

Report Parameters and Report Entities

Evaluation Comparison Report

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> • Data Pool • Case • Evaluation Type • Evaluator • Student/Encounter • Reference Evaluator 	
Report Entities	
The report will have the following entities:	
Entity	Definition
Q. No.	Sequence no. of question in the checklist/case/scenario.
Question Text	Question text
Evaluator Response	Responses will be shown up to 5 evaluators including reference evaluator if provided. Every evaluator will be identified by text as “Faculty” or “Observer” or “SP”. If reference evaluator is provided then all disagreement responses will be displayed in RED color. If any evaluator did not response the question then response will be displayed as “No Response”.
Agreement	<p>Agreement means evaluator response and referenced evaluator response is same. On every page (like page summary), no. of agreement with percent value will be printed. Percentage will be calculated on the base of reference evaluator response. Example:</p> <p>If there are 20 questions where evaluator1 agrees on 15 questions with the response given by reference evaluator, then No. of agreement will be 15 and in percent it will be $(15/20) * 100 = 75\%$.</p>
Disagreement	Disagreement means evaluator response and referenced evaluator response is not same. On every page (like page summary), no. of

	<p>disagreement with percent value will be printed. Percentage will be calculated on the base of reference evaluator response.</p> <p><i>Example:</i> If there are 20 questions where evaluator1 does not agree on 5 questions with the response given by reference evaluator, then No. of disagreement will be 5 and in percent it will be $(5/20) * 100 = 25\%$.</p>
General Comments	General comments, given by evaluators, will be printed on every page (like page summary).

Evaluation Response Report

Parameters:	
<p>This report will be based on the following parameters:</p> <ul style="list-style-type: none"> • Data Pool • Case • Evaluation Type • Category • Evaluator • Student/Encounter 	
Report Entities	
<p>The report will have the following entities:</p>	
Entity	Definition
Q. No.	Sequence no. of question in the checklist/case/scenario.
Question Text	Question Text.
Response	Response for the question.
Score	Score for the question in percent.

Score Report – Detailed

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> • Data Pool • Case • Evaluation Type (except survey) • Evaluator 	
Report Entities	
The report will have the following entities:	
Entity	Definition
Q. No.	Sequence no. of question in the checklist/case/scenario.
Question Text	Question Text.
Score	Score for the Forms/Case/Scenario/Category/Question in percent.
Result	Result for Form/Case/Scenario/Category. Result will be either PASS or FAIL.

Score Report – Summary

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> • Data Pool • Case • Evaluation Type (except survey) • Evaluator 	
Report Entities	
The report will have the following entities:	
Entity	Definition

Score	Score for the Forms/Case/Scenario/Category/Question in percent. Form score will be printed in report header.
Result	Result for Form/Case/Scenario/Category. Result will be either PASS or FAIL. Form result will be printed in report header.

Score Report – Grading

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> • Data Pool • Case • Evaluation Type (except survey) • Evaluator 	
Report Entities	
The report will have the following entities:	
Entity	Definition
Q. No.	Sequence no. of question for the category. This will start with 1 for each category.
Question Text	Question Text.
Score	Response for the question. This will be the text for choice/option. Grading score will be printed for each category.

Advanced Statistics – Kappa Statistics

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> Data Pool 	
Report Entities	
The report will have the following entities:	
Entity	Definition
Question	Question text with question no. in the order of checklist.
Sample Size	Total no. of attempts for the question within data pool. If statistics is being calculated for individual SPs then this will be calculated for the SP only.
Kappa Value	<p>Kappa Value. The calculation will be done as:</p> <p>Get total no. of students for the item for the case within data pool. This will be based on observer response. Say this number is TotalStudent.</p> <p>Calculate no. of agreements by comparing responses with observer and evaluator. Say this number is TotalAgreement.</p> <p>Calculate Observed agreement: $ObservedAgreement = TotalAgreement / TotalStudent$</p> <p>Now, calculate Chance agreement for each option. This will be calculated as: $SPAttempts = Total\ no.\ of\ attempts\ for\ the\ grading/option\ by\ SP\ for\ the\ item.$ $ObserverAttempts = Total\ no.\ of\ attempts\ for\ the\ grading/option\ by\ observer\ for\ the\ item.$</p> <p>Then $ChanceOfAgreement = sum\ of\ ((SPAttempts / TotalStudent) * (ObserverAttempts / TotalStudent))$.</p>

Kappa Value = (ObservedAgreement - ChanceOfAgreement) / (1 - ChanceOfAgreement)

If ChanceOfAgreement is 1 then Kappa value will be displayed as '-NA-'.

