research papers. The
Assessment	rubric used a 1 (Developing) to 4 (Capstone) scale to assess six categories of research: 1. Topic Selection, 2. Existing
<b>Methods</b>	Knowledge, 3. Design, 4. Analysis, 5. Conclusions, and 6. Limits and Implications (see Appendix A for the rubric). We
	assessed 30 papers from three courses: POL 111: American Foreign Policy (Dr. Knecht), POL 124: International

	Development (Dr. Bryant) and POL 150: International Conflict and Peacebuilding (Dr. Bryant) course (see Appendix B for
	paper prompts). Dr. Bryant and Dr. Knecht had a meeting in which they discussed various categories and assessment strategies.
Indirect	
Assessment	
<u>Methods</u>	
Major	Overall, we had mixed findings. The average rubric scores and standard deviations were as follows: Topic Selection = 3.1
Findings	(SD = .7); Existing Knowledge = 2.9 (SD = .7); Design = 2.6 (SD = .8); Analysis = 2.6 (SD = .9); Conclusions = 2.5 (SD = .9); and
	Limitations and Implications = 2.6 (SD = .8) (see Appendix C). We ran an ANOVA to see if there was a significant difference
	between Drs. Bryant and Knecht's assessment of student work; in only one category—topic selection—was there a
	statistically significant difference in ratings (Dr. Knecht was the more generous evaluator of topic selection).
	What are we to make of these findings? Unfortunately, the results fall short of our goal that students average "3's" or
	better across all categories. However, the "3" goal is somewhat arbitrary and perhaps unrealistic. A better judge of our
	results is to compare them to the last time we assessed critical training. On this score, there is reason to celebrate. The
	2016-17 crop of students equaled or outperformed the 2014-15 students on every category. We are especially gratified that students improved most dramatically in their ability to write a literature review (i.e., existing knowledge), which has
	been a point of emphasis for the Department. This finding suggests that Departmental efforts (particularly in POL-040) are bearing fruit in significant ways.
Closing the	The results show that we are trending in the right direction in critical training. The biggest change is that Kate Bryant will
Loop	teach POL 40: Empirical Political Research in the Fall. POL 40 is the course where students receive the most training in
Activities	research methods (i.e., critical training). We are excited to see how Dr. Bryant revamps the course. Beyond that, most of
	the "closing the loop" activities are on hold as we begin writing our six-year report. The Department will use the coming
	year to "think big" about the major, including how we train our students to think critically.

or/and

### II B. Key Questions

Key Question	
Who is in	
Charge/Involved?	
Direct Assessment	
<u>Methods</u>	
Indirect	
Assessment	
<u>Methods</u>	
Major Findings	
Recommendations	
Collaboration and C	ommunication

### III. Follow-ups

Program Learning
Outcome or Key
Question
Who was
involved in
implementation?
What was
decided or
addressed?

How were the	
recommendations	
implemented?	
Collaboration and C	Communication

IV. Other assessment or Key Questions related projects

Project	
Who is in	
Charge /Involved?	
/Involved?	
Major	
Findings	
Action	
Collaboratio	on and Communication

### V. Adjustments to the Multi-year Assessment Plan (optional)

Proposed adjustment	Rationale	Timing

### **VI.** Appendices

A. Prompts or instruments used to collect the data

- B. Rubrics used to evaluate the data
- C. Relevant assessment-related documents (optional)

## **APPENDIX A. RUBRIC**

#### **INQUIRY AND ANALYSIS VALUE RUBRIC**

for more information, please contact value@aacu.org



The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can by shared nationally through a common dialog and understanding of student success.

#### Definition

Inquiry is a systematic process of exploring issues, objects or works through the collection and analysis of evidence that results in informed conclusions or judgments. Analysis is the process of breaking complex topics or issues into parts to gain a better understanding of them.

