CASPER

An SJT that measures social intelligence and professionalism by probing for 10 aspects of this construct.

8 video-based scenarios

4 text-based scenarios

3 open-ended questions

5 minutes to answer

60-90 minutes to complete

1 aggregate score

Let's Try It

During the **rating process**

Background and Theory

Four sections

Aspect

Indication of which aspects to focus on

Guiding Questions

3-4 questions to help you think critically and fairly about responses

Application

Paragraph including context and connection between scenario and aspect

Points to Consider

Other important issues to consider, including concerning response flags

Casper is **human rated**

Raters are blinded to avoid biases

Diverse rater pool of more than 300 people

SCENARIOS

SCORE

4 5 4 4 3 6 5 4 4 3 4 6

4.33

Each rater focuses on 1 scenario and rates anonymized responses using a 9-point Likert-type scale
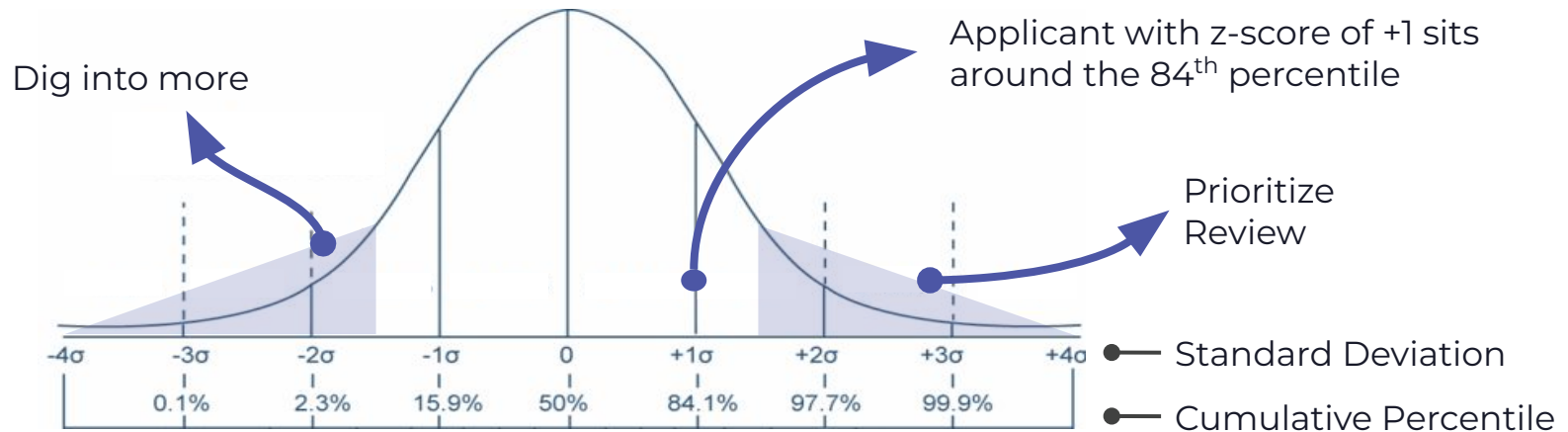
Casper score is an average of 12 unique impressions

Casper z-scores and percentiles

Mean of the group is set to zero (0)
Applicants above the mean have positive z-score

Dig into more

Applicant with z-score of +1 sits
around the 84th percentile

Prioritize
Review

-4σ	-3σ	-2σ	-1σ	0	+1σ	+2σ	+3σ	+4σ
	0.1%	2.3%	15.9%	50%	84.1%	97.7%	99.9%	

●— Standard Deviation

●— Cumulative Percentile

Example

Scenario: Two friends are discussing their third friend, Anna, who they worry is in an unhealthy relationship.
Question 1: "Should you get involved in this situation with your friend Anna? Why or why not?"

