OPM | USA Staffing

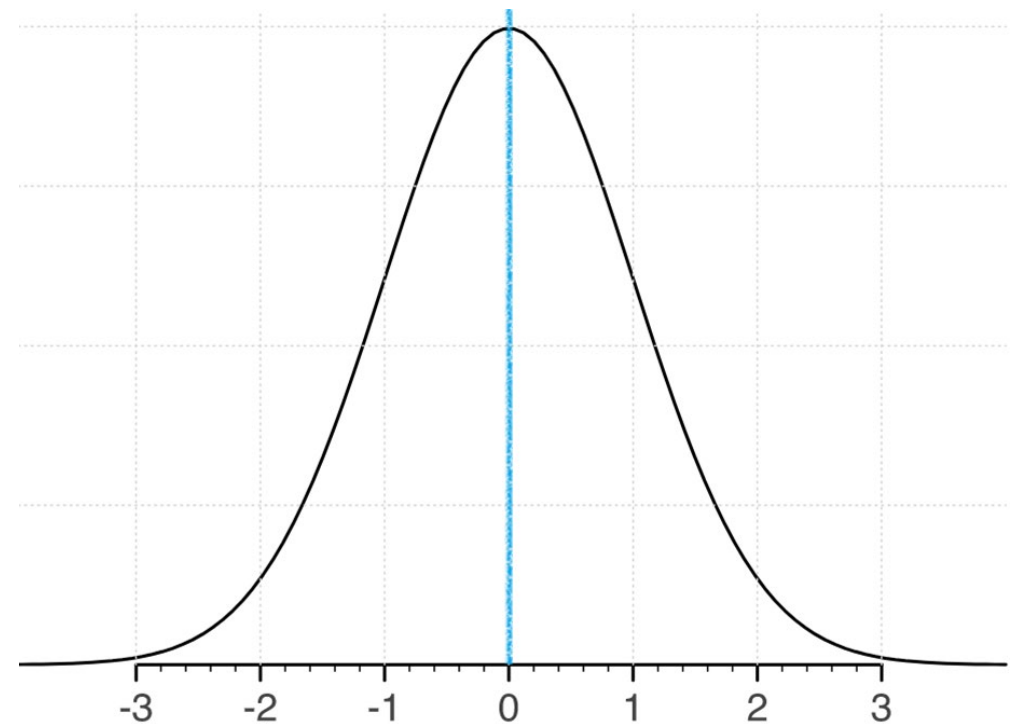# USA Staffing Assessment Standardization

August 2023

Overview

1. What is score standardization?

2. Why standardize scores?

3. When are scores standardized in USA Staffing?

4. How are scores calculated when they're *not* standardized?

5. How are scores calculated when they *are* standardized?

6. What are some factors to consider?

7. Where can I get additional info on scoring?

What is score standardization?

› The process of converting an assessment score to a common metric while considering how applicants performed *relative to each other*

› Calculating a standardized score includes finding the *average score* and determining *how spread out* the applicant scores are from the average

Why standardize scores?

Standardizing is a *best practice when comparing or combining scores* on two or more assessments.

Before comparing/combining two or more scores that are based on different scoring scales (e.g., 0 – 50 and 0 – 200), we first want to *make the scales more equal in meaning*. This involves more than simply putting the scores on the same scale, i.e., transmuting them to the 70 – 100 scale.

We also need to consider *how the scores are distributed*. In other words, what is the average score? How spread apart are the scores?

When are scores standardized in USA Staffing?

Scores are standardized:

1. When using a *USA Hire* battery

2. When using a *Manual* assessment

3. When using *multiple rated AQs*

These 3 scenarios apply whether the assessments are all in Hurdle 1 (Default Hurdle) or across multiple hurdles.

When are scores standardized in USA Staffing?

1. When using a *USA Hire* battery:

   - USA Hire scores are **always** standardized

   - When combining Assessment Questionnaire (AQ) scores with USA Hire, the **AQ scores will also be standardized**

Indicator displays when AQ is standardized

When are scores standardized in USA Staffing?

2. When using a *Manual* assessment:

- Manual assessment scores are standardized if the HR user turns on the **Standardize scores** setting for the Manual assessment

- When combining AQ scores with a Manual assessment that has the **Standardize scores** setting turned on, the AQ scores will also be standardized

When are scores standardized in USA Staffing?

3. When using *multiple rated AQs*:

- *Rating* checkbox is selected for more than one AQ within an Assessment Plan

How does USA Staffing calculate scores when they're *not* standardized?

1. Calculate the **raw score** the applicant received for each assessment
2. **Transmute** applicant assessment raw scores to the 70 – 100 scale

Transmutation Formula:

Transmuted Score = 70 + ((Raw Score – Min Raw Score)/(Max Raw Score – Min Raw Score) x 30)

Example: Applicant scored 57 on a scale of 0 – 250.