#### Framing Language

This rubric is designed for use in a wide variety of disciplines. Since the terminology and process of inquiry are discipline-specific, an effort has been made to use broad language which reflects multiple approaches and assignments while addressing the fundamental elements of sound inquiry and analysis (including topic selection, existing, knowledge, design, analysis, etc.) The rubric language assumes that the inquiry and analysis process carried out by the student is appropriate for the discipline required. For example, if analysis using statistical methods is appropriate for the discipline then a student would be expected to use an appropriate statistical methodology for that analysis. If a student does not use a discipline-appropriate process for any criterion, that work should receive a performance rating of "1" or "0" for that criterion.

In addition, this rubric addresses the **products** of analysis and inquiry, not the **processes** themselves. The complexity of inquiry and analysis tasks is determined in part by how much information or guidance is provided to a student and how much the student constructs. The more the student constructs, the more complex the inquiry process. For this reason, while the rubric can be used if the assignments or purposes for work are unknown, it will work most effectively when those are known. Finally, faculty are encouraged to adapt the essence and language of each rubric criterion to the disciplinary or interdisciplinary context to which it is applied.

#### Glossary

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- · Conclusions: A synthesis of key findings drawn from research/evidence.
- · Limitations: Critique of the process or evidence.
- · Implications: How inquiry results apply to a larger context or the real world.

	Capstone 4	Miles 3	stones 2	Benchmark 1
Topic selection	Identifies a creative, focused, and manageable topic that addresses potentially significant yet previously less- explored aspects of the topic.	Identifies a focused and manageable/doable topic that appropriately addresses relevant aspects of the topic.	Identifies a topic that while manageable/doable, is too narrowly focused and leaves out relevant aspects of the topic.	Identifies a topic that is far too general and wide-ranging as to be manageable and doable.
Existing Knowledge, Research, and/or Views	Synthesizes in-depth information from relevant sources representing various points of view/approaches.	Presents in-depth information from relevant sources representing various points of view/approaches.	Presents information from relevant sources representing limited points of view/approaches.	Presents information from irrelevant sources representing limited points of view/approaches.
Design Process	All elements of the methodology or theoretical framework are skillfully developed. Appropriate methodology or theoretical frameworks may be synthesized from across disciplines or from relevant subdisciplines.	Critical elements of the methodology or theoretical framework are appropriately developed, however, more subtle elements are ignored or unaccounted for.	Critical elements of the methodology or theoretical framework are missing, incorrectly developed, or unfocused.	Inquiry design demonstrates a misunderstanding of the methodology or theoretical framework.
Analysis	Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities related to focus.	Organizes evidence to reveal important patterns, differences, or similarities related to focus.	Organizes evidence, but the organization is not effective in revealing important patterns, differences, or similarities.	Lists evidence, but it is not organized and/or is unrelated to focus.
Conclusions	States a conclusion that is a logical extrapolation from the inquiry findings.	States a conclusion focused solely on the inquiry findings. The conclusion arises specifically from and responds specifically to the inquiry findings.	States a general conclusion that, because it is so general, also applies beyond the scope of the inquiry findings.	States an ambiguous, illogical, or unsupportable conclusion from inquiry findings.
Limitations and Implications	Insightfully discusses in detail relevant and supported limitations and implications.	Discusses relevant and supported limitations and implications.	Presents relevant and supported limitations and implications.	Presents limitations and implications, but they are possibly irrelevant and unsupported.

# **APPENDIX B. PROMPTS**

# **Paper Guide**

POL 111: American Foreign Policy Professor Knecht Spring 2016

#### Overview

You will write an original 15-25 page paper on American foreign policy. You will also have considerable leeway in formulating a research topic and are free to choose between quantitative, qualitative, or experimental methods. This guide will help you along the way.

