

2019-2020 Institutional Assessment of Critical Thinking: Full Report

Report submitted by Jim Taylor, Professor of Philosophy and Lead Assessment Specialist

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I. Overview, Team, Instrument, Data Collection, & Limitations

Overview. Many educators believe critical thinking skills are the most important higher education outcome. Westmont's commitment to critical thinking is represented by our institutional learning outcome that *Westmont graduates will accurately evaluate the strength of evidence in support of a claim*. Our institutional assessment efforts in the 2019-2020 academic year were devoted to investigating how well our students are doing in this area.

Team. The members of the assessment team that agreed to engage in this investigation were Jim Taylor (Philosophy), Lead Assessment Specialist; Steve Contakes (Chemistry), *Assessment Consultant in Natural & Behavioral Sciences*; Angela D'Amour (Student Life), *Assessment Consultant in Student Life*; Edd Noell (Economics & Business), *Assessment Consultant in the Social Sciences*; and Randy VanderMey (English), *Assessment Consultant in the Humanities*. Tatiana Nazarenko (Administration), *Dean of Curriculum & Educational Effectiveness* oversaw, organized, and supported our efforts throughout. All of us, except for Edd, were on the critical thinking ILO assessment team I lead during the 2013-2014 academic year. Edd participated that year in the scoring session (as did the rest of us).

Instrument. We used the same assessment instrument we employed last time: the 15-question, short answer Critical Thinking Assessment Test (the CAT), developed and facilitated by the Center for Assessment & Improvement of Learning at Tennessee Tech University (the CAIL). The test takes students about an hour to complete and requires them to engage in relatively high-level real world critical thinking and problem solving. It also requires them to be able to exercise creativity and to communicate their answers clearly, concretely, and concisely. The skills assessed by means of this test include but go beyond the skill set required to meet our institutional critical thinking student learning outcome (to accurately evaluate the strength of evidence in support of a claim).

We chose the CAT because it focuses on a number of identifiable higher-order critical thinking skills of the sort contained in Bloom's classic taxonomy of cognitive skills, involves thinking about real world problems, requires short essays as answers to most questions (thus revealing students' underlying thought processes), is (ideally) scored in a guided scoring session by Westmont faculty (thus providing us with professional development benefits), has been widely used for over 20 years (by over 350 institutions of higher learning on their campuses and in over 40 NSF projects), is valid and reliable, provides a basis for comparison to national norms, and is relatively inexpensive.

[The CAIL website](#) describes the development, purpose, nature, and value of the CAT as follows: "The Critical-thinking Assessment Test (CAT) was developed with input from

faculty across a wide range of institutions and disciplines, with guidance from colleagues in the cognitive/learning sciences and assessment and with support from the National Science Foundation (NSF). DEVELOPED to assess a broad range of skills that faculty across the country feel are important components of critical thinking and real world problem solving. DESIGNED to emulate real world problems. All questions derived from real world situations with most questions requiring short answer essay responses. ENGAGE faculty in the assessment and improvement of student critical thinking skills and connects faculty to a teaching community.”¹

The specific critical thinking skills covered by the CAT are as follows:²

- Q1 – Summarize the pattern of results in a graph without making inappropriate inferences.
- Q2 – Evaluate how strongly correlational-type data supports a hypothesis.
- Q3 – Provide alternative explanations for a pattern of results that has many possible causes.
- Q4 – Identify additional information needed to evaluate a hypothesis.
- Q5 – Evaluate whether spurious information strongly supports a hypothesis.
- Q6 – Provide alternative explanations for spurious associations.
- Q7 – Identify additional information needed to evaluate a hypothesis.
- Q8 – Determine whether an invited inference is supported by specific information.
- Q9 – Provide relevant alternative interpretations for a specific set of results.
- Q10 – Separate relevant from irrelevant information when solving a real-world problem.
- Q11 – Use and apply relevant information to evaluate a problem.
- Q12 – Use basic mathematical skills to help solve a real-world problem.
- Q13 – Identify suitable solutions for a real-world problem using relevant information.
- Q14 – Identify and explain the best solution for a real-world problem using relevant information.
- Q15 – Explain how changes in a real-world problem situation might affect the solution.

Data Collection. The Westmont CAT results are based on 135 students who identified as seniors and 6 students who identified as juniors in spring 2020 senior seminar classes.³ These classes were from the following departments: Computer Science, Economics & Business, English, Kinesiology, Philosophy, Psychology, Religious Studies, and Sociology. As a result, we were able to test students from eight different departments with at least two departments from each of our three academic divisions (Humanities, Natural & Behavioral Sciences, and Social Sciences).⁴

¹ <https://www.tntech.edu/cat/index.php>

² Questions 5, 8, 10, 12, 13 are objectively scored questions. Scoring students’ answers to the other questions requires subjective judgment, since their answers are given in short-answer or essay form.

³ Only 124 of these students show up in the list of members of the class of 2020. Of course, 6 of these are the students who identified as juniors. Presumably the other 11 had senior status when they took the CAT even though they didn’t graduate in May 2020.

⁴ All the tests were administered on campus in senior seminar classes before the transition to remote instruction due to the COVID-19 pandemic—except for the tests given to the sociology students. The sociology students were given an opportunity to take the test online. Only one sociology student appears in the list of students who took the test. There is also a student who took the test who is classified as a communication studies major. These two students’ results are included in the “All Students” and “Transfer and Non-Transfer Students” reports but not in the “Division” and “Department” reports. Also, there is a biology major report even though the biology senior seminar did not participate and even though only two biology majors took the test.

Unfortunately, our faculty and library staff were not able to score the tests as planned because of COVID-19 physical distancing restrictions. So, Tatiana hired some student workers to enter each of the students' answers into an online form provided by the CAIL. Then the CAIL scored each of the tests by an automated process involving machine learning.

Limitations. This study is subject to the usual limitations of an assessment administered to a proper subset of a population only once. Appropriate caution must be taken when drawing conclusions about the entire population on the basis of the performance of the sample.

There is good reason to think the sample of 141 students whose CATs we scored is relatively *random*. Since nearly all majors have a senior seminar or capstone course of some kind, and since the test was administered only to students in senior seminar or capstone courses, almost any graduating Westmont senior could have wound up being part of the sample.

Moreover, since there were three departments represented from the NBS division (Biology, Mathematics/Computer Science/Data Analytics, Kinesiology), three from the HUM division (English, Philosophy, Religious Studies), and two from the SS division (Economics & Business and Sociology⁵), the students who participated came from a wide range of disciplines. However, the distribution of students across the three divisions was not equal in number: HUM (n=32), NBS (n=67), and SS (n=40).⁶

There is also good reason for thinking the sample of 141 is *representative* of the class of 2020. Tim Loomer, Director of Research, Planning, and Implementation, performed some statistical tests (with data provided by Records System Specialist Anna Darby) and concluded that, based on analysis of SAT, ACT, and GPA data, the members of the class of 2020 (n=124) who took the CAT do not differ significantly from the entire class (n=305).^{7,8}

⁵ But see footnote 4 about the Sociology department.

⁶ According to Tim Loomer (see the next paragraph in the report), the percentage of students in the graduating class of 2020 who graduated with a major in each division is as follows: Humanities: 26.2%; Natural and Behavioral Sciences: 40.8%; Social Science: 33.0%. Students with two or three majors could be in multiple categories in this data (there were 336 majors for 309 graduating students). From the CAT the numbers are Humanities: 32 students (23.0%); Natural and Behavioral Sciences: 67 students (48.2%); and Social Science: 40 students (28.8%). So, students from the Natural and Behavioral Sciences were a bit over-represented and Social Science a bit under-represented in the CAT group but there were certainly a good number of students from each division represented in the CAT and the percentages are reasonably similar to that of the graduating class of 2020.

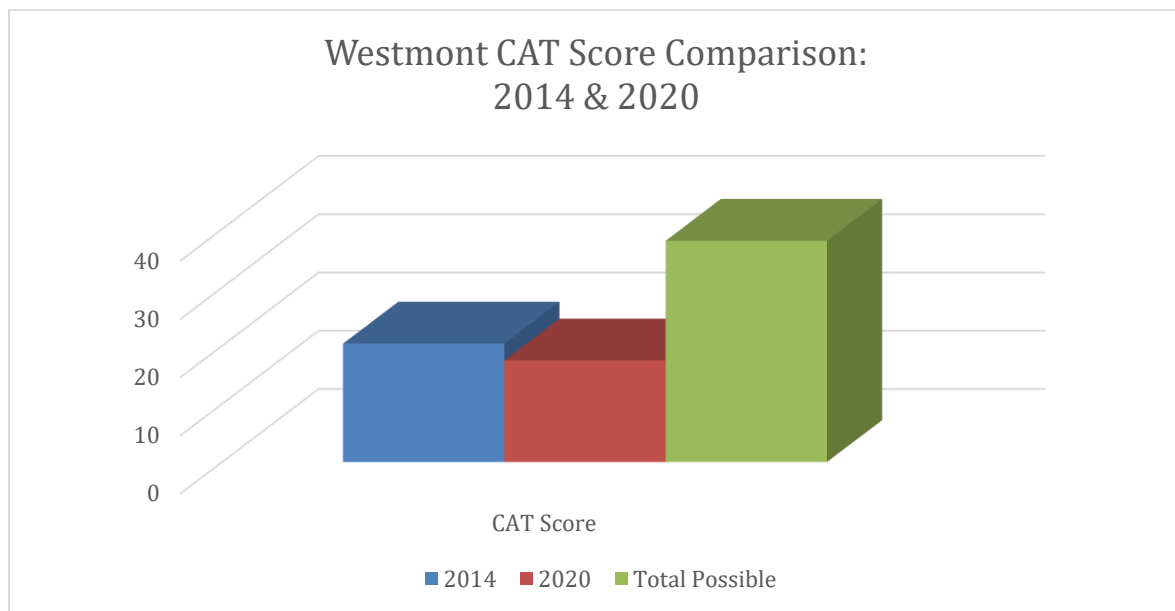
⁷ The class of 2020 CAT sample has a mean GPA of 3.284 and the class of 2020 as a whole has a mean GPA of 3.353. The class of 2020 CAT sample has a mean SAT score of 1199 and the class of 2020 as a whole has a mean SAT score of 1185. Finally, the class of 2020 CAT sample has a mean ACT score of 26.76 and the class of 2020 as a whole has a mean ACT score of 26.88.

⁸ Tim also found that cumulative Westmont GPA is a significant but not strong predictor of CAT scores. This finding could indicate that the ability to think critically in the ways assessed by the CAT are only a small component of the learning reflected in course grades (roughly 7%). If so, it will be interesting to see going forward whether this percentage increases in the case of students who take courses taught by instructors who incorporate assignments requiring CAT skills into

In sum, the students who took the CAT in 2020 constitute a random and representative sample of the entire class of 2020. Consequently, while keeping the limitations mentioned above in mind, it is reasonable to draw conclusions about the whole class on the basis of the performance of the members of that class who took the CAT.

II. What We Learned

The overall 2020 Westmont average total CAT score is 17.48 (out of a possible 38). This score is lower than the overall 2014 Westmont average total score, which was 20.37. So, our students, on average, scored lower than the 2014 group. But a comparison of the two scores should take into account that (1) the number of students who took the test in 2020 (141) is almost exactly double the number who took it in 2014 (71); (2) the standard deviation was 5.33 in 2014 and 4.77 in 2020, so the difference in overall score may be less significant than it appears to be;⁹ and (3) in 2020, students from five additional majors (Biology, Data Analytics, English, Kinesiology, and Mathematics) participated along with students from the six departments whose seniors took the CAT in 2014 (Economics & Business, Computer Science, Philosophy, Psychology, Religious Studies, and Sociology—although only one student represented Sociology in 2020). So, there were not only substantially more students who took the test in 2020 but also students from a greater diversity of disciplines.



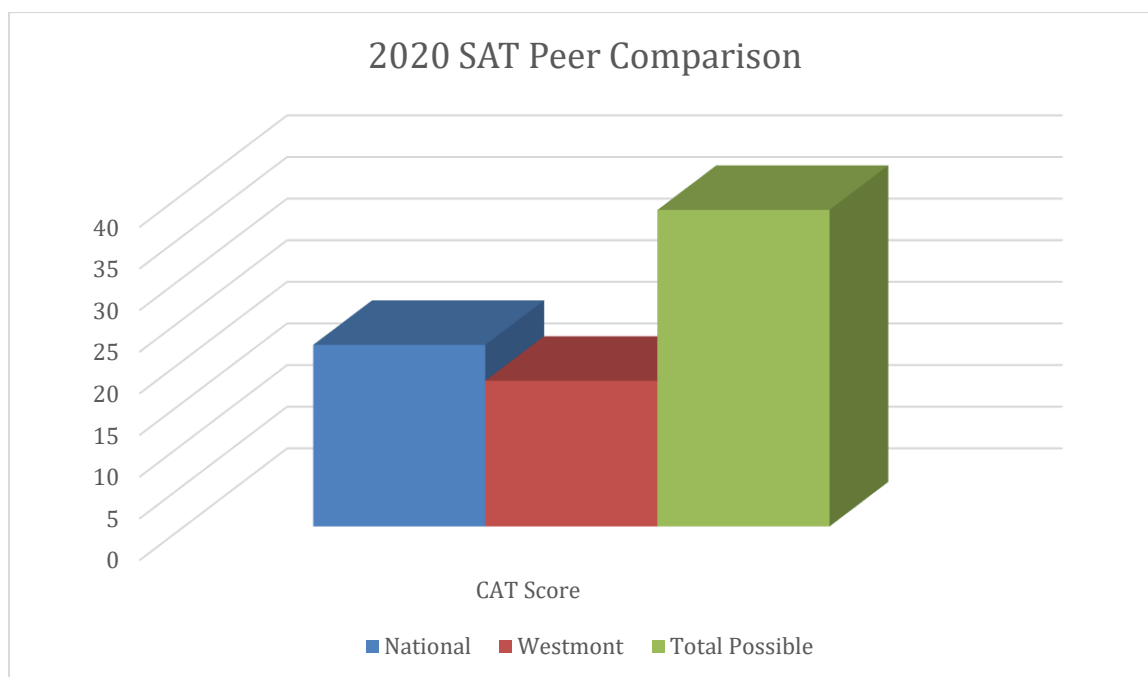
In spite of the 2020 Westmont overall average total being less than the 2014 Westmont overall average total, Westmont students did better collectively on questions 1, 10, 13, & 14 in 2020 than in 2014 (but they did collectively worse on all the other questions—though some of these differences, both positive and negative, may not be statistically significant).

the course and who base the final grade to some extent on the students' performance on those assignments. But the more important indicator will be our students' performance relative to the average national CAT score of students with the same SAT and/or ACT scores.

⁹ Another difference between the overall results of the two years concerns the range of scores. In 2020 scores ranged from 4 to 28 while in 2014 scores ranged from 8 to 36.

Another comparison between the 2020 and 2014 results concerns how our students did relative to the national CAT score average. In 2014, Westmont’s mean score (20.37) was greater than the national average (19.04). However, when the Westmont 2014 CAT score average is compared to the average national CAT score achieved by upper-division students at 4-year undergraduate institutions with the same average SAT score (1199), the Westmont 2014 CAT score (20.37) was only 93.4% of the national SAT-peer CAT score (21.81).

In 2020, Westmont’s overall mean score (17.48) was slightly lower than (99% of) the national average (17.64). But when compared to their national SAT peers (average 1199¹⁰—as in 2014), the Westmont average CAT score (17.48) falls far shorter than the national average CAT score (21.79). The Westmont score is only 80% of the national SAT-peer score. So, our students did not perform as well overall in 2020 as they did in 2014—relative to the national average score achieved by students with the same entering SAT scores. A comparison focusing on ACT scores yields almost exactly the same result.^{11,12} The Critical Thinking Assessment Team considers this outcome a reason to be concerned about the effectiveness of Westmont’s current teaching of critical thinking skills.



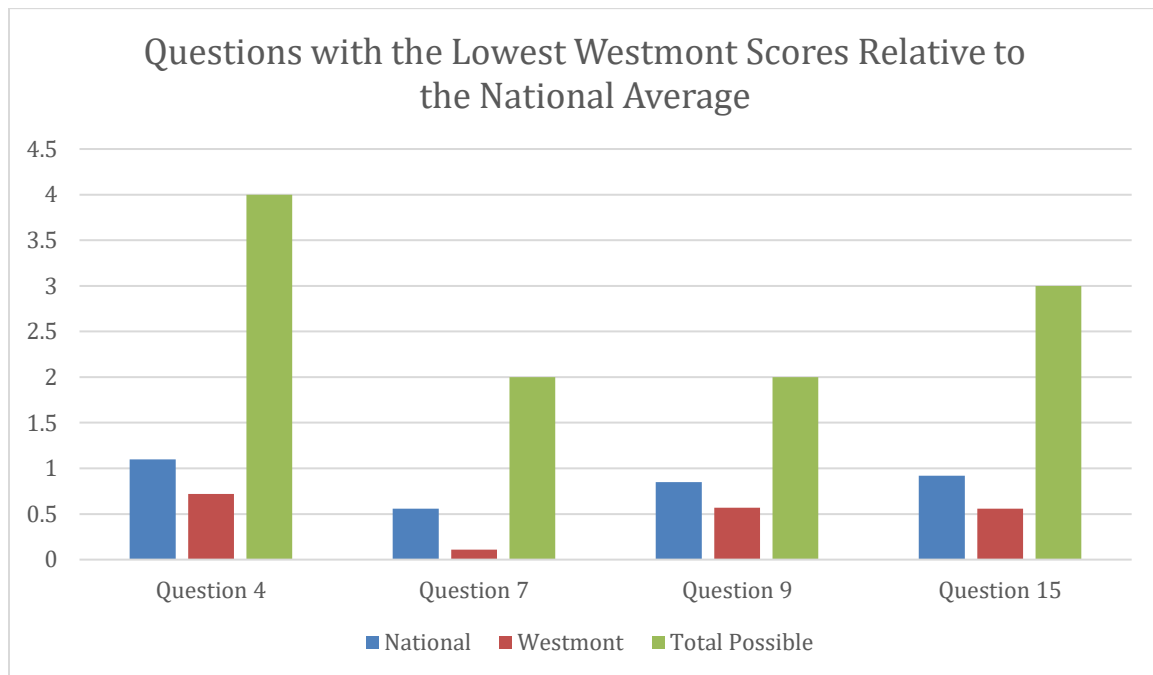
¹⁰ The number of students in the class of 2020 who had SAT scores and took the CAT is 87.