z = -2.51 1st Percentile	z = -0.68 25th Percentile	z = 0.03 50th Percentile	z = 0.68 75th Percentile	z = 2.51 99th Percentile
No. Anna **did not ask for help** and **they are both adults in the situation.**	I think that I should talk to Anna about the concerns that we have been having. She is a close friend and **maybe she wants help** with the situation as well.	Yes, but not in an intervention type of fashion. I would first just try and set up a party, or big friend get together to try and "get the gang back together" for a night. Even let her bring her boyfriend. I would try and let her see all the good times that she has been missing without confronting her about it directly, and really it would just be because everyone just wants to have fun together. But **other than that there is not much we can do to change her mind, people in that situation are unwilling to take advice from anyone,** and if you do that it usually ends up driving them away. So **I would just try to support her and be there for her for when she needs help.**	Yes because it seems like Anna is in a very controlling and unhealthy relationship. **It is difficult for the person in the unhealthy relationship to see and understand that what the other person is doing to them is harmful** and unfair because love blinds that reasoning. Having a third party come in to talk about the relationship **may help Anna see that she isn't being treated with the respect that she deserves.**	I think that **Anna's friendship with the rest of the friends should be important enough for us to get involved and help her.** She seems clearly not to be thriving, and it is speculated that Jason is not good for her. If the things like paying for him, not talking to other guy friends for him are true, then **the relationship seems unhealthy and Anna's mental health may be at risk.** However **it is important not to jump to conclusions** because maybe the rumors aren't true and Anna was just in a bad mood on that day. Either way, **I would like to have a friendly, group discussion** with Anna and maybe even Jason involved. At the conversation **I would make sure that no one in the friend group makes assumptions** about Jason and that we are in a safe environment.

The responses above are real applicant answers to CASPer scenarios; they have not been edited for spelling or grammar.
Z-score and percentile are those achieved within the test instance where the response occurred

General Best Practices

A starting point for the method best for you.

At initial screening

Allows you to use information about an applicant's personal and professional characteristics, as well as academic metrics, in initial screening
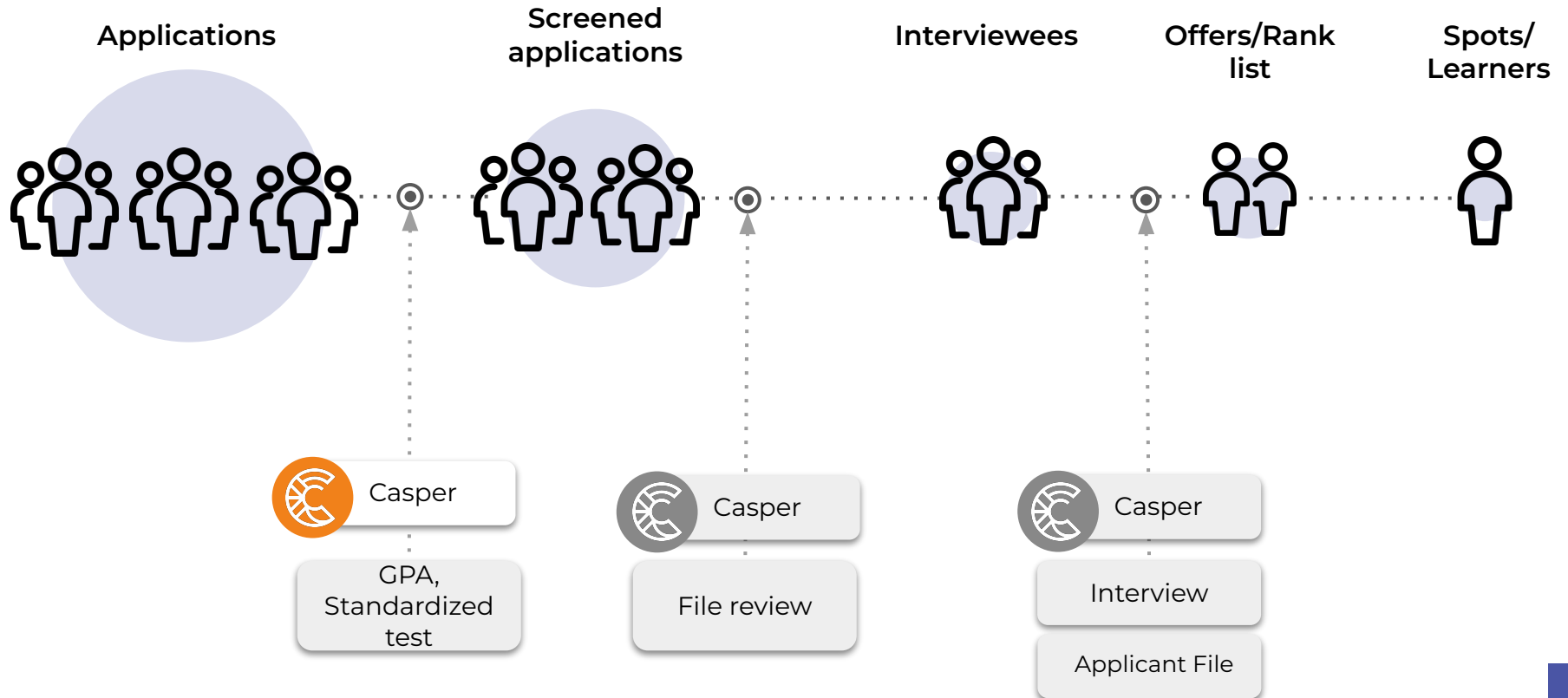
Part of a formula or rubric