#### Task 1. Research Design (Due Jan 25)

For this task, you will specify your research question and describe your preliminary research design. You have considerable freedom to choose a research question of interest. However, you should be aware that formulating a good research question is always one of the most difficult tasks in writing a paper. Here are a few things to think about when thinking about a research question:

#### Research Question

**Pose a question, not a topic**. Think of your research as a question that requires an answer instead of a topic to be discussed. The subtle difference in mindset will alter the way you approach your research. Consider the difference between these two statements: "Did public opinion influence the Bush administration's decision to go to war in Iraq?" vs. "My paper is on public opinion and foreign policy." The former statement poses an interesting theoretical question that is bounded; the later statement is vague and potentially unmanageable.

**Is my research question too broad?** Sometimes students select topics that are too broad to be answered in a term paper. For example, "what causes war?" is probably too big of a question to be covered in a mere 15 pages. A more manageable topic might be "why did the U.S. not intervene militarily in Darfur?"

**Is there enough evidence (data) to examine my topic?** Students often pose interesting research questions that simply cannot be answered with available data. For instance, the question of whether the U.S. tried covert operations to topple Saddam Hussein is an interesting research question that probably cannot be answered because national security concerns restrict access to files. Before you start down a road of inquiry, check to see if enough evidence is available to answer the question.

#### Research Design

Research design refers to the methods and evidence you will use to write your paper. Your research design should include the following:

- 1) Your research question and why it is important.
- 2) Your working thesis or set of hypotheses.
- 3) The method you will use. Will your paper be quantitative, qualitative, or experimental? Why have you selected this particular method?
- 4) The data you will use. How will you collect and analyze your data? If quantitative, which dataset will you use? If qualitative, which case studies will you conduct and why? If experimental, what is the nature of your experiment and how will you recruit subjects.

What to Turn In. Your research design should be between 1-3 pages and should be turned into Canvas before class.

## Task 2. Literature Review (Due Mar 7)

There is no way of getting around the fact that doing secondary research is hard work; you will have to read a lot to get the information you need. Although you can use course readings for your paper, you are expected to conduct outside research. Your literature review should be between 4-7 pages and have at least 15 scholarly sources (Level I: peer reviewed) read outside of class. A good literature review will (1) summarize the current literature, (2) evaluate and critique this body of knowledge, and (3) motivate your current paper. You are expected to use proper APSA formatting.

You should also be aware that there is a "hierarchy" of sources in academia, and different levels of this hierarchy are valuable for different sections of your paper.

Level I. Peer Reviewed Journals and Academic Books. Your paper should rely heavily on Level I sources, especially for your literature review and argument.

At least two experts in the field have evaluated articles that appear in peer-reviewed journals. The main peer-reviewed journals in political science are: *American Journal of Political Science; American Political Science Review; International Organization; International Security; International Studies Quarterly; Journal of Peace Research; Journal of Conflict Resolution; International Studies Review; Political Science Quarterly; Public Opinion Quarterly; Security Studies.* 

"Academic" books are often confused with "popular" books. Academic books are heavy on theory and evidence while popular books appeal to a mass audience and usually play loose with theory and evidence. For instance, *Power and Interdependence* by Keohane and Nye is an academic book; *Liberalism is a Mental Disorder* by Michael Savage is a popular book. Academic books are often, but not always, published by a university press (i.e., Cambridge University Press; Yale University Press), have a university professor as the author, and cite other academic works. Rely on academic books instead of popular books.

Level II. Magazine and Newspapers. Magazines and newspapers are good for providing background information and evidence but are not great sources for theory. Within magazines and newspapers, there is a hierarchy of sources. The *New York Times* and the *Washington Post* are considered the "papers of record" in the United States. *Time, Newsweek*, and *U.S. and World News Report* are good magazines.

Be careful of ideological bias when using newspapers and magazines. For instance, *The Weekly Standard* is conservative, and *The Progressive* is liberal.

Lexis-Nexis is a good source for newspapers and journals.

**Level III. Websites**. Although websites can be especially valuable sources of data and information, there is a wide variance in quality. Be very selective when doing research via the Internet. If your paper has a heavy dose of websites as sources, it raises a red flag. Avoid citing wikepedia.com.

