What are the advantages and disadvantages of quantitative and qualitative methods in Psychology ?

Quantification can be defined as the process of measuring on some numerical basis. That is whenever we count or categorise, we quantify (Coolican, 1990).

Quantitative methods in Psychology are concerned with the measurement and analysis of psychological phenomena. Quantitative psychologists aim to develop and apply mathematical methods of summarising and analysing all kinds of data from various areas of psychology. For example, quantitative psychologists have helped biologists develop mathematical methods of precisely describing the ways in which brain waves change when alcohol is consumed (Bernstein et al, 1991)

Qualitative methods involve emphasising meanings, experiences, descriptions and so on (Coolican, 1990). So whereas the data for quantitative research tends to be numerical or categorical, the data for qualitative research generally consists of descriptions whether verbal recorded interviews and conversations involving experimental subjects or a description of an observed phenomena.

Examples of qualitative research include reports describing and interpreting the ways in which individuals face death and describing how a minority group dealt with assimilation into the majority culture (shaughnessy & Zechmeister, 1994).

Psychological research on the whole is more quantitative than qualitative, though there are many advantages and disadvantages of both quantitative and qualitative methods.

The main advantages of qualitative research are summarised below:-

Qualitative research is generally rich in information. That is, Qualitative data consists of detailed descriptions; in depth inquiry and direct quotations capturing people's personal perspectives and experiences (Quinn Patton, 1990). Examples of qualitative data include interview transcripts, field notes, photographs, audio recordings, videotapes, diaries, personal comments, memos, official records, and textbook passages etc.

This type of research also tends to be undertaken in a naturalistic setting. That is, the researchers spend a great deal of time, for example in a school study, actually sitting in on faculty meetings, observing teachers in their classrooms, attending PTA meetings and generally observing people as they go about their daily routine. Qualitative researchers are concerned with 'context'. They believe that human behaviour is greatly influenced by its environment and therefore can be best understood when observed in a natural setting.

The fact that the design of qualitative research is unstructured has the advantage of great flexibility, being able to adapt the inquiry as understanding deepens or situations change and allowing the researcher to pursue new paths of discovery as they emerge (Quinn Patton, 1990).

Qualitative research has a high validity. Validity refers to the appropriateness, meaningfulness and usefulness of inferences made by the researcher based upon the data which they collect (Fraenkel & Wallen, 1994). In other words, qualitative research always tends to measure what the researcher claims it to.

Qualitative research also has its disadvantages in that it is often very subjective as the researcher often includes personal experience and insight as part of the relevant data thus making complete objectivity an impossibility. Also, it has a very low reliability in that it is extremely difficult to replicate a piece of qualitative research due to the fact that it does not have a structured design or a standardised procedure.

The main advantages of quantitative research include its objectivity. Unlike many qualitative researchers, quantitative researchers try to keep a 'distance' from their subjects. They use subjects unknown to them and they make no attempt to get to know their subjects other than to collect the required data from them.

Quantitative research methods, if explained in detail are generally very easy to replicate and hence have a high reliability.

The results of quantitative research tend to be very simple in that they are generally reduced to a few numerical statistics and interpreted in a few short statements.

However, quantitative research also has many disadvantages. One of the main criticisms of quantitative research is that it often takes place in an unnatural setting. That is, the researchers create an artificial environment in an attempt to control all relevant variables. Considering this, how sure can they be that the results which they obtain in the laboratory will also apply in the real world.

Quantitative research is also criticised for giving narrow, unrealistic information using measures which capture only a tiny proportion of the concept originally under study. This provokes a question of whether the research actually measures what the researcher claims it does. Hence, quantitative research has a low validity.

Reason and Rowan (1981) argued against quantitative research, stating that 'some things which are numerically precise are not true; and some things which are not numerical are true.' They put forward the point that the results of orthodox (quantitative) research may be statistically significant but are often humanly insignificant:- '... in human enquiry it is much better to be deeply interesting than accurately boring.' This is obviously a very strong point of view, maybe slightly biased, but it is only a response to the constant criticism over the years of qualitative research in Psychology to the extent that important topics which were not susceptible to objective measurement and direct observation of

every concept were devalued. However we should realise the advantages and disadvantage of both types of research methods and accept that qualitative methods are appropriate for some types of research - for example, if someone was studying the experience of mourning, but quantitative research methods are perhaps more suitable for other types of research, for example in the study of human perception in detecting colour changes (coolican, 1990).

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