Advanced Statistics – Alpha Coefficient

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> Data Pool 	
Report Entities	
The report will have the following entities:	
Entity	Definition
Case Number	Case Name
Category Name	Category Name
Alpha Value	Described above
Questions	Total distinct no. of questions for the case/category within data pool.
Students	Total distinct no. of students for the case/category within data pool.

Item Analysis – Summary

Parameters:
This report will be based on the following parameters:
<ul style="list-style-type: none"> Data Pool Case Evaluation Type Evaluator
Report Entities
The report will have the following entities:
<p>Note: All calculations will be done separately for checklist (category is greater than 0) and post encounter (category is less than or equal to 0).</p>

Entity	Definition
N (Sample Size)	<p>Total no. of students within data pool for the case and for the item (question). If one student comes twice within data pool then this will be counted as 2 (i.e. no distinct). This calculation excludes Number Missing criteria.</p> <p>Count(*)</p>
Number Missing	<p>Total no. of students within data pool for the case and for the item (question) who have answered as “*” or score is -999.99. This type of question choice is defined having “*” as score. At the time of scoring system generates score -999.99 for the question. If one student comes twice within above criteria then this will be counted as 2 (i.e. no distinct).</p> <p>Count(*)</p>
Mean	<p>Average of scores within data pool for the case and for the item (question). This calculation excludes Number Missing criteria.</p>
Variance	<p>This calculation excludes Number Missing criteria.</p> <p>$SUM(SQUARE((SCORE)-Mean))/N$</p>
SD	<p>Square root of Variance. This calculation excludes Number Missing criteria.</p> <p>$SQRT(SUM(SQUARE((SCORE)-Mean))/N)$</p>
Standard Error	<p>SD divided by square root of N. This calculation excludes Number Missing criteria.</p> <p>$SD/SQRT(N)$</p>
Minimum	<p>Minimum score obtained within data pool for the case and for the item (question). This calculation excludes Number Missing criteria.</p> <p>$MIN(SCORE)$</p>
Maximum	<p>Maximum score obtained within data pool for the case and for the item (question). This calculation excludes Number Missing criteria.</p> <p>$MAX(SCORE)$</p>
Range	<p>Difference of Maximum score and Minimum score within data pool for the case and for the item (question). $Maximum-Minimum$</p>
Sum of Scores	<p>Sum of scores within data pool for the case and for the item (question). This calculation excludes Number Missing criteria.</p>

	$SUM(SCORE)$
Sum of Squares	<p>Sum of Square of score within data pool for the case and for the item (question). This calculation excludes Number Missing criteria.</p> $SUM(SQUARE(SCORE))$
Skewness	<p>Skewness measures the extents of bulk of values in a distribution are concentrated to one side or other side of the mean.</p> <p>If the bulk of the values are less than the mean then it is positively skewed, if the bulk of the values are more than the mean then it is negatively skewed.</p> <p>Normal distribution has a Skewness of 0.</p> $\frac{SUM(x-mean)^3}{N \times (SD^3)}$ <p>If SD is 0 or N is 0 or 3rd Power of SD is 0 then Skewness will have invalid value and it will be displayed as “N.A.”. Calculation will be based on within data pool for the case and for the item (question). This calculation excludes Number Missing criteria.</p> $((SUM(POWER(((SCORE)- Mean),3))) / (N * POWER(SD,3)))$
Kurtosis	<p>Kurtosis measures the extent to which the values are concentrated in one part of a frequency distribution</p> <p>If one class or adjacent classes in a frequency distribution contains larger proportion of values in the distribution then the distribution has a high kurtosis (a very peaky). In a distribution with low degree of kurtosis all the class has an equal proportion of values so it is a more flat distribution.</p> <p>Normal distribution for Kurtosis is 3</p>

	<p>Kurtosis = $\frac{\text{Sum}(x-\text{mean})^4}{N \times (\text{SD}^4)} - 3$</p> <p>If SD is 0 or N is 0 or 4th Power of SD is 0 then Kurtosis will have invalid value and it will be displayed as “N.A.”.</p> <p>Calculation will be based on within data pool for the case and for the item (question).</p> <p>This calculation excludes Number Missing criteria.</p> <p>$((\text{SUM}(\text{POWER}(((\text{SCORE}) - \text{Mean}), 4))) / (N * \text{POWER}(\text{SD}, 4))) - 3$</p>
T Value	<p>This T Value also known as Welch's t-test is used only when the two population variances are assumed to be different (the two sample sizes may or may not be equal) and hence must be estimated separately. The t statistic to test whether the population means are different can be calculated as follows:</p> $t = \frac{\bar{X}_1 - \bar{X}_2}{s_{\bar{X}_1 - \bar{X}_2}}$ <p>where</p> $s_{\bar{X}_1 - \bar{X}_2} = \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$ <p>Where s2 is the unbiased estimator of the variance of the two samples, n = number of participants, 1 = group one, 2 = group two.</p> <p>This can be achieved by calculating the following statistics, for two sets, based on top 25 percent students within data pool for the case and for the item (question):</p> <p>N (say N1 and N2)</p> <p>Mean (say Mean1 and Mean2)</p>

