

# Political Science, Critical Thinking and Standardized Tests

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**Critical thinking (CT) is one of the most frequently mentioned learning outcomes in political science programs**

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Adopted Learning Objectives of Political Science Programs  
(N=213)

Writing skills 57.1%

Critical thinking skills 55.7%

Reading skills 36.3%

Presentation skills 30.7%

Information technology skills 30.7%

Kelly & Klunk, "Learning Assessment in Political Science  
Departments: Survey Results" *PS, July 2003*



**Research Question:** Are standardized, commercially available tests a good means of assessing CT for political science majors?

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1. What is critical thinking in political science?
2. Are non-discipline specific tests of CT valid instruments for assessing CT in political science?
3. Do discipline specific tests of CT in political science assess CT as it is defined in the literature?



## Question #1: What is critical thinking in political science?

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### Olsen and Statham:

...some combination of the concept of ‘**analytic thinking**’ and the concept of ‘**independent thinking**’ .... The most important aspects of critical thinking in political science are that of analytical and methodological skills that foster the independence of our students to do their own **research**, to analyze research and to come to their own conclusions about political questions. (emphasis added, p. 325)

...the independent ability to take information and think about it in abstract and conceptual terms, to formulate and/or process arguments or theories, and to link theories back to the world of empirical data. (p. 343, footnote #3)

“Critical Thinking in Political Science” *J. of Political Science Education*, Sept. - Dec. 2005



## What is critical thinking in political science?

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Derived from **6** articles in political science journals and **74** departmental web pages that included definitions and/or scoring rubrics:

### Ten Political Science Critical Thinking Skills:

- distilling a theory or argument into its cogent points
- using the scientific method or logical procedure when analyzing information
- assessing a theory or argument's validity
- employing conceptual clarity when analyzing theories or arguments
- constructing definitions/concepts to use elsewhere
- applying a theory or argument to other situations
- comparing and contrasting systems
- identifying assumptions, biases, viewpoints
- assessing credibility of sources
- making and assessing value judgments



## What is critical thinking in political science?

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ETS Major Field Test in Political Science (4BMF), 2006:

### Assessment Indicator: Analytical and Critical Thinking

- Identification of salient data/facts
- Comparison/making associations
- Drawing inferences
- Evaluation

## What is critical thinking in political science?

	ETS Major Field Test in Political Science Assessment Indicator: Analytical and Critical Thinking			
	Identification of salient data/facts	Comparison/making associations	Drawing Inferences	Evaluation
<b>Political Science Critical Thinking Skills</b>				
Distilling a theory or argument into its cogent points				X
Using the scientific method or other logical procedure when analyzing information		X		
Assessing a theory or argument's validity				X
Employing conceptual clarity when analyzing theories or arguments				
Constructing definitions/concepts to use elsewhere				
Applying a theory or argument to other situations		X		
Comparing and contrasting systems		X		
Identifying assumptions, bias, viewpoints				X
Assessing credibility of sources				X
Making & assessing value judgments				X

## Question #2: Are non-discipline specific tests of CT valid instruments for assessing CT in political science?

(Based on *The NPEC Sourcebook on Assessment, Volume 1: Definitions and Assessment Methods of Critical Thinking, Problem Solving and Writing*, 2000)

	Tests of General (Non-Discipline Specific) Critical Thinking						
	Academic Profile	California Critical Thinking Skills Test (CCTST)	Cambridge Assessment of Critical Thinking (CACT)	Collegiate Assessment of Academic Proficiency (CAAP)	Cornell Critical Thinking Skills Test (CCTT)	ETS Tasks in Critical Thinking (ETST)	Watson Glaser Critical Thinking Appraisal (WGCTA)
<b>Political Science Critical Thinking Skills</b>							
Distilling a theory or argument into its cogent points					X		
Using the scientific method or other logical procedure when analyzing information	X	X		X	X	X	X
Assessing a theory or argument's validity	X	X		X	X	X	X
Employing conceptual clarity when analyzing theories or arguments		X		X	X	X	X
Constructing definitions/concepts to use elsewhere		X	X			X	
Applying a theory or argument to other situations		X	X		X	X	
Comparing and contrasting systems		X				X	
Identifying assumptions, bias, viewpoints	X	X	X		X	X	X
Assessing credibility of sources					X		
Making & assessing value judgements						X	

## Are non-discipline specific tests of CT valid instruments for assessing CT in political science?

	Tests of General (Non-Discipline Specific) Critical Thinking						
	Academic Profile	California Critical Thinking Skills Test (CCTST)	Cambridge Assessment of Critical Thinking (CACT)	Collegiate Assessment of Academic Proficiency (CAAP)	Cornell Critical Thinking Skills Test (CCTT)	ETS Tasks in Critical Thinking (ETST)	Watson Glaser Critical Thinking Appraisal (WGCTA)
<b>ETS Major Field Test: Analytical and Critical Thinking</b>							
Identification of salient data/facts	X	X	X		X	X	X
Comparison/making associations		X	X		X	X	X
Drawing Inferences		X	X		X	X	X
Evaluation	X	X	X	X	X	X	X

(Based on *The NPEC Sourcebook on Assessment, Volume 1: Definitions and Assessment Methods of Critical Thinking, Problem Solving and Writing*, 2000)



# Are non-discipline specific tests of CT valid instruments for assessing CT in political science?

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## American Philosophical Association Definition Critical Thinking