¹¹ The mean ACT score of 2020 Westmont students who took that test and the CAT (n=54) is 26.76. Nationally, students with that ACT score had an average CAT score of 22.

¹² A CAIL representative said they adjust their national norms every five years to reflect changes in their student user population. After their last adjustment in December 2019, they saw a decrease in the mean score in the four-year college senior-level norm category. They believe most of this shift is due to a large increase in students in their data set which increases the variability and diversity of the student data. The national average CAT score has been adjusted from 19.04 (in 2014) to 17.64 (in 2020)—to reflect a larger and more diverse pool of students.

But there were questions on which Westmont students did significantly better than the national average in each of those years. In 2014, our students did better than the national average on questions 1, 2, 5, 6, 8. And in 2020, our students did better than the national average on questions 1, 5, 6, 8, 13, 14 (notice the overlap of questions 1, 5, 6, and 8).

But our 2020 students did significantly worse than the national average on four questions (4, 7, 9, & 15) and our 2014 students did significantly worse than the national average on only one question (7). The questions on which our 2020 students did significantly worse than the national average (4, 7, 9, & 15) all involve problem solving, creative thinking, and effective communication (in the case of 4, 7, & 15) and creative thinking and effective communication (in the case of 9). None of them involve the general skills of evaluating and interpreting information (which eight of the other questions required). Two of these (4 & 7) involve the same specific skill (“additional information needed to evaluate a hypothesis”), one involves the specific skill of “providing relevant alternative interpretations for a specific set of results” (9), and the fourth (15) the specific skill of explaining how changes in a real-world problem situation might affect the solution of a problem. Our students did worst on 7 relative to the national average (-.89) and roughly the same on the other three (-.41, -.44, & -.41).¹³



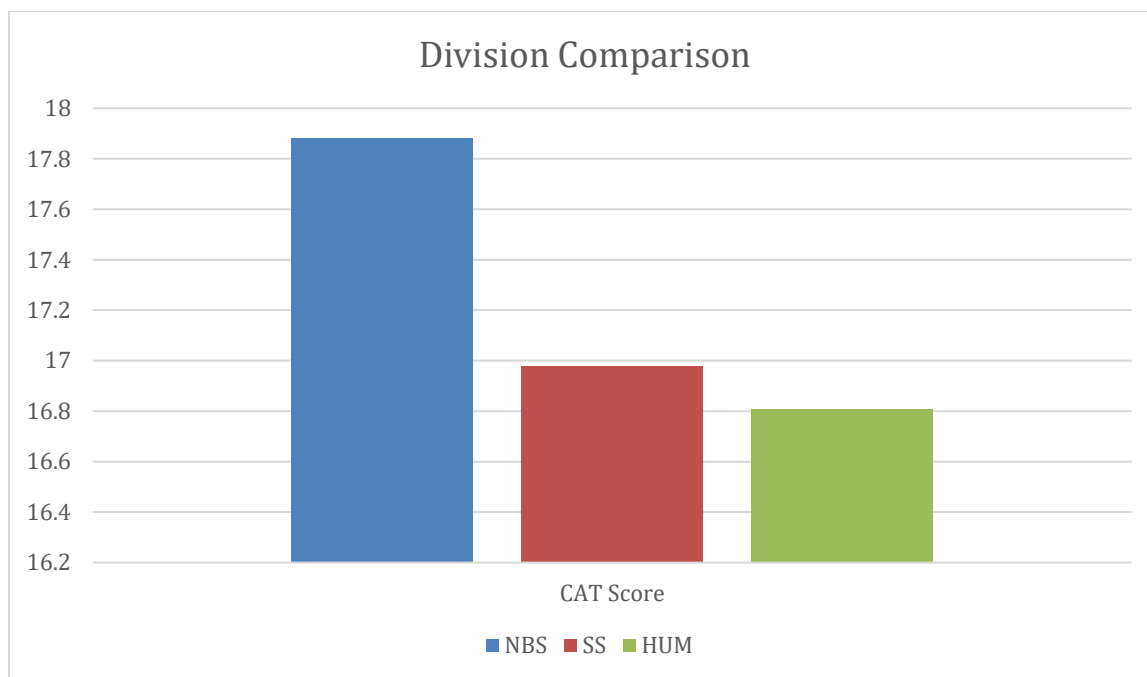
What each of the skills with which our students are deficient seem to have in common is *a creative use of the intellect and/or imagination* to think of evaluations, interpretations, or solutions that go beyond what is explicitly (and perhaps even implicitly) given in the test. The skill involved in answering questions 4 and 7 well requires *additional* information, the skill involved in answering question 9 well requires relevant *alternative* interpretations, and the skill involved in answering question 15 well requires explaining how *changes* in a real-world problem situation might affect a solution.

¹³ The negative numbers in parentheses are the “effect size” (mean difference between the Westmont and national average score divided by pooled group standard deviation).

The members of the Critical Thinking Assessment Team suggested a few possible explanations of our students' collective relatively poor performance on these questions that require similar skills: Our students go after relatively simple answers rather than pushing further to engage in deeper and more complex thinking; when they settle on one evaluation, interpretation, or solution, they do not (or do not consider) looking for alternatives; their thinking is so narrow or conventional that they do not easily think “outside the box”; they are not motivated to think more widely and independently; they come from backgrounds emphasizing accepting what they are taught over exploring multiple viewpoints; they are so burdened by anxiety or stress that they are not free to engage in challenging higher thinking; they are more disposed to please others than they are to think in ways that go against the prevailing accepted ways of thinking; and they have a need for security that prevents them from going beyond black and white thinking.

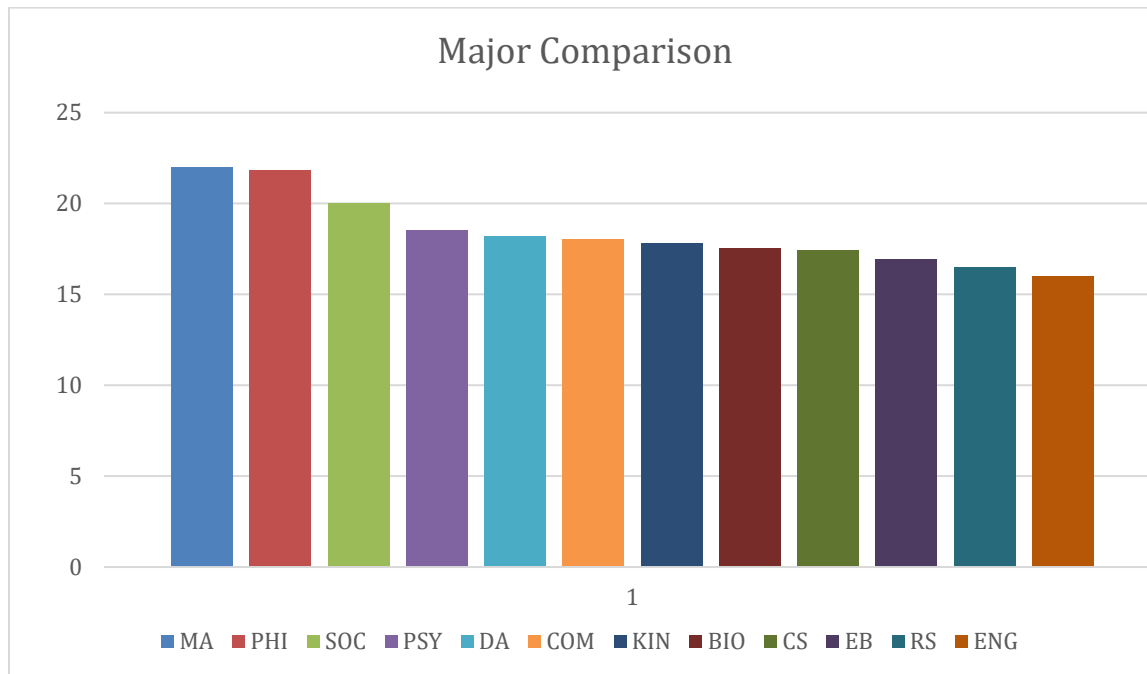
Some other interesting observations about the 2020 results have to do with various sub-groups of students. We have results by academic division of the senior seminar class in which the students took the test as well as results by student-reported major department, gender, racial identity, non-resident status, (non-)transfer status, and whether the student is a first-generation student.

- The 67 NBS students did the best overall (17.88) followed by the 40 SS students (16.98) and the 32 HUM students (16.81).



- By self-reported major department, the average total scores are as follows (from highest to lowest):
 - o Mathematics (n=1)—22
 - o Philosophy (n=4)—21.8

- Sociology (n=1)—20
- Psychology (n=24)—18.5¹⁴
- Data Analytics (n=6)—18.2
- Communication Studies (n=1)—18
- Kinesiology (n=26)—17.8
- Biology (n=2)—17.5
- Computer Science (n=10)—17.4
- Economics & Business (n=39)—16.9
- Religious Studies (n=14)—16.5
- English (n=13)—16

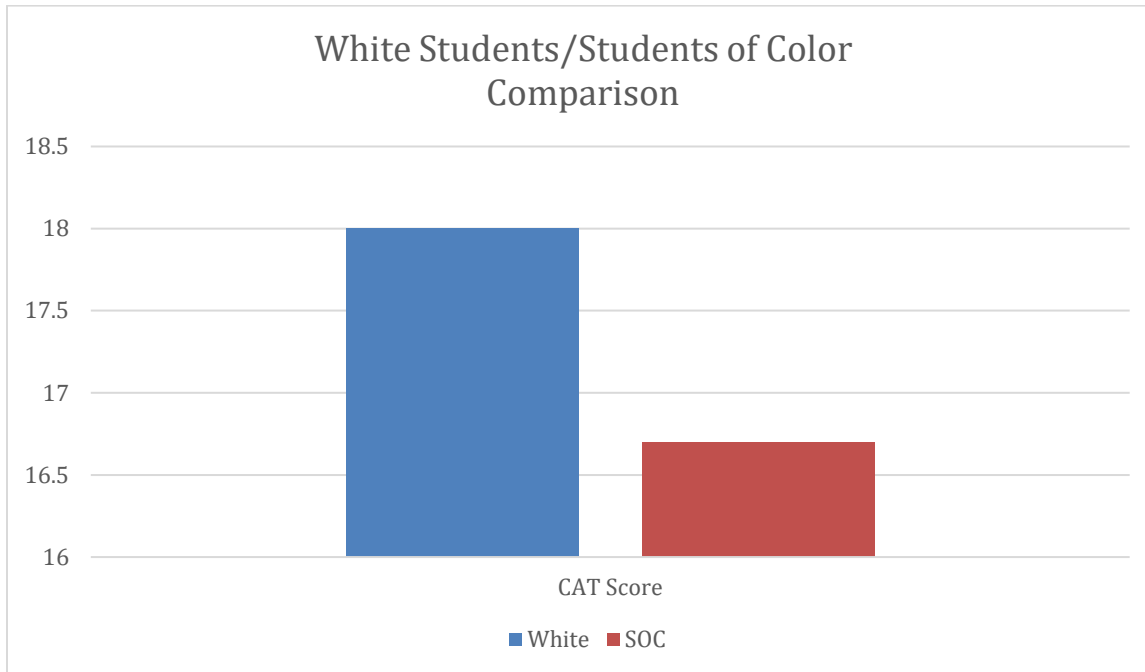


- As for gender, the average total scores are nearly the same:
 - Female (n=78)—17.41
 - Male (n=62¹⁵)—17.5
- Average scores by racial categories selected by students from a list given to them to choose from are as follows (from highest to lowest):¹⁶
 - White (n=83)—18
 - Latinx (n=22)—17.6
 - Students of Color (n=46)—16.7
 - Asian (n=15)—14.5

¹⁴ Of the five departments that participated in both 2014 and 2020 with more than one student (CS, EB, PHI, PSY, & RS), only Psychology has a higher overall average score in 2020.

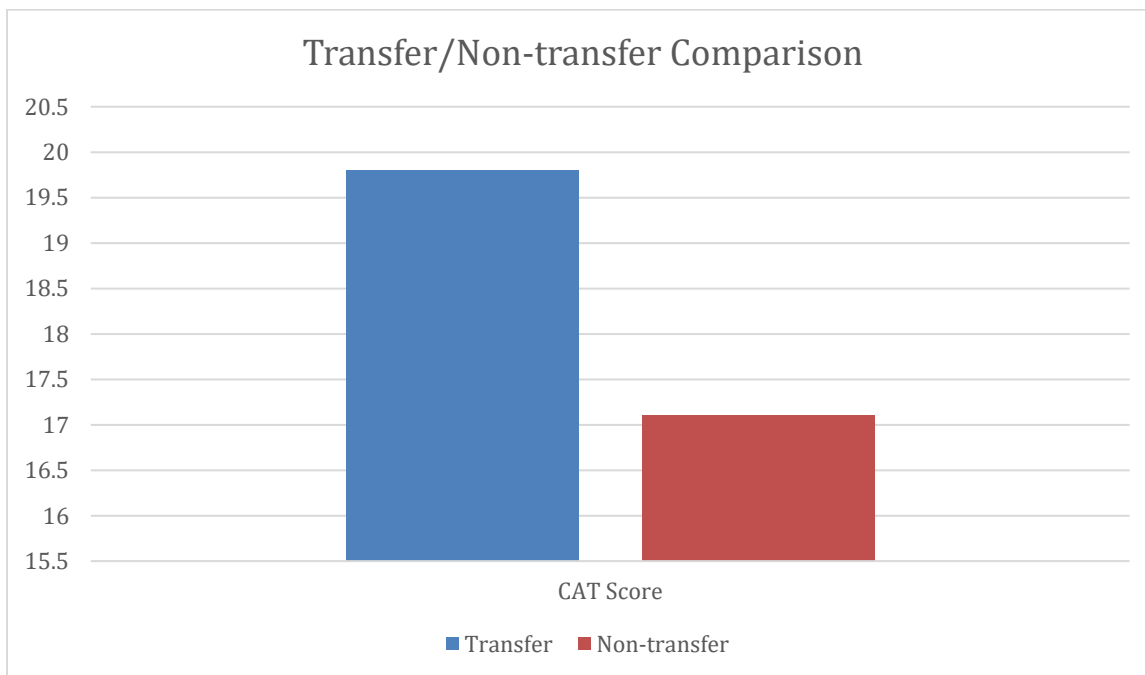
¹⁵ The total number of female and male students adds up to 140 rather than 141 because one student (with a traditionally male first name) chose not to specify gender.

¹⁶ The total number adds up to more than 141, because some students selected more than one racial category. It's not clear why the sum of white students and students of color is 129.