	<p>SD (say SD1 and SD2)</p> <p>If SD is 0 for both sets then T Value will be displayed as “N.A.”, otherwise T Value will be calculated as:</p> $\frac{\text{Mean1}-\text{Mean2}}{\text{SQRT}((\text{SQUARE}(\text{SD1})/\text{N1}) + (\text{SQUARE}(\text{SD2})/\text{N2}))}$ <p>This calculation excludes Number Missing criteria.</p>
Percentile 25	<p>A 25th percentile is a point in the score scale that divided a distribution so that 25% of the scores were equal to or lesser than that score value.</p> <p>Mean subtracted by the value of multiplication of SD and 0.67. Calculation will be based on within data pool for the case and for the item (question). This calculation excludes Number Missing criteria.</p> <p>Mean -(SD * 0.67)</p>
Percentile 50	<p>A 50th percentile is a point in the score scale that divided a distribution so that 50% of the scores were equal to or lesser than that score value.</p> <p>This value will be based on MAXID calculated for Inter Q Range. If MAXID is even number then Percentile 50 will be the score from rows where row number is MAXID/2. If MAXID is odd number then Percentile 50 will be average of score where rows between (MAXID-1)/2 AND (MAXID+1)/2.</p>
Percentile 75	<p>A 75th percentile is a point in the score scale that divided a distribution so that 75% of the scores were equal to or lesser than that score value.</p> <p>Mean added by the value of multiplication of SD and 0.67. Calculation will be based on within data pool for the case and for the item (question). This calculation excludes Number Missing criteria.</p> <p>Mean +(SD * 0.67)</p>
Inter Q Range	<p>It is one type of variability or dispersion.</p> <p>Ex if the sample size is</p> <p>1,2,4,6,18,37,31,16,28,24,9,4</p> <p>Remove the upper and lower quarters 4, 6, 9, 16, 18, 24 reduce the sample to the above said items now the interquartile range is 24-4= 20.</p>

	<p>First get maximum number of rows within data pool for the case and for the item excluding Number Missing. Say the maximum number is MAXID. Then get value of MAX(SCORE)-MIN(SCORE) where row number between 0.25*MAXID AND 0.75*MAXID from the rows mentioned above. This value is Inter Q Range value. If this value is null then Inter Q Range will be 0.</p>
<p>Con Interval 1</p>	<p>First get Confidence Interval. Confidence Interval will be calculated as:</p> <p>If SD is 0 then Confidence Interval will be -100.</p> <p>Else if N is greater than or equal to 30 then Confidence Interval will be SE (Standard Error) * 1.64 (Z Score).</p> <p>Otherwise get T-DISTRIBUTION value from T-DISTRIBUTION table. This table contains the T-DISTRIBUTION values for different Ns. If N is 1 then N will be treated as 2.</p> <p>As query, SELECT NINTYNINE FROM T_DISTRIBUTION WHERE DF=N</p> <p>If T-DISTRIBUTION value is null then it will be treated as 0. The value of Confidence Interval will be SE (Standard Error) * T-DISTRIBUTION value.</p> <p>Then subtract Confidence Interval value from Mean. The result will be Con Interval 1. This step will make sure that subtraction will be based on 2 decimal places.</p>
<p>Con Interval 5</p>	<p>First get Confidence Interval. Confidence Interval will be calculated as:</p> <p>If SD is 0 then Confidence Interval will be -100.</p> <p>Else if N is greater than or equal to 30 then Confidence Interval will be SE (Standard Error) * 1.64 (Z Score).</p> <p>Otherwise get T-DISTRIBUTION value from T-DISTRIBUTION table. This table contains the T-DISTRIBUTION values for different Ns. If N is 1 then N will be treated as 2.</p> <p>As query, SELECT NINTYFIVE FROM T_DISTRIBUTION WHERE DF=N</p> <p>If T-DISTRIBUTION value is null then it will be treated as 0. The value of Confidence Interval will be SE (Standard Error) * T-DISTRIBUTION value.</p>