### Interpretation

- categorization
- detecting indirect persuasion
- clarifying meaning

### Analysis

- explaining ideas
- identifying arguments
- analyzing arguments

### Evaluation

- assessing claims
- assessing arguments

### Inference

- querying evidence
- conjecturing alternatives
- drawing conclusions

### Explanation

- stating results
- justifying procedures
- presenting arguments

### Self-Regulation

- self-examination
- self-correction

## Are non-discipline specific tests of CT valid instruments for assessing CT in political science?

Discipline & non-discipline CT skills assessed in commercial instruments (based on Amer. Philosophical Association definition)

	interpretation			analysis			evaluation		inference			explanation			self-regulation	
	categorization	detecting indirect persuasion	clarifying meaning	explaining ideas	identifying arguments	analyzing arguments	assessing claims	assessing arguments	querying evidence	conjecturing alternatives	drawing conclusions	stating results	justifying procedures	presenting arguments	self-examination	self-correction
PS LIT/MFT	LIT	MFT	LIT		LIT	LIT	LIT&MFT	LIT	LIT&MFT	LIT			LIT			
CAAP	N	N	N		LIT	LIT	LIT&MFT	LIT	N	N			N			
CCTST	LIT	MFT	LIT		LIT	LIT	LIT&MFT	LIT	LIT&MFT	LIT	A		N			
CCTT	N	MFT	LIT		LIT	LIT	LIT&MFT	N	LIT&MFT	LIT	A		N			A
ETS	LIT	MFT	LIT	A	LIT	LIT	LIT&MFT	LIT	LIT&MFT	LIT	A		N			
WGCT	LIT	MFT	LIT	A	LIT	LIT	LIT&MFT	LIT	LIT&MFT	LIT	A		N	A		
A = additional skill assessed					MFT = Major Field Test concept				Empty cell = in neither LIT, MFT nor commercial test							
LIT = in Political Science literature					N = skill not assessed											

# Are non-discipline specific tests of CT valid instruments for assessing CT in political science?

## Political Science content in general CT instruments

Disciplines	California Critical Thinking Skills Test (CCTST) Form B	Cambridge Assessment of Critical Thinking (CACT)	Collegiate Assessment of Academic Proficiency (CAAP)	Cornell Critical Thinking Skills Test (CCTT) Form X	Cornell Critical Thinking Skills Test (CCTT) Form Z	Watson Glaser Critical Thinking Appraisal (WGCTA) Form A
<b>Physical Sciences</b>						
Astronomy		2.50				4.323
Biology & Medicine	10.71	12.50	34.38	18.64	39.62	12.68
Chemistry					20.75	
Earth Science & Geology		5.00		3.39		
Mathematics						
Physics & Nuclear Energy		2.50				4.23
<b>Social Sciences</b>						
Anthropology						
Economics	3.57					
History	2.94					4.23
Military Affairs	3.57					4.23
<b>Political Science &amp; Public Policy</b>	<b>25.00</b>	<b>2.50</b>	<b>34.38</b>	<b>0</b>	<b>18.87</b>	<b>19.72</b>
Psychology		5.00			13.21	4.23
Sociology	7.14					4.23
<b>Humanities &amp; Arts</b>						
English & Journalism	3.57					
Film & Theater		2.50		1.69		
Performing Arts		2.50		3.39		2.82
Philosophy & Religion						4.23
Visual Arts				1.69		
Intercultural & Afro-American	7.14					
<b>Professional Studies</b>						
Accounting						
Agriculture & Farming		12.50				1.41
Business Admin	3.57	10.00				
Criminal Justice		2.50				9.86
Fashion-Attire	3.57			1.72		
Food & Nutrition		7.50		3.39	3.77	4.23
Management (labor-mgt. relations)	7.14	10.00	31.25			4.23
Marketing	3.57					
Sports, Travel, Leisure				11.86		
Transportation	7.14	7.50			3.77	
<b>Education</b>						
Public & Higher Education	7.14	5.00		3.39		8.45
Library Science & Publishing				3.39		
Not Classified	3.57	10.00		47.46		7.04

## Question #3: Do discipline specific tests of CT in political science assess CT as it is defined in the literature?

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	ETS Major Field Test in Political Science Assessment Indicator: Analytical and Critical Thinking			
	Identification of salient data/facts	Comparison/making associations	Drawing Inferences	Evaluation
<b>Political Science Critical Thinking Skills</b>				
Distilling a theory or argument into its cogent points				X
Using the scientific method or other logical procedure when analyzing information		X		
Assessing a theory or argument's validity				X
Employing conceptual clarity when analyzing theories or arguments				
Constructing definitions/concepts to use elsewhere				
Applying a theory or argument to other situations		X		
Comparing and contrasting systems		X		
Identifying assumptions, bias, viewpoints				X
Assessing credibility of sources				X
Making & assessing value judgments				X



# Findings

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- Divergent conceptualizations of critical thinking in political science
- Non-discipline specific instruments for assessing CT are NOT aligned with the concept of critical thinking used in political science
- MFT's conceptualization of CT differs from that used in the political science literature



# Recommendations

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- Political science researchers should consider developing a discipline-wide definition of critical thinking in political science (perhaps through a Delphi Technique project)
- Faculty should be cautious about using generalized tests of critical thinking as a means of assessing CT for political science majors