Research Design

Name

Institution Affiliation

Date

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(a) Components of Research:

The research consists of six chapters (components). Below is a summary of the key components of research:

Introduction

The introduction contains the key questions the researcher is trying to answer and an overview of the relevant literature (Moyle & Toth, 2013). Besides, the researcher will explain why the research is important and provide hypotheses that attempt to answer key questions. Finally, the introduction should summarize the status of the main topics after the study is complete. For example, there are still important questions or open questions?

Methodology

The methodology section of the study report is perhaps the most important for two reasons. First, it allows readers to assess the study's quality, and second, details are provided for other researchers to reproduce and confirm the results (Moyle & Toth, 2013). Usually, the methodology section's information is listed in chronological order, with the most important information at the top of each section. Ideally, the methodology description should not force you to refer to other documents. However, if the authors rely on existing methods, they will be continued.

Result

In longer research articles, the results area contains data and perhaps a brief introduction of how the results were obtained and what the results mean (Moyle & Toth, 2013). Usually, data interpretation and analysis is provided for the discussion part.

Discussion

The discussion section is where research results are interpreted and evaluated using existing bodies or existing research literature. If anomalies are found in the results, the authors report them here. Finally, the discussion section tries to link the results to the bigger picture and show how they can be applied (Moyle & Toth, 2013).

Conclusion and Recommendation:

In this section, the investigator makes a conclusion based on the hypothesis tested. The conclusion is always connected to the research questions and hypotheses (Moyle & Toth, 2013). The conclusion answers the following question; does the investigation address the statement of the problem? The recommendation gives ideas on how future investigations can be conducted to improve the particular investigation.

(b) Sources of Information:

Information to be used in data analysis is obtained from primary and secondary sources. Primary sources are used to provide information from direct reports of an event and are considered authoritative and accurate (Hagerstrom, Hutchinson, Bharthulwar, & Tinius, 2010). Primary sources are considered to give the original thought of the respondents. Among the popular sources of primary data include surveying. Surveying is a research design that comprises a questionnaire, interview, observations, and focus group discussion. Primary sources are used when collecting data during the event and can also be used to obtain data after the event. However, the disadvantage of primary data is that it is costly and can lead to observer bias.

On the other hand, secondary sources give analyzed, evaluated, and synthesized form of primary data (Hagerstrom et al., 2010). Like the word secondary suggests, secondary sources give the investigator opinions based on the collected primary data. Although scientific journals are generally viewed as secondary sources, they often contain articles on very specific topics and

primary sources of new developments. The primary and secondary categories are often variable and depend on the type of investigation. For example, editorial newspapers/opinion articles can be a secondary or primary source (Hagerstrom et al., 2010). The advantage of secondary data is that it is cheap even though it is susceptible to bias. In summary, when studying how an event affects people at any given time, that type of source is considered the primary source. When studying an event, that opinion reacts to the event, secondary sources of data are considered.

(c) Use and Misuse of Information

The basic use of research is to help the leaders to make policies that will benefit society. The research findings are conceptually used to form new ideas, identify and solve problems, and make appropriate solutions in new ways; moreover, research is also used to offer future innovation guidelines. Research is also useful in the promotion and marketing of products and services. For instance, a company that needs to collect data regarding the clients' taste and preferences will need to investigate the target market. Having accurate and timely data is paramount for marketing as it helps the company match its products and services with the clients' needs.

Research is indeed complex, but simple if the objectives of the investigation are carefully stated. However, findings are alternated or misinterpreted in some cases, thereby giving a false impression and wrong conclusion. Such results findings are misused and cannot be used by the public as accurate data. Misuse of research may happen due to various reasons: dishonesty on the part of the investigator, not collected raw data, partisan, accidental, malice, or a combination of some of these factors. Misuse of research may also result from errors in the findings arising from bias, negligence, or ignorance. In some cases, investigators willingly or purposely alter research findings to correspond with their objectives.

(d) Established Tools of Measurement

Measurement Instrument

When conducting a quantitative investigation, there are various measurement instruments that an investigator can use when conducting an investigation. One of such measurement is the Behavioral Risk Factor Surveillance System (BRFSS) that is used to measure the degree of the health related quality of life (HRQoL) (Mody & Smith, 2006). Hamilton Anxiety Scale (HAM-A) is another type of a questionnaire that is used by investigators to measure the degree or the extent of anxiety among the respondents. Moreover, an investigator may be interested in determining how happy the respondents are, in this case Fordyce Emotion Questionnaire, also called the happiness measure is used (Mody & Smith, 2006). Finally, a special type of a questionnaire that measures the degree of stress is called the Perceived **Stress** Scale (PSS). These special types of questionnaires are classified as measurement instruments and are used to quantify the identified measures.

(e) Types of Research

There are various classifications of research. In this question, the types research will be given based on the research design.

Quantitative Research:

This is a type of investigation that the researcher quantifies the data by answering the question how much? what percentage? or how many? Under the quantitative the numerical value of the investigation is known. Moreover, this investigation allows the researcher to apply mathematical concepts such as hypotheses testing.

Qualitative Research:

Qualitative research gives the opinions and the views of the respondents without the use of mathematical and scientific representation of the data. This type of study is used when secondary approach of data collection is used. Moreover, when summarizing the attitudes of respondents on a given issue, qualitative research is used.

Mixed Research:

A mixed research is a type of investigation that uses both qualitative and quantitative research designs. Most investigations use a mixed approach where primary data is analyzed quantitatively and observable variables are analyzed through the use of qualitative approach.

References

Hagerstrom, C. F., Hutchinson, T. D., Bharthulwar, S., & Tinius, P. E. (2010). *U.S. Patent No. 7,685,177*. Washington, DC: U.S. Patent and Trademark Office.

Mody, R. R., & Smith, M. J. (2006). Smoking status and health-related quality of life: findings from the 2001 Behavioral Risk Factor Surveillance System data. *American Journal of Health Promotion*, *20*(4), 251-258.

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