Transmuted Score = 70 + (57/250 x 30) = 76.84

Note: For AQ's, the Min Raw Score is always 0, unless a Passing Score is applied, in which case, the *Passing Score becomes the Min Raw Score*.

How does USA Staffing calculate scores when they're *not* standardized? (Cont.)

3. If there are multiple rated assessments, **weight and combine** transmuted assessment scores to calculate hurdle/final score

Weight and Combine Formula:

Hurdle/Final Score* = (Assessment 1 Transmuted Score x Assessment 1 Percentage Weight) + (Assessment 2 Transmuted Score x Assessment 2 Percentage Weight) + ...

*For single-hurdle assessment packages, this formula results in the **Final Score**. For multi-hurdle assessment packages, this formula calculates the **Hurdle Score**, and the final score is calculated by applying the same weight/combine formula again to the hurdle scores.

How does USA Staffing calculate scores when they *are* standardized?

1. Calculate the **raw score** the applicant received for each assessment

2. Calculate the assessment raw score **mean** (simple average) and **standard deviation** (this is a measure of how spread out the numbers are)

3. Calculate a **z-score** for each applicant assessment score

4. **Transmute** applicant assessment z-scores to the 70 – 100 scale

5. **Weight and combine** transmuted scores to calculate final score

How does USA Staffing calculate scores when they *are* standardized? - Formulas

Raw Score Mean:

Raw Score Mean = Sum of all applicant raw scores divided by the total number of applicants

Standard Deviation:

Standard Deviation = Square root of the average squared difference from the mean for each score

Z-Score Formula:

Applicant Z-Score = (Raw Score – Mean Raw Score)/Raw Score Standard Deviation

Example: AQ + USA Hire

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Applicant Final Rating = AQ Transmuted Score x AQ % Weight + USA Hire Battery Score* x USA Hire Battery % Weight

Applicant Final Rating = 90.128 x 0.5 + 82.93137 x 0.5

Applicant Final Rating = 45.064 + 41.465685

Applicant Final Rating (before rounding) = 86.529685

Applicant Final Rating (rounded) = 87

*USA Hire Battery Score is calculated with the weight/combine formula, using the assessment transmuted scores and percentage weights for each assessment in the USA Hire battery.

What are some factors to consider?

- Standardizing scores doesn't affect the **_order_** of applicant scores, i.e., applicants who performed better will still score higher than those who performed less well.

- However, depending on the assessments and applicant pool, **fewer applicants may score at the top of the 70 – 100 range** when scores are standardized.

- Agencies using a standardized assessment process for DE may wish to **consider adjusting category rating cutpoint values** to ensure enough candidates place in the highest quality category.

  - If needed, category cutpoint values may be adjusted after the announcement has been opened and applicants have applied (change is tracked in History and a banner message will display).

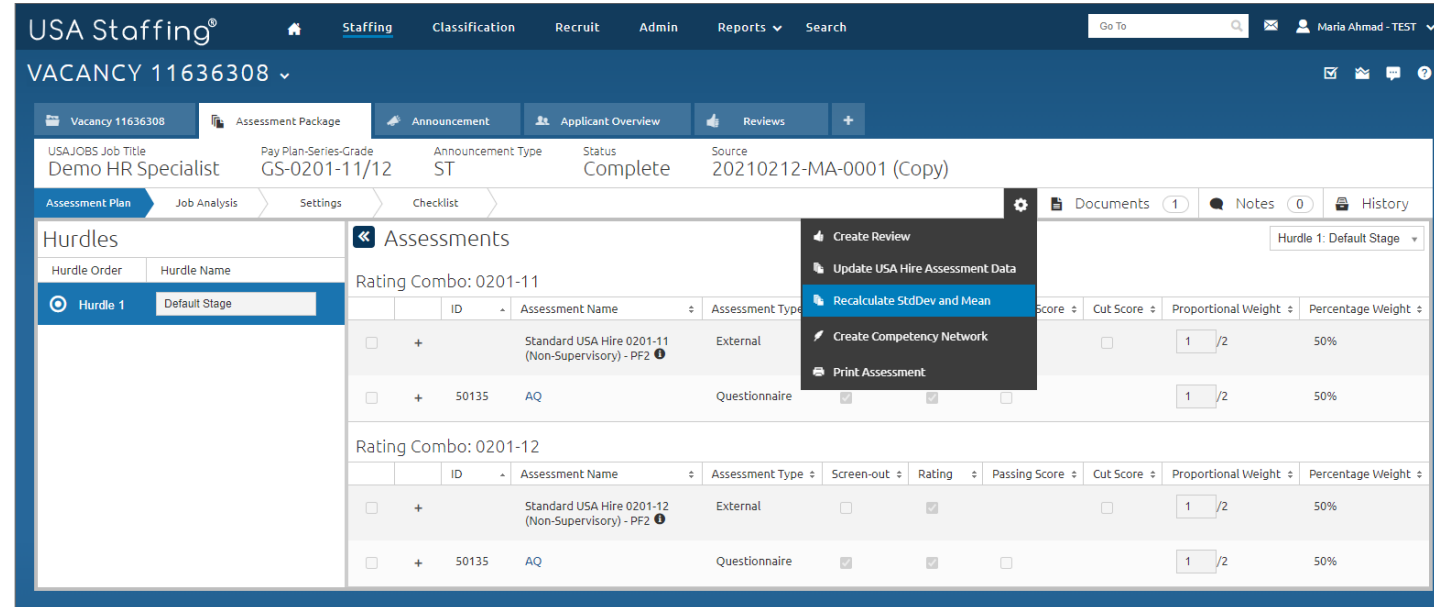# What are some factors to consider when using USA Hire?