<u>What to Turn In</u>. Turn in a Word copy of your literature review to Canvas. Your literature review should be between 4-7 pages with proper APSA citations. Your paper will be evaluated on both content and style.

#### Task 3. Formulating an Argument

There is a large section on formulating an argument and writing a thesis statement on Canvas. Here are a few additional comments:

Make an argument. Your paper should have a coherent argument and should be falsifiable.

**Be original.** Your paper should try to make an original contribution to the literature. In other words, do not simply recite what others have written.

Avoid writing an "opinion paper." Your paper should largely be non-normative. Normative views should be left to the conclusion.

**Stay on track.** Many papers wonder away from the main point. Write your research question and your answer on a separate piece of paper and refer to it often. If you find you are spending a lot of time on an issue that is unrelated to your question and thesis, stop and refocus.

**Defeat rival hypotheses.** Foreign policy events are overdetermined, meaning that there are multiple explanations for each phenomenon. As a result, there will always be other theories and perspectives that will challenge your own. A good rhetorical technique is to anticipate objections to your work by analyzing your argument. Then try to answer these objections.

#### Task 4. Research

This is a major research project and, as such, I expect you to spend significant time conducting research. You must start early, set deadlines for yourself, and complete the research in plenty of time to write the paper. I am happy to help you if you need assistance.

#### Task 5. Writing your paper. (Rough Draft Due Apr 4; Peer Reviews Due April 11; Final Paper Due April 25)

Writing a quality paper takes a lot of work: you have to outline, write, revise, get comments from others, revise again, and then revise some more. To help you in this process, you will hand in an initial draft on Apr 4. A peer will review your work and offer suggestions. You are then expected to revise your paper and turn it into Canvas on April 24. Here is the basic outline of a research paper:

- Introduction
  - Thesis
  - Road map
- Literature Review
- Theory
- Methodology
- Results
- Discussion (optional)

Conclusions

# Task 6. Peer Review (Due Apr 11)

You are expected to review a fellow student's paper and provide comments. All comments should be made electronically using Microsoft Word's editor function. Your comments should incorporate both substantive and stylistic suggestions. You are expected to be a firm, yet encouraging, editor.

## **Paper Requirements**

Your paper will be graded on the quality of the writing as well as the quality of the argument.

- The paper will be at least 15 pages.
- Use headings and subheadings as needed.
- Citations. You are free to use any acceptable form of citation (footnotes, MLA, Chicago etc...). My personal preference is to use parenthetical notation with a bibliography. In this method of citing, you write the authors' last name, date of publication and page number with the punctuation after the parentheses (Knecht 2004: 12). If you are paraphrasing, you do not have to use quotations but do have to cite (Smith 2003: 2). "Direct quotes need to have quotation marks and the parenthetical notation goes outside the quote" (George 2004:23). If you are communicating a finding or theory that other scholars have come up with, make sure you cite each relevant author (Bradley 1999; Jones 2004; Smith 2003). The full citation will appear in the bibliography
- Plagiarism. Do not do it. I check the authenticity of students work. Any questions about what constitutes plagiarism, please see me.
- Late work is penalized one letter grade per day.
- All papers should be typed. Use normal margins (1") and font (12 point) and double-spaced. Include page numbers. Do not submit your paper in a binder or folder, just staple.
- A good resource on writing is: Hacker, Diana (1999). A Writer's Reference. (4<sup>th</sup> ed). Boston: Bedford/St.Martins.

