

Measurement of variables essay sample



Measurement is the assignment of numbers to characteristics (or attributes) of objects according to a pre-specified set of rules. Describe the object and characteristics of Syafiq's study. The object of the study is to help the Standard Asian Merchant Banks SP department understand how, and to what extent, the customers use the website and how it can be simplified in order to reduce the number of help calls associated with it. The author of the study, Syafiq, must decide which characteristics of the study are likely to be relevant to users of the review. The characteristics of this study are Information Quality, System Quality, Interactivity and System design Quality. The measurement of more abstract and subjective characteristics (or attributes – such for instance the attributes in Syafiq's study) is more difficult than the measurement of other, more tangible attributes such as weight, length, gender, age, and marital status.

Why is that? The abstract and subjective characteristics of the study fall under the System design quality and Satisfaction with the website. The attributes of the two characteristics include visual appeal, innovativeness, image consistency and satisfaction with the website. All of these attributes are subjective to the person viewing the website. For instance, an older test subject may think the website is modern and very up-to-date, while a younger test subject may see it as tired, or old, technology. The questions on the review are directed to the customer's opinion of the website and will vary from one to another. One way of tapping more abstract and subjective attributes is operationalizing these attributes. What is operationalization?

Shuttleworth (2014) defines Operationalization as “ the process of strictly defining variables into measurable factors. The process defines “ fuzzy

concepts” and allows them to be measured, empirically and quantitatively.” Operationalization sets down exact definitions of each variable, increasing the quality of the results, and improving the robustness of the design. These concepts determine how the researchers are going to measure an emotion or concept, such as the level of suffering or hostility. Easily measured variables are height, mass, volume, circumference, etc. Fairly easily measured variables are speed, distance, work, frequency range. Not easily measured variables are happiness, aggressiveness, pain, physical ability, love, hunger, frustration, and situational awareness.

Describe the process of operationalizing variables.

Factors that are subjective, effort dependent or abstract are hard to measure. First, identify the characteristics or attributes that are needed to study and come up with a system to measure the variable or concept. Second, determine one or more quantitative measures of the characteristic or attribute. Will they be measured using the metric system, imperial system or English? Third, determine the instrument for obtaining this measure. For example, the use of a ruler or tape measure to obtain a measure of height in inches, or a scale of 1-10 to measure emotion or other abstract characteristics. Based on a review of the literature Syafiq has developed a table (Table 1) that should help him to operationalize the variables of his conceptual model. Use this table to discuss the attributes ‘ Information Quality’ in terms of dimensions and elements.

In other words, which dimensions of ‘ Information Quality’ has Syafiq found in the literature and how have these dimensions further been broken into elements by researchers who have investigated this issue in the past?

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Information Quality refers to the basic idea behind the questions asked in the research. The ideas were researched by Syafiq and added to the conceptual model to show that the questions asked by the reference authors could be used in another test and show correlation and the ability to measure abstract and subjective concepts in the study. Information content consists of elements such as the amount and quality of the information provided on the website. Relevance refers to the precision, usefulness and applicability to the needs of users. Information Currency/Up to date relates to the timeliness of information and the timely updating of new/corrected information.

Goodness of information/understandability refers to the information being provided in a way that is clear to users and easy to understand. Information that is written in a way that an average user would not be able to comprehend does not show “goodness”. Completeness means that all necessary, sufficient and detailed information is provided for the scope of information needed. Information dependability/reliability is the use of information considered both credible and consistent. Accuracy refers to the provided information meeting users’ expectations of reliability, accuracy and detail, as well as being the most up-to-date information available.

Information Benefit refers to the degree to which the user believes that the information on the website will enhance their decision.

Syafiq could decide to use the survey questions he has found in the literature as a basis for his questionnaire. Is it, in general, a good or a bad idea to use existing scales? Why? I believe it would be a poor decision to use existing scales to measure the reaction to the questions presented because the

questions may not be worded so as to extract the exact information he is seeking from the subjects. This would cause parts, if not all, of the questions to be invalid. These questions can be used as a basis and modified to specifically address the study that he is performing and relate to the study's subjects.

References

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