	<p>Then subtract Confidence Interval value from Mean. The result will be Con Interval 5. This step will make sure that subtraction will be based on 2 decimal places.</p>
<p>Con Interval 95</p>	<p>First get Confidence Interval. Confidence Interval will be calculated as:</p> <p>If SD is 0 then Confidence Interval will be -100.</p> <p>Else if N is greater than or equal to 30 then Confidence Interval will be SE (Standard Error) * 1.96 (Z Score).</p> <p>Otherwise get T-DISTRIBUTION value from T-DISTRIBUTION table. This table contains the T-DISTRIBUTION values for different Ns. If N is 1 then N will be treated as 2.</p> <p>As query, SELECT NINTYFIVE FROM T_DISTRIBUTION WHERE DF=N</p> <p>If T-DISTRIBUTION value is null then it will be treated as 0. The value of Confidence Interval will be SE (Standard Error) * T-DISTRIBUTION value.</p> <p>Then subtract Confidence Interval value from Mean. The result will be Con Interval 95. This step will make sure that subtraction will be based on 2 decimal places.</p>
<p>Con Interval 99</p>	<p>First get Confidence Interval. Confidence Interval will be calculated as:</p> <p>If SD is 0 then Confidence Interval will be -100.</p> <p>Else if N is greater than or equal to 30 then Confidence Interval will be SE (Standard Error) * 2.58 (Z Score).</p> <p>Otherwise get T-DISTRIBUTION value from T-DISTRIBUTION table. This table contains the T-DISTRIBUTION values for different Ns. If N is 1 then N will be treated as 2.</p> <p>As query, SELECT NINTYNINE FROM T_DISTRIBUTION WHERE DF=N</p> <p>If T-DISTRIBUTION value is null then it will be treated as 0. The value of Confidence Interval will be SE (Standard Error) * T-DISTRIBUTION value.</p> <p>Then subtract Confidence Interval value from Mean. The result will be Con Interval 99. This step will make sure that subtraction will be based on 2 decimal places.</p>

Item Analysis – Histogram

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> • Data Pool • Case • Evaluation Type • Evaluator • Category • Class 	
Report Entities	
The report will have the following entities:	
Entity	Definition
N (Sample Size)	Total no. of students within data pool for the case and for the item (question). If one student comes twice within data pool then this will be counted as 2 (i.e. no distinct). If question is of type Custom then this will be distinct count for the session, case, question and candidate within data pool.
No. of attempts for each option with percentage	Total no. of attempts for the choice within data pool for the case and for the item. Percentage will be calculated as (No. of Attempts/N)*100 .

Item Analysis – Discrimination

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> • Data Pool • Case • Evaluation Type • Evaluator 	
Report Entities	
The report will have the following entities:	
Entity	Definition

N (Sample Size)	Total no. of students within data pool for the case. If one student comes twice within data pool then this will be counted as 2 (i.e. no distinct). This calculation excludes Number Missing criteria defined in Summary report.
Mean Score	Average of case score within data pool for the case. This calculation excludes Number Missing criteria defined in Summary report. <i>AVG(CASE SCORE)</i>
Median Score	The middle score in within data pool for the case. This will be calculated as: First get maximum number of case scores within data pool for the case. This calculation excludes Number Missing criteria defined in Summary report. Say the maximum number is MAXID. If MAXID is even number then get case score say meadian1 where row number is MAXID/2. Then get case score say median2 where row number is (MAXID/2) +1. Median score will be the average of both scores. i.e. (meadian1 + median2)/2. If MAXID is odd number then Median score will be score where row number is (MAXID/2) +1.
Max Score	This will be 100. As score can be more than 100%.
Lowest Score	Minimum case score obtained within data pool for the case. This calculation excludes Number Missing criteria defined in Summary report. <i>MIN(CASE SCORE)</i>
Highest Score	Maximum case score obtained within data pool for the case. This calculation excludes Number Missing criteria defined in Summary report. <i>MAX(CASE SCORE)</i>
SD	This will be calculated for session score within data pool for the case. This calculation excludes Number Missing criteria defined in Summary report. (<i>This will also be referred as S_i in the formula</i>) <i>STDEVP(Session Score)</i>
Overall %	This is average score for the item. This will be calculated as: Get total count for the question score equals to maximum score defined for the question within data pool for the case and for the item. Say this value is