### Deadlines [all due by the start of class unless otherwise noted]

Jan 25. Research Design (5 pts) Mar 7. Literature Review (10 pts) Apr 4. Rough Draft (10 pts) Apr 11. Peer Reviews (10 pts) Apr 25. Final Paper (65 pts)

#### Research Paper and Presentation Guidelines POL 124: International Development

The research paper and presentation account for **30%** of your final grade. The paper will account for 20%, while the presentation and participation in the mini-conference will account for 10%

<u>Paper Expectations and Deadlines</u>: This is a thesis driven paper that evaluates an aspect of development, most likely in a single developing country of your choosing, although you are welcome to examine multiple countries as well. Your paper should be driven by a research question. Your paper should include an introduction, literature review, theory section, empirical evidence, and a conclusion.

- Proposal due **September 14th**. This section should include your research question as well as the country you plan to study. Briefly describe why this topic is important.
- Literature review due **October 5<sup>th</sup>**. This section should summarize *at least five scholarly sources* that address your research question. Think about how the articles you have chosen interact. Do they agree or disagree? Why and how? Discuss this in your paper.
- Thesis statement due **October 26th**. This section is the main argument that you will be making in your paper. Your argument should offer an answer to your research question and you should be able to draw at least one hypothesis from your argument. Use other research to support your argument and address potential counterarguments.
- Data Analysis due **November 9th**. This section should include empirical evidence testing your argument. This can be done using a variety of methods such as graphs, tables, charts, tabulations, correlations, regressions, etc. I will offer help in the computer lab to assist with questions or problems.
- Rough draft due **November 30th**. This is a full draft of your paper that will be sent to your discussant for the miniconference.
- Final draft due **December 12<sup>th</sup> by 10:00am**. Your final draft should be highly polished incorporate comments and suggestions from the mini-conference.

Please submit all materials through Canvas.

<u>Presentation and Mini-Conference Expectations</u>: For the conference, please prepare a ten-minute presentation of your paper. You may use slides, but are not required to. The presentation should focus on your main argument and supporting evidence. You will also serve as a discussant for one of your fellow students. As a discussant, you should read the paper before the mini-conference and provide feedback after the presentation. Highlight things you liked about the paper, things that were unclear, ask questions on things you were unsure of or interested in, and suggest ways the paper can be improved, This is an important role, as your feedback can help other students improve their papers. Presentations will be made in class on **November 30<sup>th</sup>** and **December 7<sup>th</sup>**.

#### Research Paper Guidelines POL 150: International Conflict and Peace-building

*Overview*: The research paper will account for **25%** of your final grade. The paper will examine a historical conflict or crisis of your choosing, but is subject to my approval. The first part of the paper will focus on the history of the conflict. The second part will ask you to analyze the causes of the conflict or crisis. Specifically, you will need to identify <u>three</u> of the theories discussed in class or the readings and directly relate them to your event. Additional details are provided below.

#### Paper Structure:

- 1. Introduction This will provide an introduction to your chosen subject. You should discuss why the event you examined is important. You should also provide a brief outline of the remainder of your paper.
- 2. History of the Event In this section, you should provide an overview of the events leading up to the event. Next, provide an informative but succinct overview of the major events that occurred during the conflict. Finally, discuss the outcome of the event and its effects on the country/countries.
- 3. Causes of the Conflict In this section you will identify three theoretical factors that caused the event to occur. Each theory should be described in general terms and then should be applied directly to your chosen event.
- 4. Conclusion In the conclusion, you should summarize your findings and provide a projection about the likelihood of conflict in this area in the future.

*Formatting*: The paper should be 18-20 pages long, double-spaced, with normal font and one-inch margins. You must also include a <u>bibliography</u> of all works referenced, but this will not count against your page limit. You should include no fewer than ten scholarly sources, including at least two sources for each theory you examine. If you need help finding sources, contact me and/or the library. Finally, the bibliography should follow the APSA Style Manual, available here:

http://www.apsanet.org/Portals/54/APSA%20Files/publications/APSAStyleManual2006.pdf

#### Grading:

- Proposal (due February 1<sup>st</sup>)– 5%
- Introduction 5%
- History of the Event 30%
- Causes of the Conflict 45% (15% for each theory)
- Conclusion 5%
- Writing style and grammar 5%
- Proper formatting, citations, and bibliography 5%