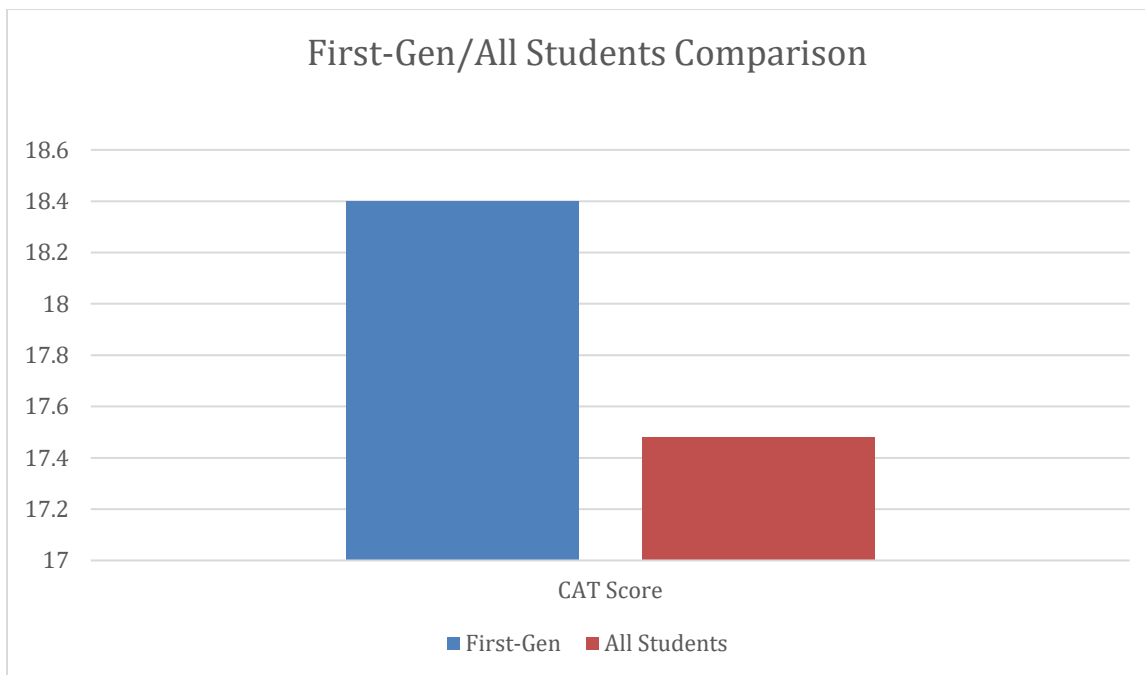


- Average score achieved by students who are not citizens of the United States:
 - o Non-resident (n=4)—17

- A comparison of transfer and non-transfer student scores:
 - o Transfer students (n=20)—19.8
 - o Non-transfer students (n=121)—17.1



- Average score achieved by students whose parents did not complete a four-year college or university degree:
 - o First-generation students (n=21)—18.4



The assessment team discussed possible reasons both transfer students and first-generation students did so much better on average than the overall Westmont average (17.48) and better than the average achieved by most of the other sub-groups aside from specific majors (with students identifying as white coming in third). Some suggested that students in these two groups are more likely than the others to engage in “out of the box” thinking and “own their education more” due to having to be more proactive and adult in their pursuit of an education. That is, these students’ need to take more responsibility for their learning may have motivated them to do more independent thinking. Another suggestion is that these groups have more resolve and persistence than students in the other groups as they have navigated through various additional trials in making it to their senior year.

III. Recommendations

The Critical Thinking Assessment Team recommends the Westmont faculty discuss possible pedagogical and curricular changes that will facilitate our students’ improvement in the three skill areas involved in the four CAT questions on which our students did significantly worse than the national average:

- Identify additional information needed to evaluate a hypothesis. (Q4 & Q7)
- Provide relevant alternative interpretations for a specific set of results. (Q9)
- Explain how changes in a real-world problem situation might affect the solution. (Q15)

There are at least three alternative general approaches we could take: (1) Add a Critical Thinking requirement to our GE program, (2) simply encourage all faculty to focus more on

critical thinking in their relevant courses, or (3) implement a targeted but less comprehensive approach. Option 1 seems unreasonable, since our GE program already takes up a lot (some think too much) of our students' units. And option 2 is unlikely to lead to much significant positive change. But option 3 seems feasible. It's the alternative the assessment team recommended in 2014. But it ended up having the effect of option 2, since we didn't follow through with our specific plan, which I will now restate.

The CAIL recommended that, now that we have an idea where our students are as they are exiting the college, we identify some courses in which to focus on the skills we've chosen to target and use the CAT to do pre-testing and post-testing in those courses to see whether our teaching of those skills is effective. Then we invite faculty members who teach these courses to consider which of the skills we target they would like to provide instruction for in one of their classes (again, using pre- and post-tests). According to the CAIL, it would not be necessary or helpful to test incoming freshmen to get a benchmark to compare with our senior class results. Instead, it would be better for us to focus on using the CAT at the individual course level (using a pre-test and post-test design) going forward. Then we could compare not only individual student's results on these two tests but also use as a benchmark the national average score of students who have the same SAT and/or ACT scores (if these scores are available).

In light of their recommendations, the Critical Thinking Assessment Team recommends that the Academic Senate:

- (1) Identify courses in which focused instruction could be given for the improvement of the three skills listed above (the Team recommends at least one GE course from each of the three divisions such as PHI-012, CHM-005, and SOC-001—but ideally more);
- (2) Secure faculty members willing to teach those skills in those courses;
- (3) Provide those faculty members with the financial and pedagogical resources they need to implement this skill instruction effectively;
- (4) Arrange to use CATs for pre-tests and post-tests in these courses;¹⁷
- (5) Set as a benchmark the average overall national CAT score of SAT-peers at comparable institutions; and
- (6) Consider changing the ILO to include a broader range of critical thinking skills.

Also, in response to a CUPA Team suggestion, the CT Team also recommends the Senate

- (7) Change the language of the Critical Thinking ILO. The new ILO reads, "*Westmont graduates will demonstrate sound judgment and creative thinking when evaluating the strength of evidence in support of a claim.*"

Another of the CAIL's recommendations for individual departments is to (1) select the skills tested by the CAT that are especially important in their discipline and then (2) develop discipline-specific analogs to the CAT questions that test students on these skills ("CAT Applications" or "CAT Apps"). Though students' responses to these discipline-specific analogue questions will not be assessable by means of the standard CAT scoring process, departments can formulate their own rubrics as tools to evaluate the tests they construct out

¹⁷ The documents entitled "Effective Practices for Improving Students' Critical Thinking and Problem Solving" and "Effectively Using the CAT for Assessment" in the CAT Training Manual will be especially useful as resources for the faculty who agree to teach a class that targets specific CAT critical thinking skills.

of their discipline-specific questions. We recommend offering a workshop for the faculty who volunteer to incorporate CAT-related assignments in their courses (and for other interested faculty as well).

See the separate appendices for more information and documentation.

- 1: CAT Institutional Reports from the CAIL
- 2: Effective Practices for Improving Students' Critical Thinking and Problem Solving
- 3: Effectively Using the CAT for Assessment

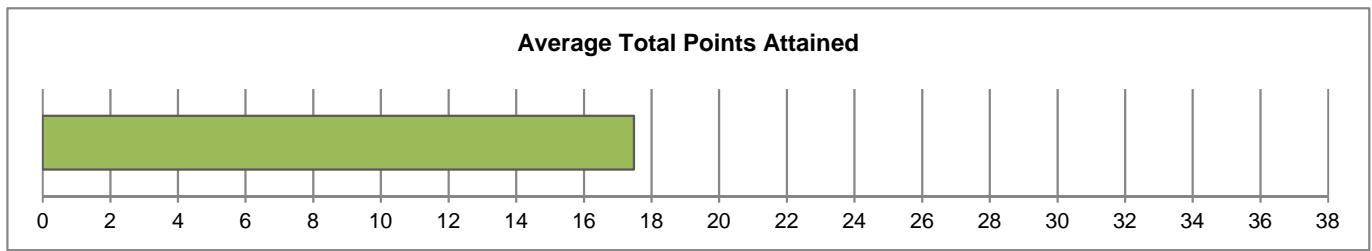
Westmont College

CAT Institutional Report

July 2020 - All Students

**CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - All Students**

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	141	4.00	28.00	17.48	4.77



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	62	44.3%
	Female	78	55.7%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	6	4.3%
	Senior	135	95.7%
Class	Undergraduate	141	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	11	7.8%
	21-25 years	130	92.2%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	112	79.4%
	Black or African American	5	3.5%
	American Indian or Alaska Native	2	1.4%
	Asian	21	14.9%
	Native Hawaiian or Other Pacific Islander	2	1.4%
	Other Race	8	5.7%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	113	80.1%
	Very Good	23	16.3%
	Good	5	3.5%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	18	12.8%
Considered English primary language?	136	96.5%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - All Students

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	22	15.6%
		1	119	84.4%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	43	30.5%
		1	40	28.4%
		2	20	14.2%
		3	38	27.0%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	39	27.7%
		1	53	37.6%
		2	49	34.8%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	55	39.0%
		1	71	50.4%
		2	15	10.6%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	23	16.3%
		1	118	83.7%
Q6	Provide alternative explanations for spurious associations.	0	11	7.8%
		1	29	20.6%
		2	95	67.4%
		3	6	4.3%
Q7	Identify additional information needed to evaluate a hypothesis.	0	125	88.7%
		1	16	11.3%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	35	24.8%
		1	106	75.2%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	61	43.3%
		1	79	56.0%
		2	1	0.7%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	8	5.7%
		2	18	12.8%
		3	50	35.5%
		4	65	46.1%
Q11	Use and apply relevant information to evaluate a problem.	0	27	19.1%
		1	93	66.0%
		2	21	14.9%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	26	18.4%
		1	115	81.6%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	38	27.0%
		1	47	33.3%
		2	32	22.7%
		3	24	17.0%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	30	21.3%
		1	23	16.3%
		2	0	0.0%
		3	14	9.9%
		4	59	41.8%
		5	15	10.6%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	84	59.6%
		1	35	24.8%
		2	22	15.6%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - All Students

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.84	84%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.38	46%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.07	36%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.72	18%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.84	84%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.68	56%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.11	6%
X				Q8	Determine whether an invited inference is supported by specific information.	0.75	75%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.57	29%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.22	80%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.96	48%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.82	82%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.30	43%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.67	53%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.56	19%
CAT Total Score						17.48	46%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - All Students

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.84	0.70	***	+0.35
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.38	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.07	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.72	1.10	***	-0.41
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.84	0.75	*	+0.22
		X	X	Q6	Provide alternative explanations for spurious associations.	1.68	1.53	*	+0.20
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.11	0.56	***	-0.89
X				Q8	Determine whether an invited inference is supported by specific information.	0.75	0.66	*	+0.20
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.57	0.85	***	-0.44
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.22	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.96	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.82	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.30	1.10	*	+0.20
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.67	2.24	**	+0.23
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.56	0.92	***	-0.41
CAT Total Score						17.48	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

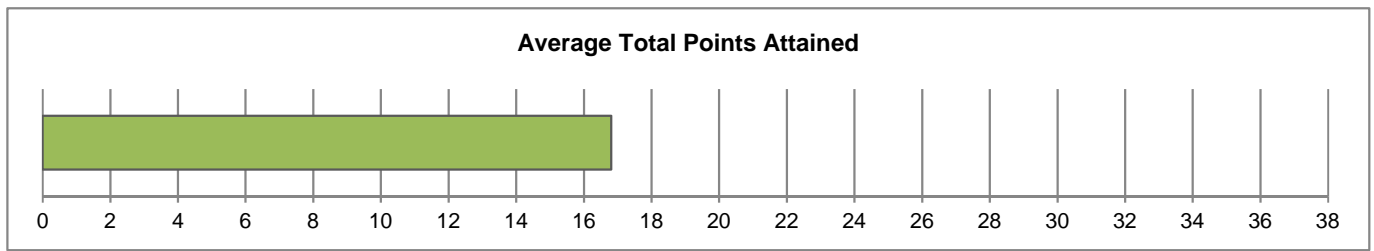
Westmont College

CAT Institutional Report

July 2020 - Humanities

**CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Humanities**

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	32	4.00	26.00	16.81	5.28



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	15	46.9%
	Female	17	53.1%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	2	6.3%
	Senior	30	93.8%
Class	Undergraduate	32	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	2	6.3%
	21-25 years	30	93.8%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	29	90.6%
	Black or African American	0	0.0%
	American Indian or Alaska Native	0	0.0%
	Asian	3	9.4%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	1	3.1%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	25	78.1%
	Very Good	6	18.8%
	Good	1	3.1%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	2	6.3%
Considered English primary language?	32	100.0%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Humanities

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	9	28.1%
		1	23	71.9%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	11	34.4%
		1	7	21.9%
		2	6	18.8%
		3	8	25.0%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	7	21.9%
		1	11	34.4%
		2	14	43.8%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	13	40.6%
		1	15	46.9%
		2	4	12.5%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	8	25.0%
		1	24	75.0%
Q6	Provide alternative explanations for spurious associations.	0	4	12.5%
		1	7	21.9%
		2	20	62.5%
		3	1	3.1%
Q7	Identify additional information needed to evaluate a hypothesis.	0	29	90.6%
		1	3	9.4%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	9	28.1%
		1	23	71.9%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	13	40.6%
		1	19	59.4%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	3	9.4%
		2	4	12.5%
		3	12	37.5%
		4	13	40.6%
Q11	Use and apply relevant information to evaluate a problem.	0	4	12.5%
		1	22	68.8%
		2	6	18.8%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	7	21.9%
		1	25	78.1%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	9	28.1%
		1	12	37.5%
		2	6	18.8%
		3	5	15.6%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	8	25.0%
		1	7	21.9%
		2	0	0.0%
		3	3	9.4%
		4	11	34.4%
		5	3	9.4%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	18	56.3%
		1	9	28.1%
		2	5	15.6%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Humanities

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.72	72%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.34	45%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.22	41%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.72	18%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.75	75%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.56	52%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.09	5%
X				Q8	Determine whether an invited inference is supported by specific information.	0.72	72%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.59	30%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.09	77%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.06	53%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.78	78%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.22	41%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.34	47%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.59	20%
CAT Total Score						16.81	44%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Humanities

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.72	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.34	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.22	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.72	1.10		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.75	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.56	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.09	0.56	***	-.94
X				Q8	Determine whether an invited inference is supported by specific information.	0.72	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.59	0.85		
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.09	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.06	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.78	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.22	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.34	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.59	0.92		
CAT Total Score						16.81	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

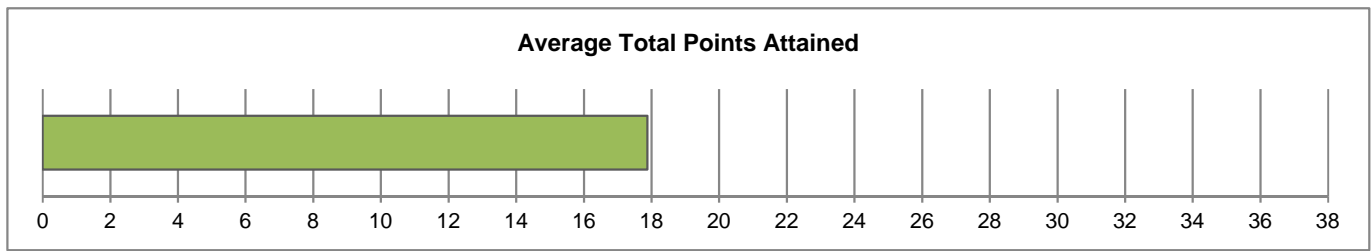
Westmont College

CAT Institutional Report

July 2020 - Natural & Behavior Sciences

**CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Natural & Behavior Sciences**

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	67	7.00	28.00	17.88	4.53



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	25	37.9%
	Female	41	62.1%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	4	6.0%
	Senior	63	94.0%
Class	Undergraduate	67	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	4	6.0%
	21-25 years	63	94.0%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	50	74.6%
	Black or African American	3	4.5%
	American Indian or Alaska Native	2	3.0%
	Asian	11	16.4%
	Native Hawaiian or Other Pacific Islander	2	3.0%
	Other Race	4	6.0%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	55	82.1%
	Very Good	8	11.9%
	Good	4	6.0%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	11	16.4%
Considered English primary language?	66	98.5%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Natural & Behavior Sciences

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	7	10.4%
		1	60	89.6%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	24	35.8%
		1	19	28.4%
		2	6	9.0%
		3	18	26.9%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	20	29.9%
		1	26	38.8%
		2	21	31.3%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	23	34.3%
		1	36	53.7%
		2	8	11.9%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	9	13.4%
		1	58	86.6%
Q6	Provide alternative explanations for spurious associations.	0	3	4.5%
		1	11	16.4%
		2	49	73.1%
		3	4	6.0%
Q7	Identify additional information needed to evaluate a hypothesis.	0	59	88.1%
		1	8	11.9%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	10	14.9%
		1	57	85.1%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	30	44.8%
		1	36	53.7%
		2	1	1.5%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	3	4.5%
		2	6	9.0%
		3	26	38.8%
		4	32	47.8%
Q11	Use and apply relevant information to evaluate a problem.	0	15	22.4%
		1	43	64.2%
		2	9	13.4%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	9	13.4%
		1	58	86.6%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	18	26.9%
		1	18	26.9%
		2	17	25.4%
		3	14	20.9%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	14	20.9%
		1	10	14.9%
		2	0	0.0%
		3	9	13.4%
		4	26	38.8%
		5	8	11.9%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	42	62.7%
		1	14	20.9%
		2	11	16.4%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Natural & Behavior Sciences

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.90	90%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.27	42%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.01	34%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.78	19%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.87	87%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.81	60%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.12	6%
X				Q8	Determine whether an invited inference is supported by specific information.	0.85	85%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.57	28%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.30	82%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.91	46%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.87	87%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.40	47%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.70	54%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.54	18%
CAT Total Score						17.88	47%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Natural & Behavior Sciences

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.90	0.70	***	+0.50
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.27	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.01	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.78	1.10	*	-.35
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.87	0.75	*	+0.30
		X	X	Q6	Provide alternative explanations for spurious associations.	1.81	1.53	**	+0.38
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.12	0.56	***	-.87
X				Q8	Determine whether an invited inference is supported by specific information.	0.85	0.66	**	+0.45
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.57	0.85	**	-.44
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.30	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.91	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.87	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.40	1.10	*	+0.29
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.70	2.24	*	+0.25
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.54	0.92	**	-.43
CAT Total Score						17.88	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2 -tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