	<p>TotalCorrectResponse. Get total count for the question score within data pool for the case and for the item. Say this value is TotalCount. Now the overall % will be $(\text{TotalCorrectResponse} / \text{TotalCount}) * 100$. If TotalCount is 0 then overall % will be 0. This calculation excludes Number Missing criteria defined in Summary report.</p>
Upper 27 %	<p>Percentage of Top 27 percent students who have scored the maximum score defined for the question. This will be calculated as:</p> <p>Get count for the question score within data pool for the case for top 27 percent of students in the context of session score. Say this value is TotalCount. Get count for the question score equals to maximum score defined for the question within data pool for the case for top 27 percent of students in the context of session score. Say this value is TotalTop27. Now the Upper 27 % will be $(\text{TotalTop27} / \text{TotalCount}) * 100$. If TotalCount is 0 then Upper 27 % will be 0. This calculation excludes Number Missing criteria defined in Summary report.</p>
Lower 27 %	<p>Percentage of bottom 27 percent students who have scored the maximum score defined for the question. This will be calculated as:</p> <p>Get count for the question score within data pool for the case for bottom 27 percent of students in the context of session score. Say this value is TotalCount. Get count for the question score equals to maximum score defined for the question within data pool for the case for bottom 27 percent of students in the context of session score. Say this value is TotalBottom27. Now the Lower 27 % will be $(\text{TotalBottom27} / \text{TotalCount}) * 100$. If TotalCount is 0 then Lower 27 % will be 0. This calculation excludes Number Missing criteria defined in Summary report.</p>
Point Bi Serial	<p>Point Bi-Serial Value of the item. (For details: http://www.jalt.org/test/bro_12.htm). This will be calculates as:</p> <p>If SD is 0 then Point Bi Serial will be displayed as “N.A.”.</p> <p>Get Average score and count for the question where question score is not equals to maximum score defined for the question within data pool for the case. Say these values are MeanFail and TotalFail.</p> <p>Get average session score where question score is not equals to maximum score defined for the question within data pool for the case. Say this value is MeanSessionFail. If this value comes as null then this value will be reassigned with MeanFail. If MeanSessionFail is null after reassigning the</p>

	<p>value then it will be set to 0. (<i>MeanSessionFail will be referred as M_q in the formula</i>)</p> <p>Get Average score and count for the question where question score is equals to maximum score defined for the question within data pool for the case. Say these values are MeanPass and TotalPass.</p> <p>Get average session score where question score is equals to maximum score defined for the question within data pool for the case. Say this value is MeanSessionPass. If this value comes as null then this value will be reassigned with MeanPass. If MeanSessionPass is null after reassigning the value then it will be set to 0. (<i>MeanSessionPass will be referred as M_p in the formula</i>)</p> <p>Now get fail proportion by dividing TotalFail with (TotalFail + TotalPass). Say this value is FailProportion.</p> <p>FailProportion = TotalFail / (TotalFail + TotalPass). (<i>This will be referred as q in the formula</i>)</p> <p>Now get pass proportion by dividing TotalPass with (TotalFail + TotalPass). Say this value is PassProportion.</p> <p>PassProportion = TotalPass / (TotalFail + TotalPass). (<i>This will be referred as p in the formula</i>)</p> <p>Now, calculate Point Bi Serial for the item as:</p> <p>PointBiSerial (r_{pbi}) = (((MeanSessionPass – MeanSessionFail) / SD) * SQRT(PassProportion * FailProportion))</p> <p>The all above calculations exclude Number Missing criteria defined in Summary report.</p>
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Correct Answer	Correct answer for the item. The choice/option no. whose score is defined as maximum score for the question. For custom choices, this will be displayed as “Custom”. If question category is defined with grading 2 then this will be either “Y” or “N”. This calculation excludes Number Missing criteria defined in Summary report.
Response frequency	Attempted choices/options. No. of attempts for the choice/option within data pool for the case and for the question will be displayed beneath each choice/option. This calculation excludes Number Missing criteria defined in Summary report.
Non Distractor	Un-attempted choices/options. Comma separated string for all un-attempted choices/options within data pool for the case and for the item. This calculation excludes Number Missing criteria defined in Summary report.