# FINAL DRAFT IS DUE ON APRIL 28<sup>TH</sup> AT 5:00PM THROUGH CANVAS.

# **APPENDIX C. RESULTS**

	Student	Topic Selection	Existing Knowledge	Design	Analysis	Conclusions	Limits and Implications	
1	124-1	3	4	3	3	3	3	
1	124-2	3	3	2	2	2	3	
1	124-3	4	4	3	4	4	4	
1	124-4	3	3	3	3	3	3	
	124-5	3	2	2	2	2	2	
1	124-6	3	3	3	3	3	3	
	124-7	3	3	3	2	2	2	
	124-8	3	3	3	3	3	2	
	124-9	3	3	3	3	2	3	
	124-10	3	4	3	3	3	2	
	124-10	1	2	2	2	2	2	
	124-12	4	4	2	3	3	3	
	124-12	2	3	3	2	2	2	
	124-15	2	2	2	2	1	2	
							2	
	150-1	3	3	3	3	2		
	150-2	3	2	2	2	3	3	
	150-3	3	4	3	3	3	3	
	150-4	3	3	3	4	3	3	
	150-5	3	2	3	3	3	3	
	111-1	3	3	2	2	2	2	
	111-2	4	3	4	3	4	3	
2	111-3	4	3	2	3	3	3	
2	111-4	4	3	2	3	3	3	
2	111-5	3	2	1	1	1	1	
2	111-6	3	2	2	1	1	1	
	111-7	4	4	4	4	4	4	
2	111-8	3	2	2	2	2	2	
	111-9	3	3	1	1	1	2	
	111-10	4	4	4	4	4	4	
	111-11	3	2	2	2	2	2	
2	Avg	3.1	2.9	2.6	2.6	2.5	2.6	
	SD	0.7	0.7	0.8	0.9	0.9	0.8	
		3.0	2.5	2.4	2.3	2.5	2.3	
	2014-15 avg	5.0	2.5	2.4	2.5	2.5	2.5	
				Descri	iptives	M	ean	
		N	Mean	Descri Std. Deviation	riptives Std. Error	M Lower Bound	ean Upper Bound	
opic_Selectio	Bryant	N 19	Mean 2.89					
opic_Selectio	Bryant Knecht			Std. Deviation	Std. Error	Lower Bound	Upper Bound	
		19	2.89	Std. Deviation	Std. Error .151	Lower Bound 2.58	Upper Bound 3.21	
	Knecht Total	19 11 30	2.89 3.45 3.10	Std. Deviation .658 .522 .662	Std. Error .151 .157 .121	Lower Bound 2.58 3.10 2.85	Upper Bound 3.21 3.81 3.35	
xisting_Know	Knecht Total Bryant	19 11 30 19	2.89 3.45 3.10 3.00	Std. Deviation .658 .522 .662 .745	Std. Error .151 .157 .121 .171	Lower Bound 2.58 3.10 2.85 2.64	Upper Bound 3.21 3.81 3.35 3.36	
xisting_Know	Knecht Total Bryant Knecht	19 11 30 19 11	2.89 3.45 3.10 3.00 2.82	Std. Deviation .658 .522 .662 .745 .751	Std. Error .151 .157 .121 .171 .226	Lower Bound 2.58 3.10 2.85 2.64 2.31	Upper Bound 3.21 3.81 3.35 3.36 3.32	
xisting_Know edge	Knecht Total Bryant Knecht Total	19 11 30 19 11 30	2.89 3.45 3.10 3.00 2.82 2.93	Std. Deviation .658 .522 .662 .745 .751 .740	Std. Error .151 .157 .121 .171 .226 .135	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.66	Upper Bound 3.21 3.81 3.35 3.36 3.32 3.21	
xisting_Know edge	Knecht Total Bryant Knecht Total Bryant	19 11 30 19 11 30 19	2.89 3.45 3.10 2.82 2.93 2.68	Std. Deviation .658 .522 .662 .745 .751 .740 .478	Std. Error .151 .157 .121 .171 .226 .135 .110	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.66 2.45	Upper Bound 3.21 3.81 3.35 3.36 3.32 3.21 2.91	