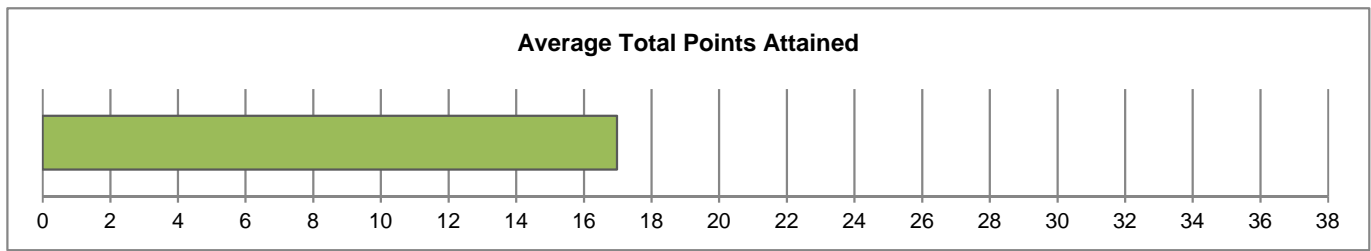
Westmont College

CAT Institutional Report

July 2020 - Social Sciences

CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Social Sciences

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	40	7.00	25.00	16.98	4.54



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	21	52.5%
	Female	19	47.5%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	0	0.0%
	Senior	40	100.0%
Class	Undergraduate	40	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	5	12.5%
	21-25 years	35	87.5%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	31	77.5%
	Black or African American	2	5.0%
	American Indian or Alaska Native	0	0.0%
	Asian	7	17.5%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	3	7.5%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	31	77.5%
	Very Good	9	22.5%
	Good	0	0.0%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	5	12.5%
Considered English primary language?	36	90.0%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Social Sciences

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	6	15.0%
		1	34	85.0%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	8	20.0%
		1	14	35.0%
		2	8	20.0%
		3	10	25.0%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	12	30.0%
		1	15	37.5%
		2	13	32.5%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	19	47.5%
		1	19	47.5%
		2	2	5.0%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	6	15.0%
		1	34	85.0%
Q6	Provide alternative explanations for spurious associations.	0	4	10.0%
		1	11	27.5%
		2	24	60.0%
		3	1	2.5%
Q7	Identify additional information needed to evaluate a hypothesis.	0	35	87.5%
		1	5	12.5%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	16	40.0%
		1	24	60.0%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	16	40.0%
		1	24	60.0%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	2	5.0%
		2	8	20.0%
		3	12	30.0%
		4	18	45.0%
Q11	Use and apply relevant information to evaluate a problem.	0	7	17.5%
		1	27	67.5%
		2	6	15.0%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	9	22.5%
		1	31	77.5%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	11	27.5%
		1	17	42.5%
		2	9	22.5%
		3	3	7.5%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	8	20.0%
		1	6	15.0%
		2	0	0.0%
		3	2	5.0%
		4	21	52.5%
		5	3	7.5%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	24	60.0%
		1	11	27.5%
		2	5	12.5%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Social Sciences

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.85	85%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.50	50%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.03	34%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.58	14%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.85	85%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.55	52%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.13	6%
X				Q8	Determine whether an invited inference is supported by specific information.	0.60	60%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.60	30%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.15	79%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.98	49%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.78	78%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.10	37%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.78	56%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.53	18%
CAT Total Score						16.98	45%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Social Sciences

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.85	0.70	*	+0.37
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.50	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.03	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.58	1.10	**	-0.57
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.85	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.55	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.13	0.56	***	-0.86
X				Q8	Determine whether an invited inference is supported by specific information.	0.60	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.60	0.85	*	-0.40
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.15	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.98	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.78	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.10	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.78	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.53	0.92	*	-0.45
CAT Total Score						16.98	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

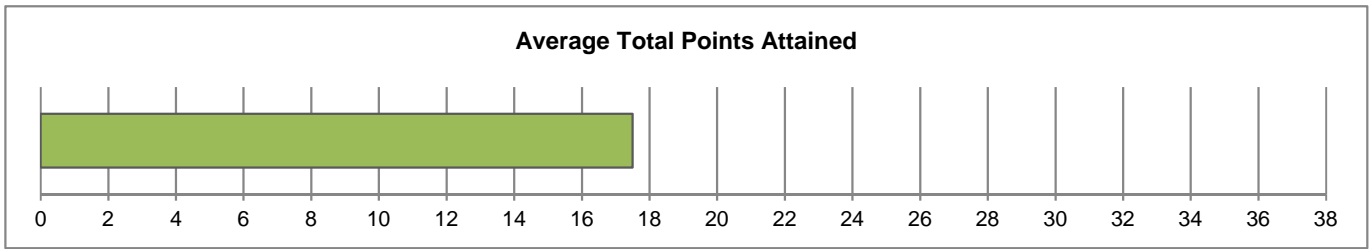
Westmont College

CAT Institutional Report

July 2020 - Biology

CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Biology

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	2	16.00	19.00	17.50	2.12



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	0	0.0%
	Female	2	100.0%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	0	0.0%
	Senior	2	100.0%
Class	Undergraduate	2	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	0	0.0%
	21-25 years	2	100.0%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	1	50.0%
	Black or African American	0	0.0%
	American Indian or Alaska Native	0	0.0%
	Asian	1	50.0%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	0	0.0%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	2	100.0%
	Very Good	0	0.0%
	Good	0	0.0%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

		Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	0	0.0%	
Considered English primary language?	2	100.0%	

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Biology

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	0	0.0%
		1	2	100.0%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	2	100.0%
		1	0	0.0%
		2	0	0.0%
		3	0	0.0%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	0	0.0%
		1	1	50.0%
		2	1	50.0%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	1	50.0%
		1	1	50.0%
		2	0	0.0%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	0	0.0%
		1	2	100.0%
Q6	Provide alternative explanations for spurious associations.	0	0	0.0%
		1	0	0.0%
		2	2	100.0%
		3	0	0.0%
Q7	Identify additional information needed to evaluate a hypothesis.	0	2	100.0%
		1	0	0.0%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	0	0.0%
		1	2	100.0%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	2	100.0%
		1	0	0.0%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	0	0.0%
		2	0	0.0%
		3	1	50.0%
		4	1	50.0%
Q11	Use and apply relevant information to evaluate a problem.	0	0	0.0%
		1	2	100.0%
		2	0	0.0%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	1	50.0%
		1	1	50.0%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	0	0.0%
		1	1	50.0%
		2	0	0.0%
		3	1	50.0%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	0	0.0%
		1	1	50.0%
		2	0	0.0%
		3	0	0.0%
		4	1	50.0%
		5	0	0.0%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	1	50.0%
		1	0	0.0%
		2	1	50.0%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Biology

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	1.00	100%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0.00	0%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.50	50%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.50	13%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	1.00	100%
		X	X	Q6	Provide alternative explanations for spurious associations.	2.00	67%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.00	0%
X				Q8	Determine whether an invited inference is supported by specific information.	1.00	100%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.00	0%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.50	88%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.00	50%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.50	50%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	2.00	67%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.50	50%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	1.00	33%
CAT Total Score						17.50	46%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Biology

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	1.00	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0.00	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.50	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.50	1.10		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	1.00	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	2.00	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.00	0.56		
X				Q8	Determine whether an invited inference is supported by specific information.	1.00	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.00	0.85		
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.50	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.00	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.50	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	2.00	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.50	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	1.00	0.92		
CAT Total Score						17.50	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

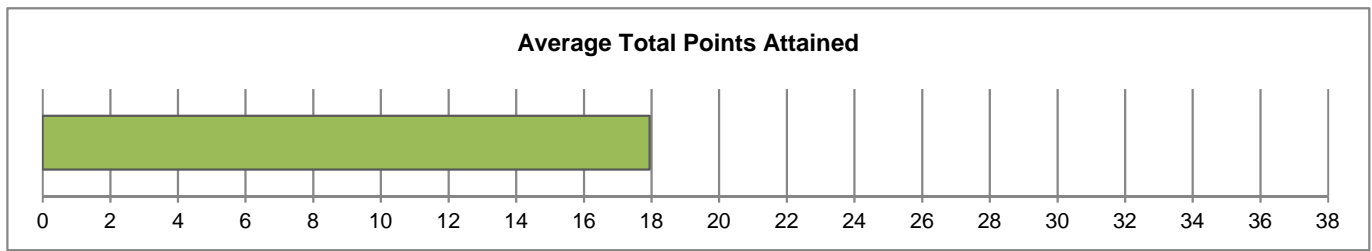
Westmont College

CAT Institutional Report

July 2020 - Computer Science, Math, & Data Analytics

CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Computer Science, Math, & Data Analytics

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	17	7.00	27.00	17.94	4.55



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	9	56.3%
	Female	7	43.8%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	0	0.0%
	Senior	17	100.0%
Class	Undergraduate	17	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	1	5.9%
	21-25 years	16	94.1%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	11	64.7%
	Black or African American	2	11.8%
	American Indian or Alaska Native	1	5.9%
	Asian	3	17.6%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	0	0.0%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	15	88.2%
	Very Good	1	5.9%
	Good	1	5.9%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

		Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	2	11.8%	
Considered English primary language?	16	94.1%	

CAT Breakdown: Frequency of Points Awarded for Each Question
Westmont College: July 2020 - Computer Science, Math, & Data Analytics

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	1	5.9%
		1	16	94.1%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	6	35.3%
		1	4	23.5%
		2	1	5.9%
		3	6	35.3%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	1	5.9%
		1	9	52.9%
		2	7	41.2%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	3	17.6%
		1	11	64.7%
		2	3	17.6%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	2	11.8%
		1	15	88.2%
Q6	Provide alternative explanations for spurious associations.	0	0	0.0%
		1	1	5.9%
		2	14	82.4%
		3	2	11.8%
Q7	Identify additional information needed to evaluate a hypothesis.	0	16	94.1%
		1	1	5.9%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	2	11.8%
		1	15	88.2%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	7	41.2%
		1	10	58.8%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	1	5.9%
		2	1	5.9%
		3	5	29.4%
		4	10	58.8%
Q11	Use and apply relevant information to evaluate a problem.	0	5	29.4%
		1	10	58.8%
		2	2	11.8%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	3	17.6%
		1	14	82.4%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	4	23.5%
		1	8	47.1%
		2	3	17.6%
		3	2	11.8%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	6	35.3%
		1	3	17.6%
		2	0	0.0%
		3	2	11.8%
		4	3	17.6%
		5	3	17.6%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	11	64.7%
		1	5	29.4%
		2	1	5.9%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Computer Science, Math, & Data Analytics

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.94	94%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.41	47%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.35	45%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	1.00	25%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.88	88%
		X	X	Q6	Provide alternative explanations for spurious associations.	2.06	69%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.06	3%
X				Q8	Determine whether an invited inference is supported by specific information.	0.88	88%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.59	29%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.41	85%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.82	41%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.82	82%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.18	39%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.12	42%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.41	14%
CAT Total Score						17.94	47%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Computer Science, Math, & Data Analytics

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.94	0.70	*	+0.66
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.41	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.35	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	1.00	1.10		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.88	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	2.06	1.53	*	+0.79
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.06	0.56	**	-1.04
X				Q8	Determine whether an invited inference is supported by specific information.	0.88	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.59	0.85		
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.41	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.82	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.82	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.18	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.12	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.41	0.92		
CAT Total Score						17.94	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

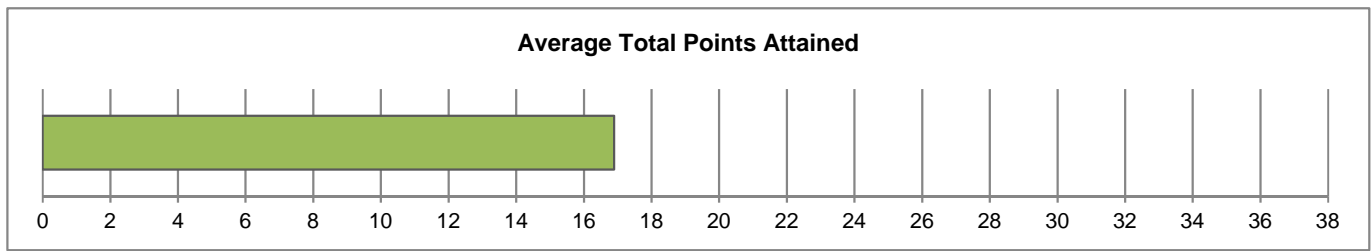
Westmont College

CAT Institutional Report

July 2020 - Economics & Business

CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Economics & Business

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	39	7.00	25.00	16.90	4.57



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	21	53.8%
	Female	18	46.2%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	0	0.0%
	Senior	39	100.0%
Class	Undergraduate	39	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	5	12.8%
	21-25 years	34	87.2%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	30	76.9%
	Black or African American	1	2.6%
	American Indian or Alaska Native	0	0.0%
	Asian	7	17.9%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	3	7.7%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	31	79.5%
	Very Good	8	20.5%
	Good	0	0.0%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

		Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	5	12.8%	
Considered English primary language?	35	89.7%	

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Economics & Business

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	6	15.4%
		1	33	84.6%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	8	20.5%
		1	13	33.3%
		2	8	20.5%
		3	10	25.6%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	12	30.8%
		1	14	35.9%
		2	13	33.3%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	19	48.7%
		1	18	46.2%
		2	2	5.1%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	6	15.4%
		1	33	84.6%
Q6	Provide alternative explanations for spurious associations.	0	4	10.3%
		1	11	28.2%
		2	23	59.0%
		3	1	2.6%
Q7	Identify additional information needed to evaluate a hypothesis.	0	35	89.7%
		1	4	10.3%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	15	38.5%
		1	24	61.5%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	15	38.5%
		1	24	61.5%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	2	5.1%
		2	8	20.5%
		3	12	30.8%
		4	17	43.6%
Q11	Use and apply relevant information to evaluate a problem.	0	7	17.9%
		1	26	66.7%
		2	6	15.4%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	9	23.1%
		1	30	76.9%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	11	28.2%
		1	16	41.0%
		2	9	23.1%
		3	3	7.7%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	8	20.5%
		1	6	15.4%
		2	0	0.0%
		3	2	5.1%
		4	20	51.3%
		5	3	7.7%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	24	61.5%
		1	10	25.6%
		2	5	12.8%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Economics & Business

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.85	85%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.51	50%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.03	34%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.56	14%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.85	85%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.54	51%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.10	5%
X				Q8	Determine whether an invited inference is supported by specific information.	0.62	62%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.62	31%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.13	78%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.97	49%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.77	77%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.10	37%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.74	55%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.51	17%
CAT Total Score						16.90	44%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Economics & Business

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.85	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.51	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.03	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.56	1.10	**	-.58
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.85	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.54	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.10	0.56	***	-.92
X				Q8	Determine whether an invited inference is supported by specific information.	0.62	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.62	0.85		
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.13	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.97	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.77	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.10	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.74	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.51	0.92	*	-.47
CAT Total Score						16.90	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2 –tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

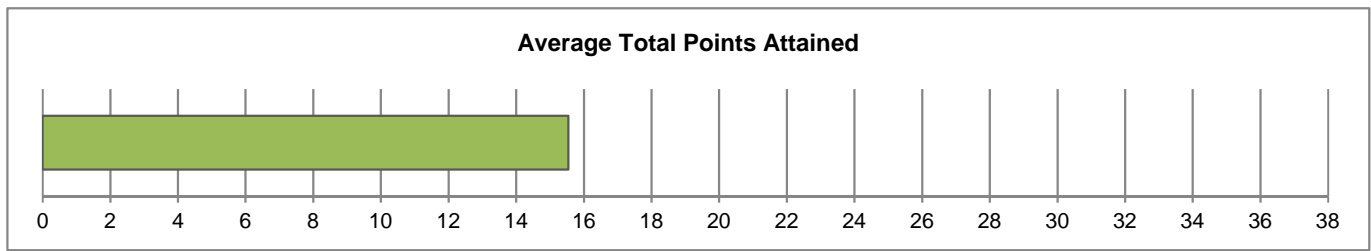
Westmont College

CAT Institutional Report

July 2020 - English

**CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - English**

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	13	4.00	25.00	15.54	5.35



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	4	30.8%
	Female	9	69.2%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	0	0.0%
	Senior	13	100.0%
Class	Undergraduate	13	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	1	7.7%
	21-25 years	12	92.3%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	12	92.3%
	Black or African American	0	0.0%
	American Indian or Alaska Native	0	0.0%
	Asian	2	15.4%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	0	0.0%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	11	84.6%
	Very Good	2	15.4%
	Good	0	0.0%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	1	7.7%
Considered English primary language?	13	100.0%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - English