Performance Statistics – Skill Summary

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> Data Pool 	
Report Entities	
The report will have the following entities:	
Entity	Definition
Score	Average Score for Session/Case/Scenario/Category Group/Category/Competency within data pool for the student.
Mean	Average score for Session/Case/Scenario/Category Group /Category/Competency within data pool.
StdDev	<p>Standard Deviation for Case/Scenario/Category Group /Category/Competency within data pool.</p> <p>This will be calculated as standard:</p> $\text{SQRT}(\text{SUM}(\text{SQUARE}((\text{SCORE}) - \text{Mean})) / N)$ <p>Where Mean is average score for the entity within data pool and N is number of records for the entity within data pool.</p>
Range High	The highest score obtained by a student for Session/Case/Scenario/Category Group /Category/Competency within data pool.
Range Low	The lowest score obtained by a student for Session/Case/Scenario/Category Group /Category/Competency within data pool.
Passing Cut-off	<p>Passing cut off score for the Session /Category Group /Category/Competency within data pool. This will be calculated as :</p> $\text{Mean (for the entity)} - (\text{Sigma Cutoff} * \text{StdDev})$
Sigma Cut-off	The Sigma value provided during report selection. This value can be 1/2/3/4/5.

	<p>Sigma values will be calculated to display data in different colors. Calculation will be:</p> <p>One Sigma Below = Mean - (1* StdDev)</p> <p>One Sigma Above = Mean + (1* StdDev)</p> <p>Two Sigma Below = Mean - (2* StdDev)</p> <p>Two Sigma Above= Mean - (2* StdDev)</p>
XY	<p>XY will be calculated as:</p> <p>For Session:</p> <p>First get top 1 average Session score for the candidate within data pool. Say this value is SessionScore.</p> <p>Then get no. of questions scored for the candidate within data pool for the Session. Say this value is NoOfQuestions.</p> <p>Then XY for the case will be:</p> $XY = (\text{SessionScore} / 100) * \text{NoOfQuestions} + ' / ' + \text{NoOfQuestions}$ <p>For example if SessionScore is 76.60 and NoOfQuestions is 61 then XY will be (47/61). This calculation will be rounded to 0.</p> <p>For Case:</p> <p>First get top 1 case score for the candidate within data pool for the case. Say this value is CaseScore.</p> <p>Then get no. of questions scored for the candidate within data pool for the case. Say this value is NoOfQuestions.</p>

	<p>Then XY for the case will be:</p> $XY = (\text{CaseScore}/100) * \text{NoOfQuestions} + ' / ' + \text{NoOfQuestions}$ <p>For example if CaseScore is 82.00 and NoOfQuestions is 38 then XY will be (31/38). This calculation will be rounded to 0.</p> <p>For Skills:</p> <p>First get average skill score for the candidate within data pool. Say this value is SkillScore.</p> <p>Then get no. of questions scored for the candidate within data pool for the skill. For competencies, this will be total no. of competencies scored by the candidate within data pool. Say this value is NoOfQuestions.</p> <p>Then XY for the case will be:</p> $XY = (\text{SkillScore} / 100) * \text{NoOfQuestions} + ' / ' + \text{NoOfQuestions}$ <p>For example if SkillScore is 91.48 and NoOfQuestions is 21 then XY will be (19/21). This calculation will be rounded to 0. If skill is category then average will be calculated for the category scores having weight is greater than 0.</p> <p>All above average calculations will excludes Number Missing Criteria.</p>
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Performance Statistics – Learner Rank

Parameters:
<p>This report will be based on the following parameters:</p> <ul style="list-style-type: none"> • Data Pool

- Optional:
 - SD
 - Percentage for Above/Below mean

Report Entities

The report will have the following entities:

Entity	Definition
Mean	Average score for Session/Case/Scenario//Category within data pool for the entity.
SD	Standard Deviation for Session/Case/Scenario//Category within data pool. This will be calculated as: STDEVP(entity score)
Cut-off	Minimum Passing cut off defined for the Form/Case/Category within data pool.
Score	Score for Session/Case/Scenario/Category within data pool for students. The order of the scores will be descending. i.e. the highest scorer will come on top and lowest will go bottom.

Performance Statistics – Percentile Score

Parameters:

This report will be based on the following parameters:

- Data Pool
- Optional:
 - Percentile for Top/Bottom

Report Entities

The report will have the following entities:

Entity	Definition
Student Score (SS)	Average score for Session/Case/Scenario//Category within data pool for the entity for the student.