Allows you to use information from the full range of scores, rather than just the extreme ends of the scale

In conjunction with interviews

Casper may measure some overlapping aspects, but it is designed as a pre-screening tool

Casper and your selection process

Using Casper in your admissions process

Approach	Description	Benefits	Risks
Formulaic	Combine Casper and other metrics to create an overall score for each applicant, which can then be used to rank applicants.	Data-driven; highly defensible and trackable	Small (non-meaningful) differences may not relate to future performance. May be too granular. Highly dependent on formula weights
Rubric	Include Casper alongside other metrics in a scoring guide, with each level clearly described	Interpretable groupings of performance; highly defensible and trackable	Highly dependent on rubric weights and definitions
Qualitative	Your reviewers use Casper and all other application materials to make a progress decision, without any mathematical formula.	Highly flexible to your reviewers interpretation	Greater dependance on the program's applicant reviewers and risk of individual biases, defensible process needs clear documentation

Formulaic

	Knowledge Test - %ile	GPA - %ile	Casper - %ile	Total score	Rank
Weight	⅓	⅓	⅓		
app1	99	57	78	**78**	1
app2	42	24	41	**36**	4
app3	40	43	37	**40**	3
app4	26	87	88	**67**	2

- Casper and other scores to create overall score for applicant
- Applicants can be ranked to prioritize for next phase

Rubric

Similar to formula, with additional step of 'grouping' functionality equivalent scores

	Standardized Test - Percentile	GPA- Percentile	Casper- Percentile
	1/3	**1/3**	**1/3**
4	≥ 90th	≥ 90th	≥ 90th
3	75th - 90th	75th - 90th	75th - 90th
2	50th - 75th	50th - 75th	50th - 75th
1	25 - 50th	25 - 50th	25 - 50th
0	< 25th	< 25th	< 25th

- Casper included alongside other tools in a scoring guide
- Achievement levels outlined for all measures
- A common scale is used for each, then weightings attached to each tool

Scores from 0-4 are given in each category then overall score is calculated based on the assigned weighting.