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	6	46.2%
		1	7	53.8%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	6	46.2%
		1	3	23.1%
		2	2	15.4%
		3	2	15.4%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	3	23.1%
		1	4	30.8%
		2	6	46.2%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	8	61.5%
		1	5	38.5%
		2	0	0.0%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	4	30.8%
		1	9	69.2%
Q6	Provide alternative explanations for spurious associations.	0	3	23.1%
		1	5	38.5%
		2	4	30.8%
		3	1	7.7%
Q7	Identify additional information needed to evaluate a hypothesis.	0	11	84.6%
		1	2	15.4%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	6	46.2%
		1	7	53.8%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	6	46.2%
		1	7	53.8%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	1	7.7%
		2	2	15.4%
		3	7	53.8%
		4	3	23.1%
Q11	Use and apply relevant information to evaluate a problem.	0	2	15.4%
		1	9	69.2%
		2	2	15.4%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	2	15.4%
		1	11	84.6%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	4	30.8%
		1	3	23.1%
		2	3	23.1%
		3	3	23.1%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	4	30.8%
		1	2	15.4%
		2	0	0.0%
		3	1	7.7%
		4	3	23.1%
		5	3	23.1%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	6	46.2%
		1	6	46.2%
		2	1	7.7%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - English

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.54	54%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.00	33%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.23	41%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.38	10%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.69	69%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.23	41%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.15	8%
X				Q8	Determine whether an invited inference is supported by specific information.	0.54	54%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.54	27%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	2.92	73%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.00	50%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.85	85%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.38	46%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.46	49%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.62	21%
CAT Total Score						15.54	41%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - English

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.54	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.00	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.23	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.38	1.10	*	-.80
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.69	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.23	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.15	0.56	*	-.78
X				Q8	Determine whether an invited inference is supported by specific information.	0.54	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.54	0.85		
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	2.92	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.00	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.85	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.38	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.46	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.62	0.92		
CAT Total Score						15.54	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

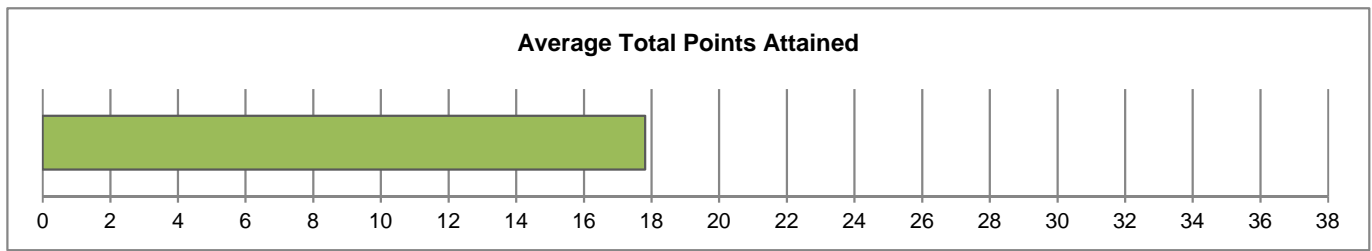
Westmont College

CAT Institutional Report

July 2020 - Kinesiology

CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Kinesiology

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	26	8.00	24.00	17.81	4.53



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	12	46.2%
	Female	14	53.8%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	1	3.8%
	Senior	25	96.2%
Class	Undergraduate	26	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	1	3.8%
	21-25 years	25	96.2%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	19	73.1%
	Black or African American	0	0.0%
	American Indian or Alaska Native	0	0.0%
	Asian	4	15.4%
	Native Hawaiian or Other Pacific Islander	1	3.8%
	Other Race	2	7.7%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	19	73.1%
	Very Good	5	19.2%
	Good	2	7.7%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	5	19.2%
Considered English primary language?	26	100.0%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Kinesiology

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	2	7.7%
		1	24	92.3%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	8	30.8%
		1	9	34.6%
		2	2	7.7%
		3	7	26.9%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	9	34.6%
		1	12	46.2%
		2	5	19.2%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	12	46.2%
		1	14	53.8%
		2	0	0.0%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	5	19.2%
		1	21	80.8%
Q6	Provide alternative explanations for spurious associations.	0	3	11.5%
		1	7	26.9%
		2	14	53.8%
		3	2	7.7%
Q7	Identify additional information needed to evaluate a hypothesis.	0	23	88.5%
		1	3	11.5%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	3	11.5%
		1	23	88.5%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	14	53.8%
		1	12	46.2%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	1	3.8%
		2	4	15.4%
		3	8	30.8%
		4	13	50.0%
Q11	Use and apply relevant information to evaluate a problem.	0	4	15.4%
		1	16	61.5%
		2	6	23.1%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	4	15.4%
		1	22	84.6%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	6	23.1%
		1	7	26.9%
		2	7	26.9%
		3	6	23.1%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	5	19.2%
		1	3	11.5%
		2	0	0.0%
		3	4	15.4%
		4	10	38.5%
		5	4	15.4%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	14	53.8%
		1	4	15.4%
		2	8	30.8%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Kinesiology

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.92	92%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.31	44%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0.85	28%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.54	13%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.81	81%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.58	53%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.12	6%
X				Q8	Determine whether an invited inference is supported by specific information.	0.88	88%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.46	23%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.27	82%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.08	54%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.85	85%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.50	50%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.88	58%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.77	26%
CAT Total Score						17.81	47%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report
Westmont College: July 2020 - Kinesiology

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.92	0.70	*	+0.60
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.31	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0.85	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.54	1.10	*	-0.63
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.81	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.58	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.12	0.56	**	-0.88
X				Q8	Determine whether an invited inference is supported by specific information.	0.88	0.66	*	+0.55
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.46	0.85	*	-0.62
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.27	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.08	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.85	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.50	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.88	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.77	0.92		
CAT Total Score						17.81	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

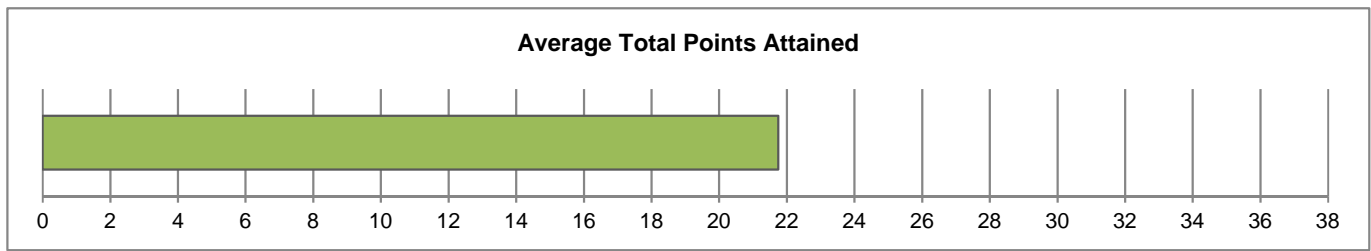
Westmont College

CAT Institutional Report

July 2020 - Philosophy

CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Philosophy

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	4	21.00	22.00	21.75	0.50



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	4	100.0%
	Female	0	0.0%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	0	0.0%
	Senior	4	100.0%
Class	Undergraduate	4	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	0	0.0%
	21-25 years	4	100.0%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	4	100.0%
	Black or African American	0	0.0%
	American Indian or Alaska Native	0	0.0%
	Asian	0	0.0%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	0	0.0%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	4	100.0%
	Very Good	0	0.0%
	Good	0	0.0%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

		Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	0	0.0%	
Considered English primary language?	4	100.0%	

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Philosophy

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	0	0.0%
		1	4	100.0%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	0	0.0%
		1	1	25.0%
		2	2	50.0%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	2	50.0%
		1	0	0.0%
		2	2	50.0%
Q4	Identify additional information needed to evaluate a hypothesis.	3	0	0.0%
		0	1	25.0%
		1	3	75.0%
		2	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	3	0	0.0%
		0	1	25.0%
		1	3	75.0%
		2	0	0.0%
Q6	Provide alternative explanations for spurious associations.	4	0	0.0%
		0	0	0.0%
		1	0	0.0%
		2	4	100.0%
Q7	Identify additional information needed to evaluate a hypothesis.	3	0	0.0%
		0	3	75.0%
		1	1	25.0%
Q8	Determine whether an invited inference is supported by specific information.	2	0	0.0%
		0	1	25.0%
		1	3	75.0%
Q9	Provide relevant alternative interpretations for a specific set of results.	2	0	0.0%
		0	1	25.0%
		1	3	75.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	3	0	0.0%
		0	0	0.0%
		1	0	0.0%
		2	0	0.0%
Q11	Use and apply relevant information to evaluate a problem.	3	1	25.0%
		0	0	0.0%
		1	3	75.0%
Q12	Use basic mathematical skills to help solve a real-world problem.	2	1	25.0%
		0	0	0.0%
Q13	Identify suitable solutions for a real-world problem using relevant information.	1	4	100.0%
		0	0	0.0%
		1	2	50.0%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	2	1	25.0%
		0	0	0.0%
		1	0	0.0%
Q15	Explain how changes in a real-world problem situation might affect the solution.	3	0	0.0%
		0	0	0.0%
		1	3	75.0%
		2	0	0.0%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Philosophy

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	1.00	100%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	2.25	75%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.00	33%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.75	19%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.75	75%
		X	X	Q6	Provide alternative explanations for spurious associations.	2.00	67%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.25	13%
X				Q8	Determine whether an invited inference is supported by specific information.	0.75	75%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.75	38%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.75	94%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.25	63%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	1.00	100%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.75	58%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	3.75	75%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.75	25%
CAT Total Score						21.75	57%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Philosophy

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	1.00	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	2.25	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.00	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.75	1.10		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.75	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	2.00	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.25	0.56		
X				Q8	Determine whether an invited inference is supported by specific information.	0.75	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.75	0.85		
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.75	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.25	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	1.00	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.75	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	3.75	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.75	0.92		
CAT Total Score						21.75	17.64		

^a National user norms updated Fall 2019

^d * p<.05 **p<.01 ***p<.001 (2 –tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

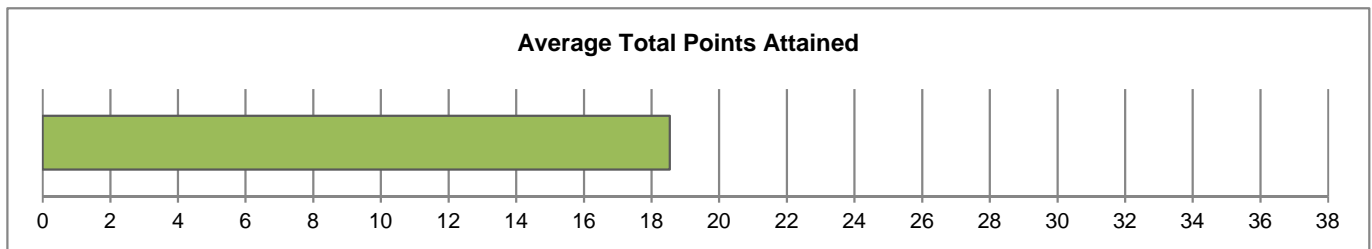
Westmont College

CAT Institutional Report

July 2020 - Psychology

**CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Psychology**

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	24	10.00	28.00	18.54	5.13



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	5	20.8%
	Female	19	79.2%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	3	12.5%
	Senior	21	87.5%
Class	Undergraduate	24	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	2	8.3%
	21-25 years	22	91.7%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	21	87.5%
	Black or African American	1	4.2%
	American Indian or Alaska Native	1	4.2%
	Asian	3	12.5%
	Native Hawaiian or Other Pacific Islander	1	4.2%
	Other Race	2	8.3%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	21	87.5%
	Very Good	2	8.3%
	Good	1	4.2%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	4	16.7%
Considered English primary language?	24	100.0%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Psychology

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	4	16.7%
		1	20	83.3%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	8	33.3%
		1	6	25.0%
		2	3	12.5%
		3	7	29.2%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	10	41.7%
		1	5	20.8%
		2	9	37.5%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	7	29.2%
		1	11	45.8%
		2	6	25.0%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	2	8.3%
		1	22	91.7%
Q6	Provide alternative explanations for spurious associations.	0	0	0.0%
		1	3	12.5%
		2	21	87.5%
		3	0	0.0%
Q7	Identify additional information needed to evaluate a hypothesis.	0	20	83.3%
		1	4	16.7%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	5	20.8%
		1	19	79.2%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	9	37.5%
		1	14	58.3%
		2	1	4.2%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	1	4.2%
		2	1	4.2%
		3	12	50.0%
		4	10	41.7%
Q11	Use and apply relevant information to evaluate a problem.	0	7	29.2%
		1	16	66.7%
		2	1	4.2%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	2	8.3%
		1	22	91.7%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	8	33.3%
		1	2	8.3%
		2	7	29.2%
		3	7	29.2%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	3	12.5%
		1	3	12.5%
		2	0	0.0%
		3	3	12.5%
		4	13	54.2%
		5	2	8.3%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	16	66.7%
		1	6	25.0%
		2	2	8.3%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Psychology

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.83	83%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.38	46%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0.96	32%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.96	24%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.92	92%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.88	63%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.17	8%
X				Q8	Determine whether an invited inference is supported by specific information.	0.79	79%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.67	33%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.29	82%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.75	38%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.92	92%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.54	51%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	3.08	62%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.42	14%
CAT Total Score						18.54	49%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Psychology

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.83	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.38	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0.96	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.96	1.10		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.92	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.88	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.17	0.56	**	-.75
X				Q8	Determine whether an invited inference is supported by specific information.	0.79	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.67	0.85		
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.29	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.75	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.92	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.54	1.10	*	+ .39
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	3.08	2.24	*	+ .48
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.42	0.92	*	-.59
CAT Total Score						18.54	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2 -tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

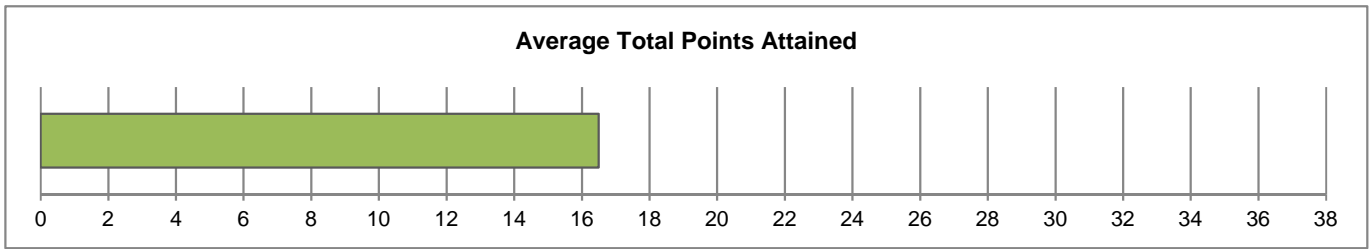
Westmont College

CAT Institutional Report

July 2020 - Religious Studies

CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Religious Studies

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	14	7.00	26.00	16.50	5.54



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	7	50.0%
	Female	7	50.0%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	2	14.3%
	Senior	12	85.7%
Class	Undergraduate	14	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	1	7.1%
	21-25 years	13	92.9%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	12	85.7%
	Black or African American	0	0.0%
	American Indian or Alaska Native	0	0.0%
	Asian	1	7.1%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	1	7.1%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	9	64.3%
	Very Good	4	28.6%
	Good	1	7.1%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

		Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	1	7.1%	
Considered English primary language?	14	100.0%	

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Religious Studies

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	3	21.4%
		1	11	78.6%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	5	35.7%
		1	3	21.4%
		2	3	21.4%
		3	3	21.4%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	2	14.3%
		1	6	42.9%
		2	6	42.9%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	3	21.4%
		1	7	50.0%
		2	4	28.6%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	3	21.4%
		1	11	78.6%
Q6	Provide alternative explanations for spurious associations.	0	1	7.1%
		1	1	7.1%
		2	12	85.7%
		3	0	0.0%
Q7	Identify additional information needed to evaluate a hypothesis.	0	14	100.0%
		1	0	0.0%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	2	14.3%
		1	12	85.7%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	6	42.9%
		1	8	57.1%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	2	14.3%
		2	2	14.3%
		3	4	28.6%
		4	6	42.9%
Q11	Use and apply relevant information to evaluate a problem.	0	2	14.3%
		1	9	64.3%
		2	3	21.4%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	5	35.7%
		1	9	64.3%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	4	28.6%
		1	7	50.0%
		2	2	14.3%
		3	1	7.1%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	4	28.6%
		1	4	28.6%
		2	0	0.0%
		3	1	7.1%
		4	5	35.7%
		5	0	0.0%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	11	78.6%
		1	0	0.0%
		2	3	21.4%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Religious Studies

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.79	79%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.29	43%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.29	43%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	1.07	27%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.79	79%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.79	60%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.00	0%
X				Q8	Determine whether an invited inference is supported by specific information.	0.86	86%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.57	29%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.00	75%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.07	54%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.64	64%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.00	33%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	1.93	39%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.43	14%
CAT Total Score						16.50	43%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Religious Studies

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.79	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.29	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.29	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	1.07	1.10		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.79	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.79	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.00	0.56	**	-1.25
X				Q8	Determine whether an invited inference is supported by specific information.	0.86	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.57	0.85		
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.00	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.07	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.64	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.00	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	1.93	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.43	0.92		
CAT Total Score						16.50	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