Percentile Score (PR)	<p>Percentile score for Session/Case/Scenario//Category within data pool for the entity. The calculation for percentile will be as:</p> <p>Get no. of scores which are less than or equal to the score for the student. Say this is NoBelowScore.</p> <p>Get no. of total scores. Say this is TotalScoreCount. Then percentile will be $(\text{NoBelowScore} / \text{TotalScoreCount}) * 100$. Individual calculations will be done for session/Case/Category scores within data pool.</p> <p>$\text{CAST}(\text{SUM}(\text{CASE WHEN SCORE} \leq \textit{Student Score (SS)} \text{ THEN 1 ELSE 0 END}) \text{ AS FLOAT}) / \text{COUNT}(*)$</p>
Over All Score	Average case score for the candidate within data pool.
Case Score	Case Score for the candidate within data pool.
Top/Bottom percentile	<p>The calculation for the top/bottom will be as:</p> <p>Get total no. of students within data pool. Say this number is TotalStudents.</p> <p>Then top/bottom percentile will be:</p> <p>$(\text{TotalStudents} * \textit{Percentile Provided}) / 100$. Top/bottom will be calculated in the order of case score for the students within data pool.</p>

Performance Statistics – Class Summary

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> Data Pool 	
Report Entities	
The report will have the following entities:	
Entity	Definition
Session	Session for which the details/statistics will be shown.

Case Name	Case name for which the details/statistics will be shown
Total	Total no. of students (including team) who's Session/Case score is available within data pool.
Team	Total no. of teams who's Session/Case score is available within data pool.
Male	Total no. of male students who's Session/Case score is available within data pool.
Female	Total no. of female students who's Session/Case score is available within data pool.
Other	Total no. of unidentified sex students, whose Session/Case score is available within data pool. i.e. gender is null in the table.
Mean	Average of Session/Case scores within data pool. This calculation excludes Number Missing criteria. <i>AVG(SCORE)</i>
Variance	This calculation excludes Number Missing criteria. <i>SUM(SQUARE((SCORE)-Mean))/ Total</i>
SD	Square root of Variance . This calculation excludes Number Missing criteria. <i>SQRT(SUM(SQUARE((SCORE)-Mean))/ Total)</i>
Minimum	Minimum score obtained within data pool for the session/case This calculation excludes Number Missing criteria. <i>MIN(SCORE)</i>
Maximum	Maximum score obtained within data pool for the session/case This calculation excludes Number Missing criteria. <i>MAX(SCORE)</i>
Range	Difference of Maximum score and Minimum score within data pool for the Session/case. <i>Maximum-Minimum</i>
Pass %	Minimum Passing cut off defined for the Form/Case within data pool.

Case/Category Report	
N	Same as Total but for the Category of a case within data pool.
M	Same as Mean but for the Category of a case within data pool.
S	Same as SD but for the Category of a case within data pool.
Min	Same as Minimum but for the Category of a case within data pool.
Max	Same as Maximum but for the Category of a case within data pool.
Range	Same as Range (for Session/Case) but for the Category of a case within data pool.
P	Same as Pass % but for the Category of a case within data pool.

Performance Statistics – History

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> Data Pool 	
Report Entities	
The report will have the following entities:	
Entity	Definition
Session Name	Session name for which the details/statistics will be shown.
Session	Session for which the details/statistics will be shown.
Case	Case name for which the details/statistics will be shown
Category	Category name for which the details/statistics will be shown
Score	Score for Session/Case/Category for the student within data pool.
Class Mean	Average of Session/Case/Category scores within data pool. This calculation excludes Number Missing criteria.

	<i>AVG(SCORE)</i>
Minimum	Minimum score obtained within data pool for the session/case/category. This calculation excludes Number Missing criteria. <i>MIN(SCORE)</i>
Maximum	Maximum score obtained within data pool for the session/case/category. This calculation excludes Number Missing criteria. <i>MAX(SCORE)</i>
Range	Difference of Maximum score and Minimum score within data pool for the Session/case/category. <i>Maximum-Minimum</i>
Passing score	Minimum Passing cut off defined for the Form/Case/Category within data pool.

Performance Statistics – Chart

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> Data Pool 	
Report Entities	
The report will have the following entities:	
Entity	Definition
S	Score for Case/Category for the student within data pool.
M	Average of Case/Category scores within data pool. <i>AVG(SCORE)</i>
SD	Standard Deviation. This will be calculated as: $SQRT(SUM(SQUARE(Score-M)) / Total\ no.\ of\ Student\ within\ data\ pool)$

Performance Statistics - Comparison

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> Data Pool 	
Report Entities	
The report will have the following entities:	
Entity	Definition
Form Name	Form name for which the details/statistics will be shown.
Case	Case name for which the details/statistics will be shown
Category	Category name for which the details/statistics will be shown
Total	Total no. of students within data pool for the Form/Case/Category
Score	Score for Session/Case/Category for the student within data pool.
Class Mean	Average of Session/Case/Category scores within data pool. This calculation excludes Number Missing criteria. <i>AVG(SCORE)</i>
Minimum	Minimum score obtained within data pool for the session/case/category. This calculation excludes Number Missing criteria. <i>MIN(SCORE)</i>
Maximum	Maximum score obtained within data pool for the session/case/category. This calculation excludes Number Missing criteria. <i>MAX(SCORE)</i>
Range	Difference of Maximum score and Minimum score within data pool for the Session/case/category. <i>Maximum-Minimum</i>
Passing score	Minimum Passing cut off defined for the Form/Case/Category within data pool.