Rubric

$$(\mathbf{4}/4*\tfrac{1}{3}) + (\mathbf{2}/4*\tfrac{1}{3}) + (\mathbf{4}/4*\tfrac{1}{3}) * 100$$

	Knowledge Test		GPA		Casper		**Total score**	Rank
Weight	⅓		⅓		⅓			
Score type	Percentile	**Rubric**	Percentile	**Rubric**	Percentile	**Rubric**		
app1	99	**4**	57	**2**	78	**4**	**10**	1
app2	42	**1**	24	**0**	41	**1**	**2**	4
app3	40	**1**	43	**1**	37	**1**	**3**	3
app4	26	**1**	87	**3**	88	**4**	**8**	2

- Casper and other scores to create overall score for applicant
- Applicants can be ranked to prioritize for next phase
- Total score based on rubric defined by admissions committee
- Can include additional application material into rubric (LOR, CV, Service Hours…)

Qualitative

	Knowledge Test - Percentile	GPA - Percentile	Casper - Percentile	Total score	Decision
Weight	*N/A*				
app1	99	57	78		Proceed
app2	42	24	41	*N/A*	Reject
app3	40	43	37		Reject
app4	26	87	88		Proceed

- **More commonly used qualitatively conjunction with other application material:**
  - **Personal statement, LOR, CV, Service Hours…**
  - Particularly dependent on committee and reviewer priorities/biases

SUMMATIVE SJT

How can the Casper score be used?
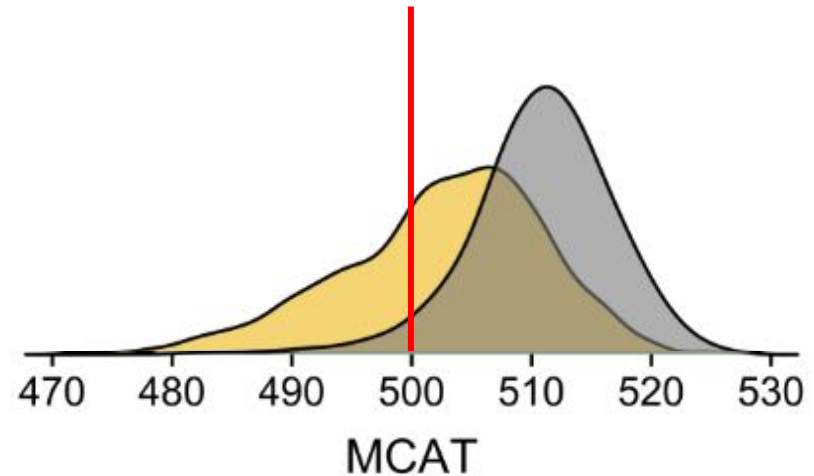
Formulaic

Rubric

Qualitative

Why we do not recommend cut-scores

undue emphasis on 'dividing lines'

Mid-range scores relate to more diverse classes while keeping high success rates

Selecting students based on small differences in scores is not supported

They hinder diversity

~40% of black applicants not even seen with 500 Cut-score, vs < 10% of white applicants

Terregino et al 2020

What to expect from using cut scores

Given demographic differences in terms of cognitive admission metrics (GPA, MCAT, etc.), cut-off scores may disproportionately impact underrepresented minorities.

While Casper subgroup differences tend to be smaller than those for MCAT and GPA, setting cut-off scores for all admission metrics (GPA, MCAT, Casper) might negatively impact underprivileged applicants.

Subgroup Comparison	Casper US 2021-2022	US MED MCAT 2021-2022	US MED GPA 2021-2022
Asian to Black or African American	0.66 (moderate)	1.17 (large)	0.77 (moderate)
White to Black or African American	0.71 (moderate)	1.09 (large)	0.89 (large)
White to Hispanic, Latino, or Spanish Origin	0.42 (small)	0.81 (large)	0.57 (moderate)

Formulae and Rubrics - *as efficient, more inclusive, and better indicators of future performance*