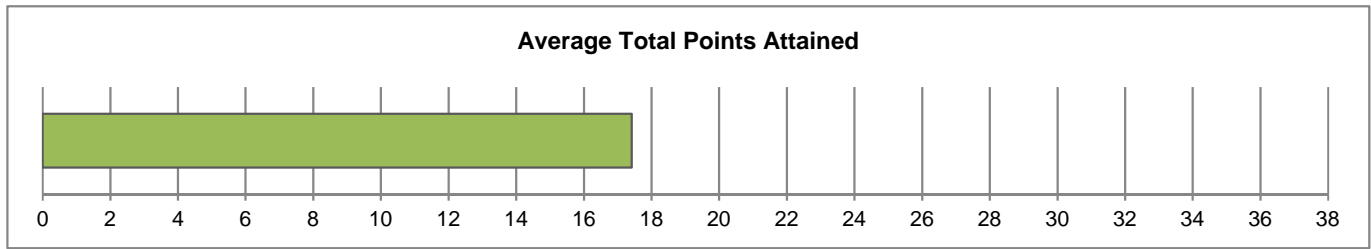
Westmont College

CAT Institutional Report

July 2020 - Female

**CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Female**

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	78	8.00	26.00	17.41	4.35



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	0	0.0%
	Female	78	100.0%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	4	5.1%
	Senior	74	94.9%
Class	Undergraduate	78	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	7	9.0%
	21-25 years	71	91.0%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	64	82.1%
	Black or African American	4	5.1%
	American Indian or Alaska Native	2	2.6%
	Asian	12	15.4%
	Native Hawaiian or Other Pacific Islander	2	2.6%
	Other Race	2	2.6%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	67	85.9%
	Very Good	11	14.1%
	Good	0	0.0%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

		Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	4	5.1%	
Considered English primary language?	77	98.7%	

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Female

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	12	15.4%
		1	66	84.6%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	27	34.6%
		1	27	34.6%
		2	10	12.8%
		3	14	17.9%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	20	25.6%
		1	30	38.5%
		2	28	35.9%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	28	35.9%
		1	39	50.0%
		2	11	14.1%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	14	17.9%
		1	64	82.1%
Q6	Provide alternative explanations for spurious associations.	0	3	3.8%
		1	22	28.2%
		2	52	66.7%
		3	1	1.3%
Q7	Identify additional information needed to evaluate a hypothesis.	0	71	91.0%
		1	7	9.0%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	18	23.1%
		1	60	76.9%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	31	39.7%
		1	46	59.0%
		2	1	1.3%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	2	2.6%
		2	9	11.5%
		3	35	44.9%
		4	32	41.0%
Q11	Use and apply relevant information to evaluate a problem.	0	15	19.2%
		1	55	70.5%
		2	8	10.3%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	16	20.5%
		1	62	79.5%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	23	29.5%
		1	22	28.2%
		2	17	21.8%
		3	16	20.5%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	16	20.5%
		1	12	15.4%
		2	0	0.0%
		3	9	11.5%
		4	31	39.7%
		5	10	12.8%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	46	59.0%
		1	19	24.4%
		2	13	16.7%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Female

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.85	85%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.14	38%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.10	37%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.78	20%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.82	82%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.65	55%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.09	4%
X				Q8	Determine whether an invited inference is supported by specific information.	0.77	77%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.62	31%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.24	81%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.91	46%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.79	79%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.33	44%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.73	55%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.58	19%
CAT Total Score						17.41	46%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Female

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.85	0.70	**	+0.36
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.14	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.10	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.78	1.10	*	-.34
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.82	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.65	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.09	0.56	***	-.95
X				Q8	Determine whether an invited inference is supported by specific information.	0.77	0.66	*	+0.24
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.62	0.85	**	-.37
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.24	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.91	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.79	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.33	1.10	*	+0.22
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.73	2.24	*	+0.27
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.58	0.92	**	-.39
CAT Total Score						17.41	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

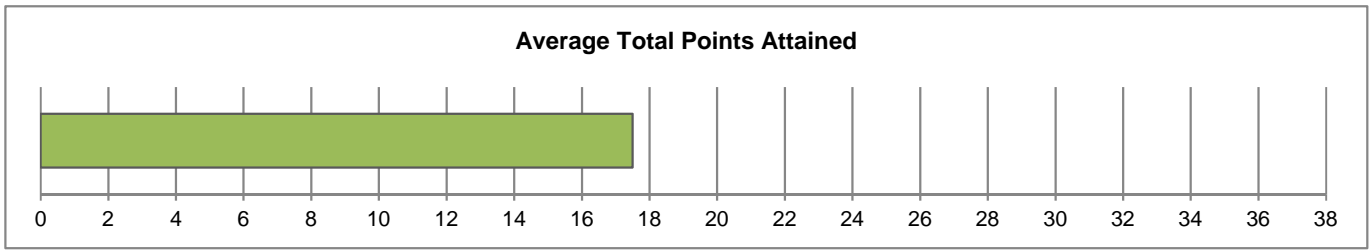
Westmont College

CAT Institutional Report

July 2020 - Male

**CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Male**

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	62	4.00	28.00	17.50	5.28



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	62	100.0%
	Female	0	0.0%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	2	3.2%
	Senior	60	96.8%
Class	Undergraduate	62	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	4	6.5%
	21-25 years	58	93.5%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	47	75.8%
	Black or African American	1	1.6%
	American Indian or Alaska Native	0	0.0%
	Asian	9	14.5%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	6	9.7%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	45	72.6%
	Very Good	12	19.4%
	Good	5	8.1%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	14	22.6%
Considered English primary language?	58	93.5%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Male

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	10	16.1%
		1	52	83.9%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	16	25.8%
		1	13	21.0%
		2	10	16.1%
		3	23	37.1%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	19	30.6%
		1	23	37.1%
		2	20	32.3%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	27	43.5%
		1	31	50.0%
		2	4	6.5%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	9	14.5%
		1	53	85.5%
Q6	Provide alternative explanations for spurious associations.	0	8	12.9%
		1	7	11.3%
		2	43	69.4%
		3	4	6.5%
Q7	Identify additional information needed to evaluate a hypothesis.	0	53	85.5%
		1	9	14.5%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	17	27.4%
		1	45	72.6%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	29	46.8%
		1	33	53.2%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	6	9.7%
		2	9	14.5%
		3	14	22.6%
		4	33	53.2%
Q11	Use and apply relevant information to evaluate a problem.	0	12	19.4%
		1	37	59.7%
		2	13	21.0%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	10	16.1%
		1	52	83.9%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	15	24.2%
		1	25	40.3%
		2	15	24.2%
		3	7	11.3%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	14	22.6%
		1	10	16.1%
		2	0	0.0%
		3	5	8.1%
		4	28	45.2%
		5	5	8.1%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	38	61.3%
		1	15	24.2%
		2	9	14.5%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Male

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.84	84%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.65	55%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.02	34%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.63	16%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.85	85%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.69	56%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.15	7%
X				Q8	Determine whether an invited inference is supported by specific information.	0.73	73%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.53	27%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.19	80%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.02	51%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.84	84%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.23	41%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.61	52%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.53	18%
CAT Total Score						17.50	46%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Male

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.84	0.70	*	+0.34
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.65	1.20	**	+0.38
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.02	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.63	1.10	**	-0.51
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.85	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.69	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.15	0.56	***	-0.80
X				Q8	Determine whether an invited inference is supported by specific information.	0.73	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.53	0.85	**	-0.51
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.19	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.02	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.84	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.23	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.61	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.53	0.92	**	-0.44
CAT Total Score						17.50	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

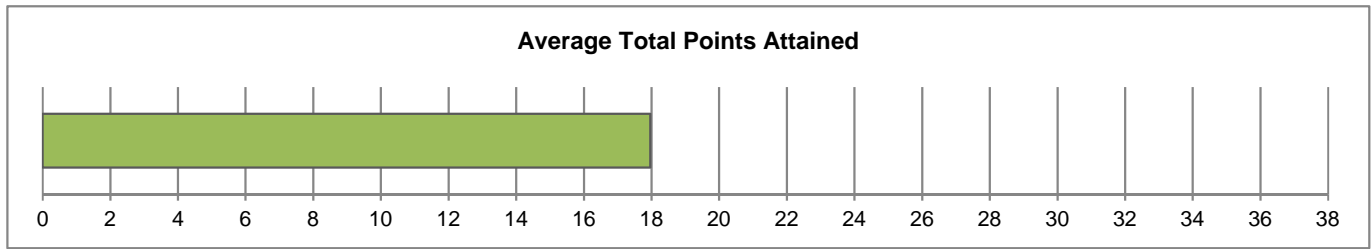
Westmont College

CAT Institutional Report

July 2020 - White

**CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - White**

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	83	7.00	28.00	17.96	4.80



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	31	37.8%
	Female	51	62.2%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	3	3.6%
	Senior	80	96.4%
Class	Undergraduate	83	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	5	6.0%
	21-25 years	78	94.0%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	82	98.8%
	Black or African American	0	0.0%
	American Indian or Alaska Native	0	0.0%
	Asian	0	0.0%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	2	2.4%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	66	79.5%
	Very Good	15	18.1%
	Good	2	2.4%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

		Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	1	1.2%	
Considered English primary language?	82	98.8%	

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - White

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	13	15.7%
		1	70	84.3%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	27	32.5%
		1	22	26.5%
		2	12	14.5%
		3	22	26.5%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	22	26.5%
		1	29	34.9%
		2	32	38.6%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	32	38.6%
		1	41	49.4%
		2	10	12.0%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	10	12.0%
		1	73	88.0%
Q6	Provide alternative explanations for spurious associations.	0	2	2.4%
		1	21	25.3%
		2	56	67.5%
		3	4	4.8%
Q7	Identify additional information needed to evaluate a hypothesis.	0	72	86.7%
		1	11	13.3%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	20	24.1%
		1	63	75.9%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	30	36.1%
		1	52	62.7%
		2	1	1.2%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	5	6.0%
		2	11	13.3%
		3	27	32.5%
		4	40	48.2%
Q11	Use and apply relevant information to evaluate a problem.	0	18	21.7%
		1	53	63.9%
		2	12	14.5%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	19	22.9%
		1	64	77.1%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	20	24.1%
		1	27	32.5%
		2	20	24.1%
		3	16	19.3%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	14	16.9%
		1	13	15.7%
		2	0	0.0%
		3	9	10.8%
		4	38	45.8%
		5	9	10.8%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	49	59.0%
		1	20	24.1%
		2	14	16.9%
		3	0	0.0%

Institutional/Departmental Profile
Westmont College: July 2020 - White

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.84	84%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.35	45%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.12	37%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.73	18%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.88	88%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.75	58%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.13	7%
X				Q8	Determine whether an invited inference is supported by specific information.	0.76	76%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.65	33%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.23	81%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.93	46%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.77	77%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.39	46%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.86	57%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.58	19%
CAT Total Score						17.96	47%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - White

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.84	0.70	**	+0.35
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.35	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.12	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.73	1.10	**	-0.39
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.88	0.75	**	+0.34
		X	X	Q6	Provide alternative explanations for spurious associations.	1.75	1.53	*	+0.30
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.13	0.56	***	-0.84
X				Q8	Determine whether an invited inference is supported by specific information.	0.76	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.65	0.85	*	-0.32
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.23	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.93	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.77	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.39	1.10	*	+0.28
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.86	2.24	**	+0.34
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.58	0.92	**	-0.38
CAT Total Score						17.96	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

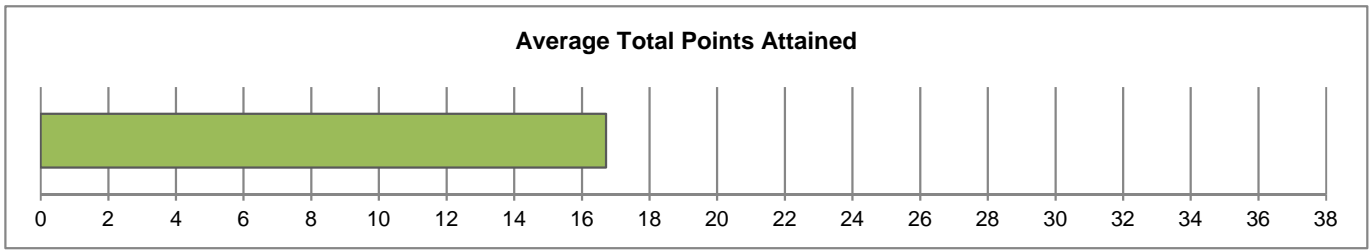
Westmont College

CAT Institutional Report

July 2020 - Non-white

CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Non-white

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	46	4.00	25.00	16.72	4.56



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	23	50.0%
	Female	23	50.0%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	3	6.5%
	Senior	43	93.5%
Class	Undergraduate	46	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	5	10.9%
	21-25 years	41	89.1%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	21	45.7%
	Black or African American	4	8.7%
	American Indian or Alaska Native	2	4.3%
	Asian	20	43.5%
	Native Hawaiian or Other Pacific Islander	2	4.3%
	Other Race	5	10.9%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	37	80.4%
	Very Good	6	13.0%
	Good	3	6.5%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	14	30.4%
Considered English primary language?	44	95.7%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Non-white

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	8	17.4%
		1	38	82.6%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	14	30.4%
		1	15	32.6%
		2	5	10.9%
		3	12	26.1%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	12	26.1%
		1	19	41.3%
		2	15	32.6%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	18	39.1%
		1	24	52.2%
		2	4	8.7%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	10	21.7%
		1	36	78.3%
Q6	Provide alternative explanations for spurious associations.	0	6	13.0%
		1	8	17.4%
		2	30	65.2%
		3	2	4.3%
Q7	Identify additional information needed to evaluate a hypothesis.	0	43	93.5%
		1	3	6.5%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	10	21.7%
		1	36	78.3%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	25	54.3%
		1	21	45.7%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	0	0.0%
		2	6	13.0%
		3	19	41.3%
		4	21	45.7%
Q11	Use and apply relevant information to evaluate a problem.	0	7	15.2%
		1	32	69.6%
		2	7	15.2%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	5	10.9%
		1	41	89.1%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	15	32.6%
		1	17	37.0%
		2	9	19.6%
		3	5	10.9%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	13	28.3%
		1	8	17.4%
		2	0	0.0%
		3	5	10.9%
		4	16	34.8%
		5	4	8.7%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	29	63.0%
		1	12	26.1%
		2	5	10.9%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Non-white

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.83	83%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.33	44%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.07	36%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.70	17%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.78	78%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.61	54%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.07	3%
X				Q8	Determine whether an invited inference is supported by specific information.	0.78	78%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.46	23%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.33	83%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.00	50%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.89	89%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.09	36%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.33	47%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.48	16%
CAT Total Score						16.72	44%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Non-white

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.83	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.33	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.07	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.70	1.10	*	-.43
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.78	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.61	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.07	0.56	***	-1.02
X				Q8	Determine whether an invited inference is supported by specific information.	0.78	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.46	0.85	***	-.63
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.33	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.00	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.89	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.09	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.33	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.48	0.92	**	-.51
CAT Total Score						16.72	17.64		

^a National user norms updated Fall 2019

^d * $p < .05$ ** $p < .01$ *** $p < .001$ (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

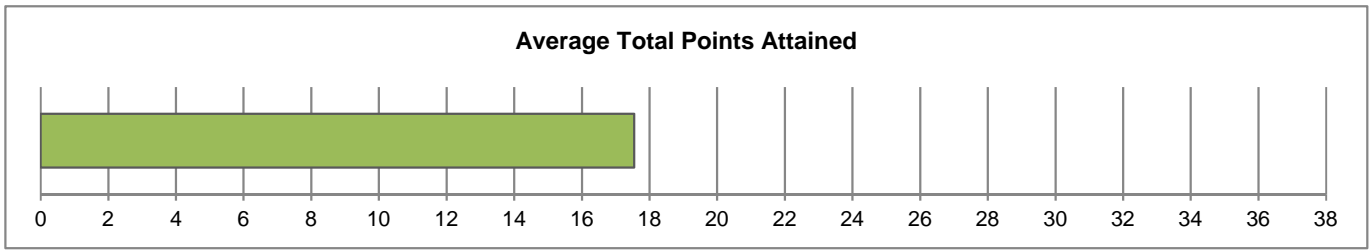
Westmont College

CAT Institutional Report

July 2020 - Latinx

CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Latinx

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	22	4.00	25.00	17.55	5.14



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	14	63.6%
	Female	8	36.4%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	2	9.1%
	Senior	20	90.9%
Class	Undergraduate	22	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	3	13.6%
	21-25 years	19	86.4%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	16	72.7%
	Black or African American	0	0.0%
	American Indian or Alaska Native	1	4.5%
	Asian	2	9.1%
	Native Hawaiian or Other Pacific Islander	1	4.5%
	Other Race	4	18.2%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	19	86.4%
	Very Good	2	9.1%
	Good	1	4.5%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	14	63.6%
Considered English primary language?	21	95.5%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Latinx

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	5	22.7%
		1	17	77.3%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	3	13.6%
		1	8	36.4%
		2	3	13.6%
		3	8	36.4%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	6	27.3%
		1	8	36.4%
		2	8	36.4%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	7	31.8%
		1	13	59.1%
		2	2	9.1%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	5	22.7%
		1	17	77.3%
Q6	Provide alternative explanations for spurious associations.	0	3	13.6%
		1	4	18.2%
		2	13	59.1%
		3	2	9.1%
Q7	Identify additional information needed to evaluate a hypothesis.	0	20	90.9%
		1	2	9.1%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	4	18.2%
		1	18	81.8%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	12	54.5%
		1	10	45.5%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	0	0.0%
		2	4	18.2%
		3	9	40.9%
		4	9	40.9%
Q11	Use and apply relevant information to evaluate a problem.	0	4	18.2%
		1	14	63.6%
		2	4	18.2%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	1	4.5%
		1	21	95.5%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	6	27.3%
		1	8	36.4%
		2	5	22.7%
		3	3	13.6%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	6	27.3%
		1	3	13.6%
		2	0	0.0%
		3	4	18.2%
		4	6	27.3%
		5	3	13.6%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	13	59.1%
		1	6	27.3%
		2	3	13.6%
		3	0	0.0%