StdDev	Standard Deviation. This calculation excludes Number Missing criteria. $\text{SQRT}(\text{SUM}(\text{SQUARE}((\text{SCORE}) - \text{Mean})) / \text{Total})$
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Standardized Score – Chart

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> Data Pool 	
Report Entities	
The report will have the following entities:	
Entity	Definition
Original Score	Original Score range for Session/Case/Scenario/Category Group/Category within data pool.
Standardize Score	Standardized Score range for Session/Case/Scenario/Category Group/Category within data pool. Calculation will be: $(\text{SDStandardized} * ((\text{original score} - \text{Mean}) / \text{SD})) + \text{MeanStandardized}$ If SD is 0 then Standardized Score will be provided mean i.e. Standardized Mean.
Original Mean (<i>Mean</i>)	Average of original Score for Session/Case/Scenario/ Category Group/Category within data pool.
Standardized Mean (<i>MeanStandardized</i>)	Provided Mean

Original Standard Deviation (SD)	$\text{SQRT}(\text{SUM}(\text{SQUARE}(\text{Score} - \text{Original Mean})) / \text{Sample Size})$
Standardized Standard Deviation (SDStandardized)	Provided Standard Deviation

Standardized Score – Learner Specific

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> Data Pool 	
Report Entities	
The report will have the following entities:	
Entity	Definition
Original Score	Average of Original Score for Session/Case/Scenario/ Category Group/Category within data pool for the student.
Standardize Score	<p>Average of Standardized Score for Session/Case/Scenario/ Category Group/Category within data pool for the student.</p> <p>Calculation will be:</p> $(SDStandardized * ((\text{original score} - \text{Mean}) / SD)) + \text{MeanStandardized}$ <p>If SD is 0 then Standardized Score will be provided mean i.e. Standardized Mean.</p> <p>Where :</p> <ul style="list-style-type: none"> SD will be calculated as defined in the Chart Report Mean will be calculated as defined in the Chart Report SDStandardized is mentioned in Chart Report MeanStandardized is mentioned in Chart Report

Survey Analysis – Statistics

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> • Data Pool • Survey Type 	
Report Entities	
The report will have the following entities:	
Entity	Definition
N (Sample Size)	Total no. of respondents within data pool for the item (question). If one respondent comes twice within data pool then this will be counted as 2 (i.e. no distinct).
No. of attempts for each option with percentage	Total no. of attempts for the choice within data pool for the Survey/Case/Item. Percentage will be calculated as (No. of Attempts/N)*100 .

Survey Analysis – Analysis

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> • Data Pool • Survey Type 	
Report Entities	
The report will have the following entities:	
Entity	Definition
S. No.	Serial No.
Name	Name of Form/Case/Category/Category group

Sample Size	Total no. of students within data pool for the item (question). This calculation excludes Number Missing criteria.
Selected Sample Size	Total no. of students whose responses are matching with provided survey answers within data pool for the items (questions). This calculation excludes Number Missing criteria.
Mean	Average score for the Form/Case/Category/Category group within data pool. This calculation excludes Number Missing criteria.
Selected Mean	Average score for the Form/Case/Category/Category group for the students whose responses are matching with provided survey answers within data pool. This calculation excludes Number Missing criteria.
SD	Standard deviation. $\text{SQRT}(\text{SUM}(\text{SQUARE}((\text{SCORE})-\text{Mean})) / \text{Sample Size})$
Selected SD	Standard deviation for the students with matching responses or scores. $\text{SQRT}(\text{SUM}(\text{SQUARE}((\text{SCORE})-\text{Selected Mean})) / \text{Selected Sample Size})$

Survey Analysis – Histogram

Parameters:	
This report will be based on the following parameters:	
<ul style="list-style-type: none"> • Data Pool • Survey Type 	
Report Entities	
The report will have the following entities:	
Entity	Definition
N (Sample Size)	Total no. of respondents within data pool for the item (question). If one respondent comes twice within data pool then this will be counted as 2 (i.e. no distinct).
No. of attempts for each option with percentage	Total no. of attempts for the choice within data pool for the Survey/Case/Item. Percentage will be calculated as (No. of Attempts/N)*100 .