Ranking applicants across multiple dimensions

- Correlates better with future performance[1]
- A fast way to prioritize review

- Highlights 'edge cases'
  - Those who *just missed the cut-off* for any one metric… but could be promising overall
  - Lets you recognize history and evaluate experience and barriers

[1] Roberts 2017

Edge Case - Example

	Knowledge Test - %ile	GPA - %ile	Casper - %ile	**Total score**	Rank
Weight	**⅓**	**⅓**	**⅓**		
app1	99	57	78	**78**	1
app2	42	24	41	**36**	4
app3	40	43	37	**40**	3
app4	26	87	88	**67**	2

Cut-score = 30
Applicant 4 would not be reviewed at all

Ranking applicants across dimensions
Highlights promise despite low Knowledge test score

Why z-scores

Raw scores are converted into z-scores

Easier to interpret

Understand where student is in relation to their peers

Normalize scores between test slots

Accounts for parallel test forms

Needed for formulaic method

Use common scale when combining multiple measures

Casper z-scores and percentiles

Alongside z-scores, we also provide percentile ranks for each applicant.

In order to relativize scores only with respect to Casper test takers from the same applicant pool, Z-scores and percentiles are calculated for each test instance cohort.

An applicant's **percentile rank** = the percentage of applicants **from the same test sitting** who received a raw mean scenario score *lower* than that applicant.
          (e.g. 75 percentile = 75% of applicants taking the same test scored lower)

Casper striving to ensure difficulty across test instances is similar.

We can help the program calculate their own percentiles to compare applicants relative to other applicants to their own program.

Casper z-scores and percentiles

Statistics based on **1127 test instances across the most recent 5 application cycles.**

A person with a z-score of -1.73 will typically be in the 0-10 percentile range.

Percentile Range	Number of Applicants	Average Z-Score	Median Z-Score	SD
0-10 percentile	31142	-1.84	-1.73	0.42
10-25 percentile	48422	-0.98	-0.97	0.19
25-50 percentile	79994	-0.32	-0.31	0.2
50-75 percentile	79903	0.34	0.34	0.2
75-90 percentile	47692	0.95	0.93	0.16
90-100 percentile	33326	1.65	1.58	0.33

Due to the large sample sizes, we can be 99% confident that the average z-score is the true mean of each percentile range.

