1.https://en.wikipedia.org/wiki/Cronbach%27s\_alpha

In [statistics](https://en.wikipedia.org/wiki/Statistics) ([classical test theory](https://en.wikipedia.org/wiki/Classical_test_theory)), **Cronbach's {\displaystyle \alpha }\ (alpha)**[[1]](https://en.wikipedia.org/wiki/Cronbach%27s_alpha#cite_note-Cronbach-1) is used as a (lowerbound) estimate of the [reliability](https://en.wikipedia.org/wiki/Reliability_(psychometrics)) of a [psychometric test](https://en.wikipedia.org/wiki/Psychometric_testing).

2. <https://www.imsglobal.org/activity/caliperram> calipher analysis

3. <https://en.wikipedia.org/wiki/Akaike_information_criterion>

**Akaike information criterion** (**AIC**) is a measure of the relative quality of [statistical models](https://en.wikipedia.org/wiki/Statistical_model) for a given set of data. Given a collection of models for the data, AIC estimates the quality of each model, relative to each of the other models. Hence, AIC provides a means for [model selection](https://en.wikipedia.org/wiki/Model_selection).

4. https://en.wikipedia.org/wiki/Standard\_deviation

In [statistics](https://en.wikipedia.org/wiki/Statistics), the **standard deviation** (**SD**, also represented by the Greek letter sigma [**σ**](https://en.wikipedia.org/wiki/Sigma) or the Latin letter [s](https://en.wikipedia.org/wiki/S)) is a measure that is used to quantify the amount of variation or [dispersion](https://en.wikipedia.org/wiki/Statistical_dispersion) of a set of data values.

5. https://en.wikipedia.org/wiki/Wald\_test

The **Wald test** is a [parametric statistical test](https://en.wikipedia.org/wiki/Parametric_statistics) named after the [Hungarian](https://en.wikipedia.org/wiki/Hungarians) statistician [Abraham Wald](https://en.wikipedia.org/wiki/Abraham_Wald). Whenever a relationship within or between data items can be expressed as a statistical model with parameters to be estimated from a sample, the Wald test can be used to test the true value of the parameter based on the sample estimate.

6.business intelligence : **Business intelligence** (**BI**) can be described as "a set of techniques and tools for the acquisition and transformation of raw data into meaningful and useful information for [business analysis](https://en.wikipedia.org/wiki/Business_analysis)purposes".[[1](https://en.wikipedia.org/wiki/Business_intelligence#cite_note-VentureSkiesDawnWhatIsVM-1)

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 when the regression line is linear (y = ax + b) the regression coefficient is the constant(a) that represents the rate of change of one variable (y) as a function of changes in the other (x); it is the slope ofthe regression line

In statistics, the **Durbin**–**Watson** statistic is a test statistic used to detect the presence of autocorrelation (a relationship between values separated from each other by a given time lag) in the residuals (prediction errors) from a regression analysis.

In regression analysis, the difference between the observed value of the dependent variable (y) and the predicted value (ŷ) is called the **residual** (e).

**Group and groupings** plugin in moodle to form group.

Metrics :

Answers generated by the data extracted ?

Which course resources/tools are being used most frequently? Video clips, posted documents, etc.

* How often are students logging onto the course?
* When did the student review the assignment instructions? Submit an assignment?
* Which discussions boards generate the most traffic – have more students views? This is different from the number of discussion board postings, as many students may view [and read] the posts but not contribute.
* When was the last time students logged onto the course? How many times per week are students logging on?
* What are the patterns of performance in online tests? By question?

Measures :

* Overall rating of the training course:

Overall rating is a one word answer: “Excellent” “Good” or “Fair”. Such ratings improve learner enrollment and provide opportunity to instructional designers to improve their courses.

* Post-event survey results:

These are basically for instructional designers and trainers. They can be specific questions related to the course, enabling designers to improve the contents.

* Instructor ratings:

Very essential for the instructor to fine tune their course mentoring. Also important for marketing the instructor as the mentor of a course.

* Learning Effectiveness:

This is a bit abstract but can be dealt with specific questions like requesting for emotional or affective responses. The confidence, excitement, anxiety, empowerment and curiosity or boredom learners feel, describe the effectiveness of the learning materials.

* Return on Investment:

as discussed above

* Overall satisfaction:

This is popular and again needs a single word answer. Using non-conventional answers like “awesome” “phenomenal” “brain wrecker” etc. add to the appeal of this metric.