Institutional/Departmental Profile
Westmont College: July 2020 - Latinx

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.77	77%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.73	58%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.09	36%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.77	19%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.77	77%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.64	55%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.09	5%
X				Q8	Determine whether an invited inference is supported by specific information.	0.82	82%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.45	23%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.23	81%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.00	50%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.95	95%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.23	41%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.45	49%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.55	18%
CAT Total Score						17.55	46%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Latinx

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.77	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.73	1.20	*	+ .48
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.09	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.77	1.10		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.77	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.64	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.09	0.56	**	-.95
X				Q8	Determine whether an invited inference is supported by specific information.	0.82	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.45	0.85	*	-.63
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.23	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.00	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.95	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.23	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.45	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.55	0.92		
CAT Total Score						17.55	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2 -tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

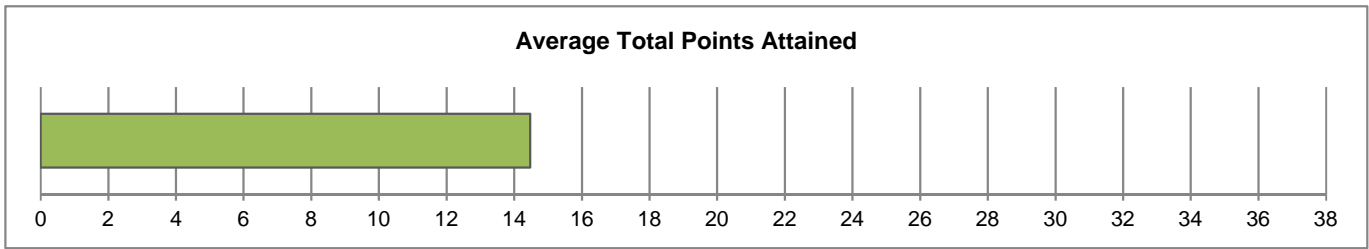
Westmont College

CAT Institutional Report

July 2020 - Asian

**CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Asian**

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	15	11.00	20.00	14.47	3.60



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	7	46.7%
	Female	8	53.3%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	0	0.0%
	Senior	15	100.0%
Class	Undergraduate	15	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	0	0.0%
	21-25 years	15	100.0%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	0	0.0%
	Black or African American	0	0.0%
	American Indian or Alaska Native	0	0.0%
	Asian	15	100.0%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	0	0.0%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	11	73.3%
	Very Good	2	13.3%
	Good	2	13.3%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

		Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	0	0.0%	
Considered English primary language?	14	93.3%	

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Asian

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	1	6.7%
		1	14	93.3%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	9	60.0%
		1	4	26.7%
		2	0	0.0%
		3	2	13.3%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	5	33.3%
		1	5	33.3%
		2	5	33.3%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	9	60.0%
		1	5	33.3%
		2	1	6.7%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	2	13.3%
		1	13	86.7%
Q6	Provide alternative explanations for spurious associations.	0	3	20.0%
		1	3	20.0%
		2	9	60.0%
		3	0	0.0%
Q7	Identify additional information needed to evaluate a hypothesis.	0	15	100.0%
		1	0	0.0%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	2	13.3%
		1	13	86.7%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	9	60.0%
		1	6	40.0%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	0	0.0%
		2	0	0.0%
		3	7	46.7%
		4	8	53.3%
Q11	Use and apply relevant information to evaluate a problem.	0	2	13.3%
		1	12	80.0%
		2	1	6.7%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	3	20.0%
		1	12	80.0%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	9	60.0%
		1	3	20.0%
		2	2	13.3%
		3	1	6.7%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	6	40.0%
		1	3	20.0%
		2	0	0.0%
		3	1	6.7%
		4	5	33.3%
		5	0	0.0%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	12	80.0%
		1	3	20.0%
		2	0	0.0%
		3	0	0.0%

Institutional/Departmental Profile
Westmont College: July 2020 - Asian

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.93	93%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0.67	22%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.00	33%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.47	12%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.87	87%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.40	47%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.00	0%
X				Q8	Determine whether an invited inference is supported by specific information.	0.87	87%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.40	20%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.53	88%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.93	47%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.80	80%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	0.67	22%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	1.73	35%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.20	7%
CAT Total Score						14.47	38%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Asian

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.93	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0.67	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.00	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.47	1.10		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.87	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.40	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.00	0.56	**	-1.25
X				Q8	Determine whether an invited inference is supported by specific information.	0.87	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.40	0.85	*	-.72
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.53	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.93	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.80	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	0.67	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	1.73	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.20	0.92	*	-.94
CAT Total Score						14.47	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

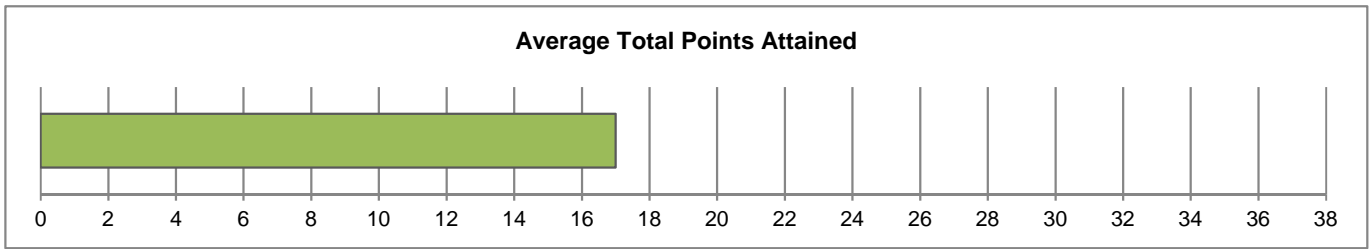
Westmont College

CAT Institutional Report

July 2020 - Non-Resident

CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Non-Resident

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	4	7.00	22.00	17.00	6.88



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	3	75.0%
	Female	1	25.0%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	0	0.0%
	Senior	4	100.0%
Class	Undergraduate	4	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	0	0.0%
	21-25 years	4	100.0%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	2	50.0%
	Black or African American	1	25.0%
	American Indian or Alaska Native	0	0.0%
	Asian	1	25.0%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	0	0.0%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	3	75.0%
	Very Good	1	25.0%
	Good	0	0.0%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	1	25.0%
Considered English primary language?	3	75.0%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Non-Resident

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	0	0.0%
		1	4	100.0%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	1	25.0%
		1	0	0.0%
		2	0	0.0%
		3	3	75.0%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	0	0.0%
		1	3	75.0%
		2	1	25.0%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	1	25.0%
		1	2	50.0%
		2	1	25.0%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	0	0.0%
		1	4	100.0%
Q6	Provide alternative explanations for spurious associations.	0	1	25.0%
		1	0	0.0%
		2	3	75.0%
		3	0	0.0%
Q7	Identify additional information needed to evaluate a hypothesis.	0	3	75.0%
		1	1	25.0%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	3	75.0%
		1	1	25.0%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	2	50.0%
		1	2	50.0%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	1	25.0%
		2	0	0.0%
		3	2	50.0%
		4	1	25.0%
Q11	Use and apply relevant information to evaluate a problem.	0	1	25.0%
		1	2	50.0%
		2	1	25.0%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	1	25.0%
		1	3	75.0%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	2	50.0%
		1	1	25.0%
		2	0	0.0%
		3	1	25.0%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	1	25.0%
		1	1	25.0%
		2	0	0.0%
		3	0	0.0%
		4	2	50.0%
		5	0	0.0%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	3	75.0%
		1	1	25.0%
		2	0	0.0%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Non-Resident

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	1.00	100%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	2.25	75%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.25	42%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	1.00	25%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	1.00	100%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.50	50%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.25	13%
X				Q8	Determine whether an invited inference is supported by specific information.	0.25	25%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.50	25%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	2.75	69%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.00	50%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.75	75%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.00	33%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.25	45%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.25	8%
CAT Total Score						17.00	45%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Non-Resident

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	1.00	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	2.25	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.25	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	1.00	1.10		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	1.00	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.50	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.25	0.56		
X				Q8	Determine whether an invited inference is supported by specific information.	0.25	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.50	0.85		
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	2.75	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.00	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.75	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.00	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.25	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.25	0.92		
CAT Total Score						17.00	17.64		

^a National user norms updated Fall 2019

^d * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

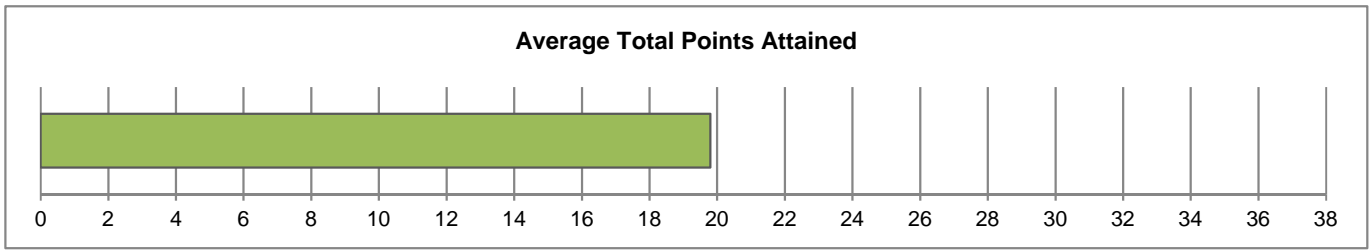
Westmont College

CAT Institutional Report

July 2020 - Transfers

**CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Transfers**

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	20	13.00	28.00	19.80	4.19



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	9	45.0%
	Female	11	55.0%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	0	0.0%
	Senior	20	100.0%
Class	Undergraduate	20	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	0	0.0%
	21-25 years	20	100.0%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	17	85.0%
	Black or African American	0	0.0%
	American Indian or Alaska Native	0	0.0%
	Asian	3	15.0%
	Native Hawaiian or Other Pacific Islander	1	5.0%
	Other Race	1	5.0%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	17	85.0%
	Very Good	3	15.0%
	Good	0	0.0%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	3	15.0%
Considered English primary language?	19	95.0%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Transfers

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	6	30.0%
		1	14	70.0%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	3	15.0%
		1	5	25.0%
		2	5	25.0%
		3	7	35.0%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	5	25.0%
		1	10	50.0%
		2	5	25.0%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	7	35.0%
		1	10	50.0%
		2	3	15.0%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	2	10.0%
		1	18	90.0%
Q6	Provide alternative explanations for spurious associations.	0	2	10.0%
		1	3	15.0%
		2	14	70.0%
		3	1	5.0%
Q7	Identify additional information needed to evaluate a hypothesis.	0	18	90.0%
		1	2	10.0%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	3	15.0%
		1	17	85.0%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	8	40.0%
		1	12	60.0%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	1	5.0%
		2	2	10.0%
		3	9	45.0%
		4	8	40.0%
Q11	Use and apply relevant information to evaluate a problem.	0	4	20.0%
		1	11	55.0%
		2	5	25.0%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	2	10.0%
		1	18	90.0%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	2	10.0%
		1	5	25.0%
		2	4	20.0%
		3	9	45.0%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	1	5.0%
		1	4	20.0%
		2	0	0.0%
		3	3	15.0%
		4	9	45.0%
		5	3	15.0%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	7	35.0%
		1	6	30.0%
		2	7	35.0%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Transfers

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.70	70%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.80	60%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.00	33%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.80	20%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.90	90%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.70	57%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.10	5%
X				Q8	Determine whether an invited inference is supported by specific information.	0.85	85%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.60	30%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.20	80%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.05	53%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.90	90%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	2.00	67%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	3.20	64%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	1.00	33%
CAT Total Score						19.80	52%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - Transfers

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.70	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.80	1.20	*	+0.55
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.00	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.80	1.10		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.90	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.70	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.10	0.56	**	-0.92
X				Q8	Determine whether an invited inference is supported by specific information.	0.85	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.60	0.85		
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.20	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.05	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.90	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	2.00	1.10	***	+0.87
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	3.20	2.24	*	+0.56
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	1.00	0.92		
CAT Total Score						19.80	17.64		

^a National user norms updated Fall 2019

^b * $p < .05$ ** $p < .01$ *** $p < .001$ (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

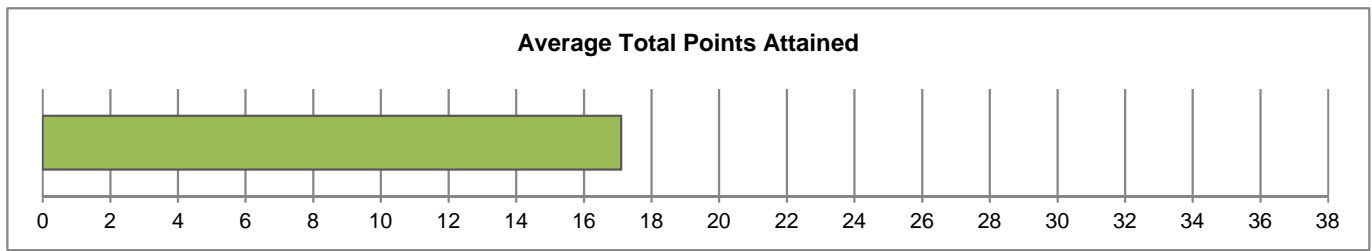
Westmont College

CAT Institutional Report

July 2020 - Non-Transfers

CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - Non-Transfers

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	121	4.00	27.00	17.10	4.76



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	53	44.2%
	Female	67	55.8%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	6	5.0%
	Senior	115	95.0%
Class	Undergraduate	121	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	11	9.1%
	21-25 years	110	90.9%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	95	78.5%
	Black or African American	5	4.1%
	American Indian or Alaska Native	2	1.7%
	Asian	18	14.9%
	Native Hawaiian or Other Pacific Islander	1	0.8%
	Other Race	7	5.8%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	96	79.3%
	Very Good	20	16.5%
	Good	5	4.1%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

	Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	15	12.4%
Considered English primary language?	117	96.7%

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - Non-Transfers

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	16	13.2%
		1	105	86.8%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	40	33.1%
		1	35	28.9%
		2	15	12.4%
		3	31	25.6%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	34	28.1%
		1	43	35.5%
		2	44	36.4%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	48	39.7%
		1	61	50.4%
		2	12	9.9%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	21	17.4%
		1	100	82.6%
Q6	Provide alternative explanations for spurious associations.	0	9	7.4%
		1	26	21.5%
		2	81	66.9%
		3	5	4.1%
Q7	Identify additional information needed to evaluate a hypothesis.	0	107	88.4%
		1	14	11.6%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	32	26.4%
		1	89	73.6%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	53	43.8%
		1	67	55.4%
		2	1	0.8%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	7	5.8%
		2	16	13.2%
		3	41	33.9%
		4	57	47.1%
Q11	Use and apply relevant information to evaluate a problem.	0	23	19.0%
		1	82	67.8%
		2	16	13.2%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	24	19.8%
		1	97	80.2%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	36	29.8%
		1	42	34.7%
		2	28	23.1%
		3	15	12.4%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	29	24.0%
		1	19	15.7%
		2	0	0.0%
		3	11	9.1%
		4	50	41.3%
		5	12	9.9%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	77	63.6%
		1	29	24.0%
		2	15	12.4%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - Non-Transfers

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.87	87%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.31	44%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.08	36%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.70	18%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.83	83%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.68	56%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.12	6%
X				Q8	Determine whether an invited inference is supported by specific information.	0.74	74%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.57	29%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.22	81%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.94	47%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.80	80%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.18	39%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.58	52%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.49	16%
CAT Total Score						17.10	45%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report
Westmont College: July 2020 - Non-Transfers

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.87	0.70	***	+ .42
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	1.31	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.08	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.70	1.10	***	-.43
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.83	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.68	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.12	0.56	***	-.88
X				Q8	Determine whether an invited inference is supported by specific information.	0.74	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.57	0.85	***	-.44
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.22	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.94	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.80	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.18	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	2.58	2.24	*	+ .18
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.49	0.92	***	-.50
CAT Total Score						17.10	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2 –tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

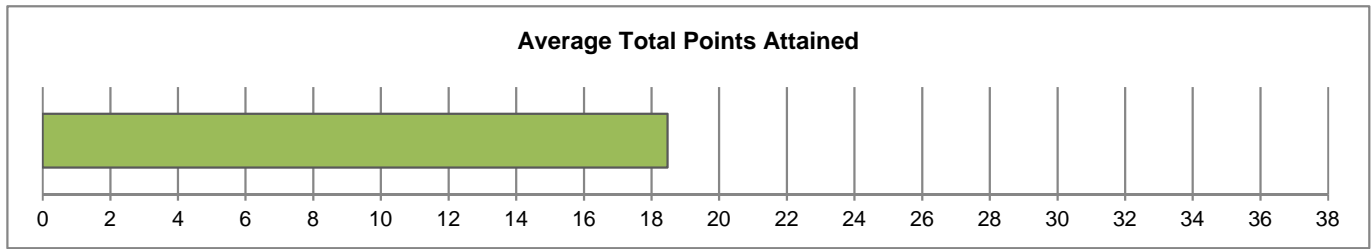
Westmont College

CAT Institutional Report

July 2020 - First Generation

**CAT Overview: Descriptive Statistics for CAT Total Score
Westmont College: July 2020 - First Generation**

	N	Min.	Max.	Mean	Std. Dev
CAT Total Score	21	11.00	25.00	18.48	4.32



CAT Demographics: Descriptive Statistics for Sample

		Freq.	Freq. %
Gender	Male	9	42.9%
	Female	12	57.1%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	2	9.5%
	Senior	19	90.5%
Class	Undergraduate	21	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	1	4.8%
	21-25 years	20	95.2%
	≥ 26 years	0	0.0%