Casper z-scores and percentiles
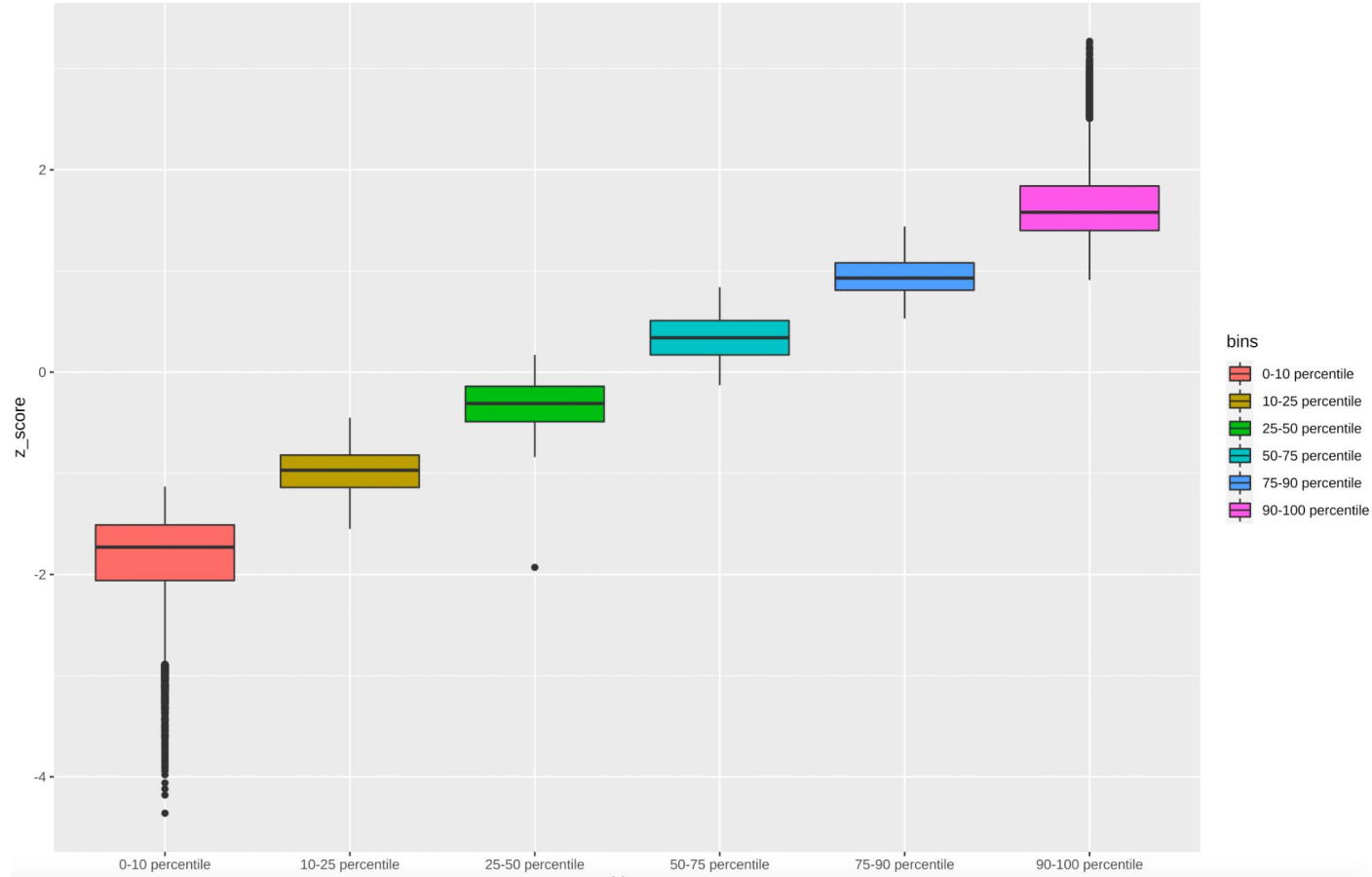
What will the **results** look like?

10,757 Applicants

Search applicants 🔍

Export ⌄

↓ Last Name	AAMC	↓ Birthdate	↓ Email	↓ CASPer Z Score	↓ Percentile Rank	↓ Red Flag Scenario	↓ Red Comm
Hand	1837294	1995-12-28	applicant@example.com	-1.48	0.07		
Kuhn	1837294	1997-04-23	applicant@example.com	-1.06	0.14		
Harris	1837294	1996-11-15	applicant@example.com	-1.48	0.07		
Dickens	1837294	1988-01-06	applicant@example.com	0.5	0.68		
Denesik	1837294	1995-05-09	applicant@example.com	-2.94	0		

Casper Quartile Report

> **Starting the 2021-22 cycle, applicants will receive Casper quartiles 1 month after their test**

Quartiles tell applicants how they scored relative to their peers. For example, applicants who scored in the fourth quartile scored higher than applicants in the first, second and third quartiles, meaning they scored higher than at least 75% of all applicants.

Your Casper Test Quartile   ✕

Test Date: **<date>**

Test Taken: **<testmaster>**

Your Casper score falls within the **50 - 74th percentile** range (4th quartile) relative to all other test takers in your cohort.

This means that your score is higher than **50% - 74%** of other test takers in your cohort

50th to 74th

FAQ's
What does it mean to place in a specific quartile?
Why did I score in a particular quartile?
How long are my scores valid for?
How can I improve my score for next time?
How do programs use Casper scores?
For more information about Casper and quartile scores, **click here.**