xisting_Know edge	Knecht Total Bryant Knecht Total Bryant Knecht	19 11 30 19 11 30 19 11	2.89 3.45 3.10 2.82 2.93 2.68 2.36	Std. Deviation .658 .522 .662 .745 .751 .740 .478 1.120	Std. Error   .151   .157   .121   .171   .226   .135   .110   .338	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.66 2.45 1.61	Upper Bound 3.21 3.81 3.35 3.36 3.32 3.21 2.91 3.12	
i edge Design	Knecht Total Bryant Knecht Total Bryant Knecht Total	19 11 30 19 11 30 19 11 30	2.89 3.45 3.10 2.82 2.93 2.68 2.36 2.57	Std. Deviation   .658   .522   .662   .745   .751   .740   .478   1.120   .774	Std. Error .151 .157 .121 .171 .226 .135 .110 .338 .141	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.66 2.45 1.61 2.28	Upper Bound 3.21 3.81 3.35 3.36 3.32 3.21 2.91 3.12 2.86	
ixisting_Know edge Design	Knecht Total Bryant Knecht Total Bryant Knecht Total Bryant	19 11 30 19 11 30 19 11 30 19 11 30	2.89 3.45 3.10 2.82 2.93 2.68 2.36 2.57 2.74	Std. Deviation .658 .522 .745 .751 .740 .740 .740 .774 .653	Std. Error   .151   .157   .121   .171   .226   .135   .110   .338   .141   .150	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.66 2.45 1.61 2.28 2.42	Upper Bound 3.21 3.81 3.35 3.36 3.32 3.21 2.91 3.12 2.86 3.05	
i edge Design	Knecht Total Bryant Knecht Total Bryant Knecht Total Bryant Knecht	19 11 30 19 11 30 19 11 30 19 11 11	2.89 3.45 3.10 2.82 2.93 2.68 2.36 2.57 2.74 2.36	Std. Deviation .658 .522 .662 .745 .745 .740 .478 1.120 .774 .653 1.120	Std. Error .151 .157 .121 .171 .226 .135 .110 .338 .141 .150 .338	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.66 2.45 1.61 2.28 2.42 2.42 1.61	Upper Bound 3.21 3.81 3.35 3.36 3.32 3.21 2.91 3.12 2.86 6 3.05 3.12	
i edge Design	Knecht Total Bryant Knecht Total Bryant Knecht Total Bryant	19 11 30 19 11 30 19 11 30 9 11 30	2.89 3.45 3.10 2.82 2.93 2.68 2.36 2.57 2.74	Std. Deviation .658 .522 .662 .745 .751 .740 .478 1.120 .774 .653 1.120 .855	Std. Error   .151   .157   .121   .171   .226   .135   .110   .338   .141   .150	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.66 2.45 1.61 2.28 2.42 1.61 2.28	Upper Bound 3.21 3.81 3.36 3.36 3.32 2.91 3.12 2.86 3.05 3.12 2.92	
i edge Design nalysis	Knecht Total Bryant Knecht Total Bryant Knecht Total Bryant Knecht	19 11 30 19 11 30 19 11 30 19 11 30 19 11 30	2.89 3.45 3.10 2.82 2.93 2.68 2.36 2.57 2.74 2.36	Std. Deviation .658 .522 .662 .745 .745 .740 .478 1.120 .774 .653 1.120	Std. Error .151 .157 .121 .171 .226 .135 .110 .338 .141 .150 .338	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.66 2.45 1.61 2.28 2.42 2.42 1.61	Upper Bound 3.21 3.81 3.35 3.36 3.32 3.21 2.91 3.12 2.86 6 3.05 3.12	