		Freq.	Freq. %
Race**	White	16	76.2%
	Black or African American	0	0.0%
	American Indian or Alaska Native	1	4.8%
	Asian	4	19.0%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	0	0.0%

**The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	18	85.7%
	Very Good	3	14.3%
	Good	0	0.0%
	Fair	0	0.0%
	Poor	0	0.0%

* Self-rated

		Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	2	9.5%	
Considered English primary language?	21	100.0%	

CAT Breakdown: Frequency of Points Awarded for Each Question

Westmont College: July 2020 - First Generation

	Skill Assessed by CAT Question	Points Awarded	Freq.	Institution
Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0	3	14.3%
		1	18	85.7%
Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0	10	47.6%
		1	5	23.8%
		2	3	14.3%
		3	3	14.3%
Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0	4	19.0%
		1	9	42.9%
		2	8	38.1%
		3	0	0.0%
Q4	Identify additional information needed to evaluate a hypothesis.	0	6	28.6%
		1	13	61.9%
		2	2	9.5%
		3	0	0.0%
		4	0	0.0%
Q5	Evaluate whether spurious information strongly supports a hypothesis.	0	2	9.5%
		1	19	90.5%
Q6	Provide alternative explanations for spurious associations.	0	1	4.8%
		1	4	19.0%
		2	14	66.7%
		3	2	9.5%
Q7	Identify additional information needed to evaluate a hypothesis.	0	20	95.2%
		1	1	4.8%
		2	0	0.0%
Q8	Determine whether an invited inference is supported by specific information.	0	4	19.0%
		1	17	81.0%
Q9	Provide relevant alternative interpretations for a specific set of results.	0	9	42.9%
		1	12	57.1%
		2	0	0.0%
Q10	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	0	0.0%
		2	2	9.5%
		3	8	38.1%
		4	11	52.4%
Q11	Use and apply relevant information to evaluate a problem.	0	1	4.8%
		1	18	85.7%
		2	2	9.5%
Q12	Use basic mathematical skills to help solve a real-world problem.	0	2	9.5%
		1	19	90.5%
Q13	Identify suitable solutions for a real-world problem using relevant information.	0	6	28.6%
		1	7	33.3%
		2	2	9.5%
		3	6	28.6%
Q14	Identify and explain the best solution for a real-world problem using relevant information.	0	4	19.0%
		1	2	9.5%
		2	0	0.0%
		3	1	4.8%
		4	10	47.6%
		5	4	19.0%
Q15	Explain how changes in a real-world problem situation might affect the solution.	0	10	47.6%
		1	8	38.1%
		2	3	14.3%
		3	0	0.0%

Institutional/Departmental Profile

Westmont College: July 2020 - First Generation

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.86	86%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0.95	32%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.19	40%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.81	20%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.90	90%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.81	60%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.05	2%
X				Q8	Determine whether an invited inference is supported by specific information.	0.81	81%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.57	29%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.43	86%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.05	52%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.90	90%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.38	46%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	3.10	62%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.67	22%
CAT Total Score						18.48	49%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Senior CAT Means Comparison Report

Westmont College: July 2020 - First Generation

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National ^a		
						Mean	Mean	Probability of difference ^b	Effect Size ^c
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.86	0.70		
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0.95	1.20		
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	1.19	1.15		
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.81	1.10		
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.90	0.75		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.81	1.53		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.05	0.56	**	-1.08
X				Q8	Determine whether an invited inference is supported by specific information.	0.81	0.66		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.57	0.85		
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.43	3.13		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	1.05	0.95		
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.90	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	1.38	1.10		
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	3.10	2.24		
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.67	0.92		
CAT Total Score						18.48	17.64		

^a National user norms updated Fall 2019

^b * p<.05 **p<.01 ***p<.001 (2-tailed) Does not Account for entering ACT/SAT.

^c Mean difference divided by pooled group standard deviation. (0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

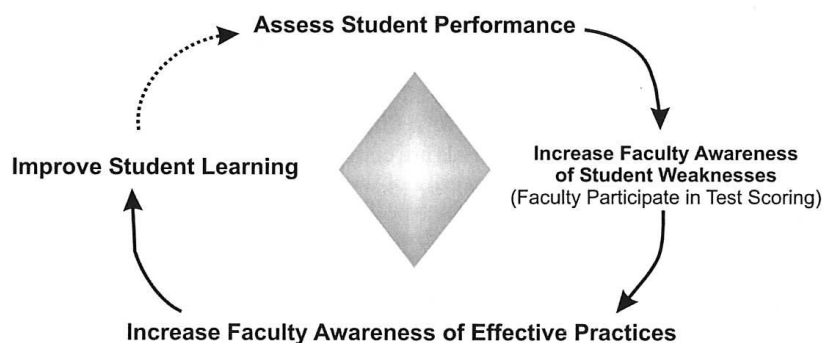
The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

Appendix B. Effective Practices for Improving Students' Critical Thinking and Real-World Problem-Solving

Effective Practices for Improving Students' Critical Thinking and Real-world Problem Solving

One important feature of the CAT instrument is the role it can play in faculty development. The CAT scoring sessions provide a unique opportunity for faculty to discuss critical thinking while at the same time personally experiencing their students' weaknesses in the area of critical thinking. Indeed, there is probably no better time to create a dialogue about effective practices than when faculty are being made aware of students' weaknesses. The CAT scoring sessions provide an opportunity to develop a teaching community where faculty come together to identify student weaknesses and discuss effective practices for improving students' critical thinking and real-world problem solving skills.

Closing the Loop in Assessment and Quality Improvement



The information in this section provides a brief overview of effective practices for improving student's critical thinking and real-world problem solving skills that will impact performance on the CAT instrument.

Skill areas assessed by the CAT instrument

The skill areas on the CAT assessment were developed by an interdisciplinary team of faculty and validated by other faculty across the country. While the list is not exhaustive of all possible skills related to critical thinking/real world problems solving, it may be the best consensus of skills that faculty across disciplines agree are important components of critical thinking. These skills should be the targets of efforts designed to improve students' critical thinking and their performance on the CAT instrument. We believe that it is beneficial to consider how effective practices should be implemented to maximize the impact of skill development in these areas.

Evaluating Information and Other Points of View

- Separating factual information from inferences.
- Interpreting numerical relationships in graphs.
- Understanding the limitations of correlation data.
- Evaluating evidence and identifying inappropriate conclusions.

Creative Thinking

- Identifying alternative interpretations for data or observations.
- Identifying new information that might support or contradict a hypothesis.
- Explaining how new information can change a problem.

Learning & Problem Solving

- Separating relevant from irrelevant information.
- Integrating information to solve problems.
- Learning and applying new information.
- Using mathematical skills to solve real-world problems.

Communication

- Communicating ideas effectively.

Developing Parallel Learning Activities to CAT Instrument Questions

The questions used on the CAT instrument are specifically designed to simulate real-world experiences that require critical thinking. These problems can serve as models for constructing discipline specific analogs that can be used as instructional tools for involving students in active learning that encourages critical thinking. Although it is extremely important to protect the integrity of the CAT test and not release its contents, we encourage faculty to think about developing their own discipline-specific activities that provide opportunities to practice skills assessed by the CAT questions and using those activities to involve students in active learning experiences that help them improve their critical thinking skills. These activities should be part of how students' performance is assessed in the course.

After faculty have had the opportunity to score the test, it would be beneficial to have them work in groups to identify parallel learning activities for the CAT questions that could be used in their courses as opportunities to develop students' critical thinking. Part I of the test involves a series of questions related to the important components of critical thinking. Questions in this part of the test can be divided into related sections, and analogs can be developed for these sections. For example, not only could a different advertising claim be used as part of journalism or advertising class, theoretical claims in a discipline's literature could be used as well. For example, students in an environmental engineering or biology class could evaluate claims by experts that global warming is not occurring.

Part II of the test involves a real-world problem solving experience that should have parallel activities in all disciplines. The prompts below might encourage the development of such activities. Keep in mind that these learning experiences should create opportunities to develop the skills targeted by the CAT instrument. For example, if students must use additional resources to solve problems, provide opportunities to differentiate relevant from irrelevant material as they search for additional information needed to solve the problem.

- Select the best alternative energy source for a particular region.
- Select the best piece of equipment needed for a particular task.
- Select the best economic development plan for a particular region.
- Select the best public health care policy for a country.
- Select the best strategy for reducing pollution.

Creating Active Learning and Real-World Problem Solving Experiences

There are numerous examples of effective practices in each discipline to encourage active learning and involve students in real-world problem solving. A variety of these methods are discussed below. These types of experiences provide opportunities to develop students' critical thinking by presenting issues and problems that stimulate original thought while utilizing previously acquired knowledge or finding and applying new information. Consider how to structure these activities so that they maximally impact critical thinking and real-world problem solving.

Some General Principles for Construction of Activities

Although effective practices vary with disciplines, course objectives, students' interests, and other factors, there are some general principles that you should consider when constructing activities to improve students' critical thinking/real-world problem solving. First, you should use some type of active learning to engage students in the learning process. Having students solely memorize information has a negative relationship with critical thinking and CAT scores in particular. Select activities and topics within those activities that are interesting to your students. Students who are interested will be more motivated and thus put more time, energy, and effort into the learning process. Information and activities should be presented in a way that is seen as appropriate, meaningful, and organized by students. Assessment of students should be related to the outcome goals including the learning of critical thinking and real world problem solving. It is often helpful for students to have the opportunity to learn collaboratively. For general guidance on maximizing student learning, we recommend *How People Learn* which can be found online from National Academies Press at http://www.nap.edu/openbook.php?record_id=6160. Listed below are some effective practices that can be used to teach critical thinking and real-world problem solving.

Service Learning

Service learning can be used to aid in critical thinking performance by providing meaningful learning experiences in local communities, such as allowing engineering students to design playgrounds for underfunded neighborhoods. Students would be presented with the problem of creating a playground with available material, which is fun, safe, affordable, and accessible to individuals with physical impairments. Students would gather information from various sources and evaluate the best possible solutions. They would then present their findings to the local communities. Excellent sources of information on conducting service learning projects can be found at the National Service-Learning Clearinghouse at www.servicelearning.org and Campus Compact at www.compact.org.

Debates

A debate on global warming may be utilized to stimulate creative thinking among biology students. One group would be told to gather research to defend the theory that global warming is a natural cycle the earth goes through. Another group would gather research that supported the claim that global warming is caused by pollution. Each group would be given research on global warming and required to find the relevant research and differentiate it from irrelevant information, analyze claims, and synthesize information from multiple sources by effectively communicating their argument. However, students should not just research their position on

global warming; they should also have to research the opposing view. This helps them understand opposing perspectives, as well as anticipate the arguments of the opposition. When using strategies such as debates, you will be most successful if your evaluation of your students corresponds to your teaching goals. Therefore, your debates will be more successful when the students are provided at the outset with your evaluation rubric which should correspond to such critical thinking components as separating factual information from inferences, identifying appropriate conclusions, and separating relevant from irrelevant information.

Simulations

Simulations could be utilized in which sociology students are assigned characters that represents an individual of another social, economical, or cultural group. The students are given constraints for each character. The students then randomly select life events throughout the semester, such as “you’re involved in a car accident and receive \$4000 in related bills.” This would affect each individual character differently and require students to figure out how changes in the nature of a problem may affect the best solution, identify additional information that is relevant, and differentiate relevant from irrelevant information, and synthesize information from multiple sources.

Case Studies

Case studies have been used extensively for many years across many disciplines including business and law. An example of case-based instruction in business ethics would be to teach about “Sustainable Value: How the World’s Leading Companies are Doing Well by Doing Good.” This and other examples of case studies across disciplines can be found at www.caseplace.org. Many other interdisciplinary examples of case-based instruction exist, such as the Legacy Cycle; examples of the use of the Legacy Cycle can be found at <https://repo.vanath.org/portal/matrix> or www.scientificjournals.org/journals2007/articles/1088.pdf.

Real-World Problem Solving Tasks

Having students solve real-world problems can be an effective tool in any field. For example, students in education could be asked to write a grant proposal for selecting a computer system for their classroom. In addition to being able to communicate effectively, students are required to develop skills in research, separate relevant from irrelevant information, separate factual information from inferences, among other skills. If you would like to have students also learn how new information might change the problem, you could add additional constraints such as a budget limit, a particular type of classroom, or different characteristics of the students.

Involving Students in Original Research

We have found a positive relationship between student involvement in original research projects and their performance on the CAT instrument. These research experiences can be beneficial because they provide students with opportunities to develop skills in many of the areas that are evaluated by the CAT instrument.

An example of involving students in original research would be to have students participate in conducting a research project in their given discipline. A biology student may have to form a hypothesis about water quality issues at a local park. The student would then design an experiment to test their hypothesis, conduct the experiment by collecting data, and analyze the

data to evaluate their hypothesis. There should be opportunities to evaluate alternative explanations for the findings and for identifying what additional information might be needed to support their hypothesis. These experiences provide opportunities to develop many of the skills assessed by the CAT instrument. In fact, having students present their findings to the class or in written form would also help develop communication skills that are assessed by the CAT instrument.

Students in nursing or other health care fields could make a documentary on an issue such as Hospital Acquired Infections (HAI). As part of the documentary, students could explore the factors related to Hospital Acquired Infections and develop solutions to reduce the number of Hospital Acquired Infections while providing an effective educational tool for others in health care fields. In this documentary, students can also address how changes to the nature of the problem can impact the potential solution by exploring how recent changes in the types of bacterial infections have provided new challenges for health care professionals.

Appendix C. Effectively Using the CAT Instrument to Assess Student Learning

Effectively Using the CAT Instrument to Assess Student Learning

Assessment Models/Designs

The CAT instrument is adaptable to a variety of assessment goals and designs. We discuss these assessment goals and some of the more frequently used models below.

The CAT instrument can be used for a variety of assessment goals.

- Evaluate effects of college education
- Evaluate effects of a program of study
- Evaluate effects of a course
- Evaluate effects of informal learning experiences

There are a variety of assessment designs that can be employed with the CAT instrument. The CAT instrument is very adaptable to various research/assessment designs because the test is very sensitive to treatment effects and because the test can be used with all levels of college students without floor effects (students obtaining the minimum score possible) or ceiling effects (students obtaining the maximum score possible). These include:

- Pre-test/Post-test designs
 - Test students at the beginning and end of course or experience (with or without a control group).
 - Test students when they are freshmen and then again when they are seniors (true value added).
- Cross-sectional studies
 - Compare freshmen to seniors (typical value-added analysis).
- Evaluate changes in program outcomes over time
 - Compare scores on the CAT after program improvements to established baseline scores that precede program changes.
 - Compare scores on the CAT to national norms over time and look for improvements.
- Evaluate changes in programs or courses by comparison to a control group.
 - Compare scores on the CAT for students who have had special courses/experiences to those for a control group who have not had the special courses/experiences.

Reducing Costs with Appropriate Sampling

We advocate a variety of practices to reduce the cost of testing without compromising the accuracy of the assessment. For example, various sampling strategies can be used to reduce the need to test all students. If that is not possible, then only a sample of the tests given might be scored. We discuss two accepted methods of sampling to ensure valid and representative results. However, we realize that the sampling techniques are not feasible

at all institutions. Center staff will be happy to discuss these and other alternatives in more detail.

1. Random sampling: A subset of the student population of interest is randomly selected for testing/scoring. The larger the sample, the more confidence there is that the sample is representative of the population of interest. In a random sample, all students have an equal chance of being selected. This is not to be confused with a convenience sample that includes only those students who volunteer to take the test.
2. Stratified random sampling: The population is divided into subgroups (e.g., Arts & Sciences, Engineering, Education, etc.). A random sample of students within each subgroup is then selected. The number of students in each randomly sampled subgroup should be proportional to that group's proportion of the population. Stratification can help ensure a more representative sample with smaller sample sizes.

Sampling after Test Administration

In many institutions it is not possible to administer the test to a random sample of students within a class. In these situations, we recommend administering the test to the larger group and then randomly sampling tests from that group to score during the faculty scoring session. This procedure will allow institutions to achieve a more representative sample without greatly increasing the faculty time needed to score tests. We recommend having a minimum of 10 - 15 tests or pairs of tests per group (e.g., class, program of study, etc.).

Scoring Accuracy Checks

At various times during the year, we conduct analyses of scoring accuracy and provide feedback about the accuracy of scoring and, if necessary, specific recommendations for improving the accuracy of scoring on a question-by-question basis. These reports are sent separately from the institutional summary report.