- When using an AQ for rating with USA Hire, the AQ mean and standard deviation values are calculated once the ***announcement has closed***.

- Applicants will remain in a **PA status** even if they have already completed the USA Hire assessments until the JOA closes, since the AQ scores will need to be re-calculated at that point.

- As a result, we don't recommend using USA Hire with open-continuous announcements unless the USA Hire assessments will be the only ones used to rate applicants, i.e., AQ is used for screen-out only.
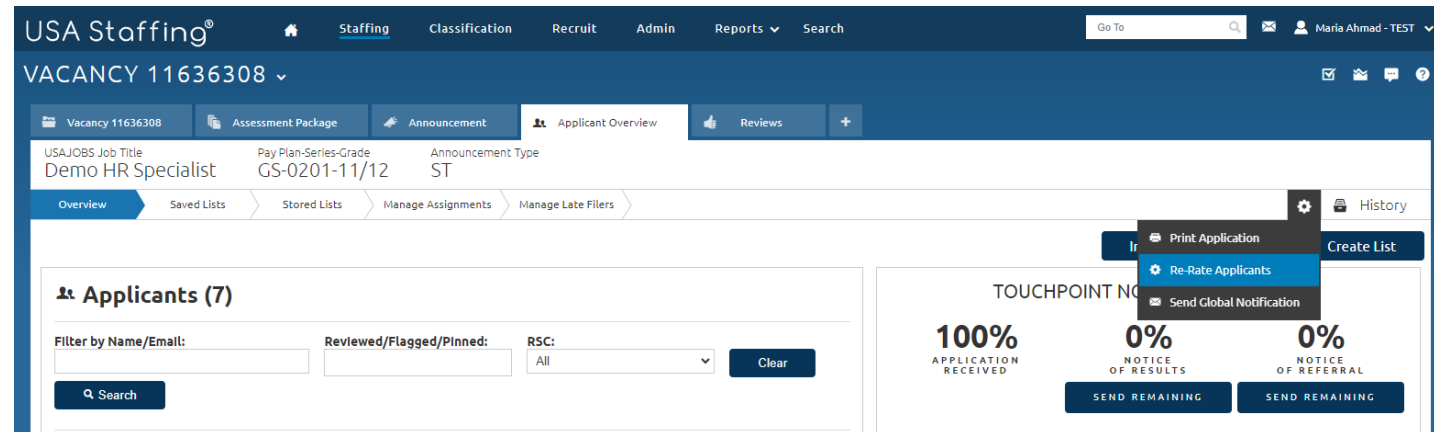
What if I have invited late applicants?

After the invited late application(s) are submitted:

1. From the Assessment Package gear menu, click **Recalculate StdDev and Mean**, and then

2. From the Applicant Overview gear menu, click **Re-Rate Applicants**

These steps will ensure *all* applicant scores are included in determining the standardized scores for the vacancy.

What are some factors to consider with Manual assessments?

- When determining if Manual assessment scores should be standardized, consider:

    - If the Manual assessment scores will be **combined** with another assessment,

    - The **size** of the applicant pool,

    - The level of **differentiation in scores** (e.g., if applicants scored roughly the same on the assessment), and

    - If the scores were **standardized** prior to loading them into USA Staffing.

- The ***Standardize scores*** setting can be adjusted after the announcement has been released/applicants have applied (change is tracked in History).

- The ***Standardize using custom values*** setting should only be used in coordination with an assessment professional (I/O psychologist).

Where can I get additional info on scoring?

USA Staffing Resource Center:

- Assessment Questionnaire:
  - **Assessment Scoring and Weighting Decision Guide**
  - **Federal Wage System Quick Reference Guide**
- Manual Assessments: **Manual Assessment User Guide**
- Passing Scores: **Assessment Passing Score FAQs**
- Multiple Hurdles: **Multiple Hurdles Guide**

USA Hire Resource Center:

- **USA Hire User Guide**
- **USA Hire FAQs**

Thank you!