i edge Design nalysis	Knecht Total Bryant Knecht Draal Bryant Knecht Total Bryant Knecht Total	19 11 30 19 11 30 19 11 30 19 11 30 19 11	2.89 3.45 3.10 2.82 2.93 2.68 2.36 2.57 2.74 2.36 2.60 2.60 2.58 2.45	Std. Deviation .658 .522 .662 .745 .751 .740 .478 1.120 .774 .653 1.120 .855	Std. Error .151 .157 .121 .171 .226 .135 .110 .338 .141 .150 .338 .156	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.66 2.45 1.61 2.28 2.42 1.61 2.28	Upper Bound 3.21 3.81 3.36 3.36 3.32 2.91 3.12 2.86 3.05 3.12 2.92	
i edge Design nalysis	Knecht Total Bryant Knecht Total Bryant Knecht Total Bryant Knecht Total Bryant	19 11 30 19 11 30 19 11 30 19 11 30 19 11 30	2.89 3.45 3.10 2.82 2.93 2.68 2.36 2.57 2.74 2.36 2.60 2.58	Std. Deviation .658 .522 .662 .745 .751 .740 .478 1.120 .774 .653 1.120 1.120 .855 .692	Std. Error 151 157 121 .121 .121 .121 .121 .121 .121 .121 .121 .121 .121 .121 .121 .121 .121 .157 .110 	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.64 2.45 1.61 2.28 2.42 1.61 2.28 2.42 2.42 2.42	Upper Bound 3.21 3.81 3.35 3.36 3.32 2.91 3.12 2.86 3.05 3.12 2.92 2.92 2.91	
i ixisting_Know adge Design inalysis Conclusions	Knecht Total Bryant Knecht Total Bryant Knecht Total Bryant Knecht Total Bryant Knecht Total	19 11 30 19 11 30 19 11 30 19 11 30 19 11	2.89 3.45 3.10 2.82 2.93 2.68 2.36 2.57 2.74 2.36 2.60 2.60 2.58 2.45	Std. Deviation .658 .522 .662 .745 .751 .740 .478 1.120 .653 1.120 .855 .692 1.214	Std. Error .151 .157 .121 .171 .226 .135 .110 .338 .141 .150 .338 .156 .159 .366	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.66 2.45 1.61 2.28 2.42 1.61 2.28 2.42 1.61 2.28 2.42 1.61	Upper Bound 3.21 3.81 3.35 3.36 3.32 3.21 2.91 3.12 2.86 3.05 3.12 2.92 2.91 3.12 2.92 3.12 2.92 3.12 2.93 3.12 2.94 3.15 3.15 3.15 3.25 3.21 3.25 3.55	
opic_Selectio	Knecht Total Bryant Knecht Total Bryant Knecht Total Bryant Knecht Total Bryant Knecht Total	19 11 300 19 11 30 19 11 30 19 11 30 19 11 30	2.89 3.45 3.10 2.82 2.93 2.68 2.36 2.57 2.74 2.36 2.69 2.58 2.58 2.58 2.53	Std. Deviation .658 .522 .662 .745 .740 .740 .740 .740 .740 .740 .740 .740 .740 .740 .740 .740 .740 .745 .751 .740 .745 .745 .752 .745 .752 .745 .746 .754 .746	Std. Error .151 .157 .121 .125 .110 .338 .110 .338 .141 .150 .338 .156 .159 .366 .164	Lower Bound 2.58 3.10 2.85 2.64 2.31 2.66 2.45 1.61 2.28 2.42 1.61 2.28 2.42 1.61 1.61 2.28 1.61 2.28	Upper Bound 3.21 3.81 3.35 3.36 3.32 2.91 3.12 2.86 3.05 3.12 2.92 2.91 3.12 2.92 3.12 2.92 3.12 2.92 3.12 2.92 3.12 2.92 3.15 3.27	