Assignment Mid-Term (Spring-2020)

Program:	MBA-90
<u>Course:</u>	Business Research Method
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Submission date:	27.April.2020

Answers the Questions

approach.

Q1. How do you think Isabelle's understanding of theory and method changed in adopting the approach she chose?

Answer: Isabelle became increasingly aware of alternative approaches to research other than the more traditional one associated with Positivism. She conceived this alternative approach using amore qualitative method that could be rigorous and have some practical relevance. She could understand how even the physical sciences which had influenced Positivism were not always as 'Scientific' as they assumed. This understanding she conceived from reading the seminal work Of Kuhn on Scientific Revolutions. Thus, it was arguably more difficult for researchers to be critical of social scientists merely on the grounds of being less rigorous and indeed systematic. She also argued that research on managers could be more valid and meaningful if she adopted more qualitative

Q2. What particular knowledge and skills did she develop in preparing this research?

Answer: Isabelle had developed her knowledge and skills in conducting research.

Researching life-histories requires knowledge and understanding of in-depth interviews and careful use of secondary data. Before her in-depth interviews with managers on how they coped with pressure at work, she decided to interview some family members using a technique pioneered by Bertaux (1995). These practical family history exercises could sensitize one to the interplay between the individual and the wider social structure in which they are embedded. The other knowledge and skills developed were ethical concerns. Problems could arise because there are potential dangers with life-history interviews. Given that life-history is an introspective process for the interviewee, this process may not always be a positive experience, it could be negative. This process may then become problematic for the interviewee. Reflecting on one's experiences may be fraught with any number of psychological pitfalls. This requires careful interviewing so that the interviewee feels that the experience has been a worthwhile experience. Equally, the vulnerability of the participant in this kind of study requires the exercise of informed consent. As well as taking care during the collection of the information, she needed to ensure that the closing of the interview is done with sensitivity. This should then make it possible for the interviewee to contact the researcher at a later date. Isabelle realized that conducting such interviews, given the theoretical, methodological and ethical issues involved, Required a psychological 'maturity' on her part, if the process was to be successful

Q3. What problems do you think she would have anticipated in conducting research into pressure and coping among managers that her literature review may not have identified.

Answer: Managers may be reluctant to admit that the pressure they are under can lead to problems. Pressure and coping among managers could thus be problematic enough in itself. The problems she would have anticipated include getting access to managers, which is usually a problem in this type of research. She would have to interview a number of managers. This would require obtaining their

consent and expecting a longer interview. This type of qualitative research would arguably take more time than giving out a postal questionnaire.

Q2. Explain the following in your own words (with proper references).

i. Difference between pure and applied research.

Answer: <u>Pure research</u>, which is also known as basic or fundamental research, is conducted without a specific goal in mind, whereas applied research is carried out with the goal of solving a problem or answering a specific question. Pure research is more exploratory in nature.

Pure research is driven by interest or curiosity in the relationships between two or more variables. When an individual is interested in learning simply for learning's sake, she is conducting pure research. **For example,** someone interested in financial markets and investor behavior may watch the stock market to gain a better understanding of how markets move. This type of research is generally not economically profitable, but it may provide a catalyst for applied research that leads to future breakthroughs.

Applied research is used to solve a specific, practical problem of an individual or group. This type of research is used in a wide number of fields, including medicine, education, agriculture and technology. **Examples of applied** research include studying the behavior of children to determine the effectiveness of various interventions, looking into the relationship between genetics and cancer, or testing the waters of a river to determine what types of contaminants are making their way into a municipal water supply.

ii. Primary and secondary research with examples?

Answer: <u>Primary Research:</u> Primary research is designed to meet your unique and specific needs. This fundamental research is conducted by you—if you're on a tight budget—or by a research firm that you hire for the project, usually a firm that comes recommended by a colleague. The research can include focus groups, surveys, interviews, and observations.

Primary research gives you a lot of specific results. For example, a focus group would be asked specific questions that you help design so the information is much targeted to your needs. Also, the research firm would use statistical models to come up with a sample group that is representative of your target audiences, making it very relevant to your business needs. Primary research provides two basic forms, exploratory and specific.

Secondary Market Research

Secondary Research is when you use previously completed studies and apply the results to your own situation. These studies are easy enough to find via an internet search or by researching marketing journals and, on the upside, are usually free or low cost. The drawback for businesses is that the results are not specific to your business, and you may not be aware of all of the variables involved. The results may also be broader than your company's niche, making it difficult to help inform your business decisions. Examples of secondary research include textbooks, news articles, review articles, and media analyses. When conducting secondary research, authors may draw data from published academic papers, government documents, statistical databases, and historical records.

iii. What is difference between theoretical and empirical research? Please explain with practical examples.

Answer: Theoretical, based upon a hypothesis, that has been studied and analyzed, bases the proofs of suppositions upon the collection of empirical data. Hypothetical suppositions are the relatively soft parts of a theory, without empirical data, the detailed hard cold facts, and statistics, a theory will not be accepted by the larger scientific community. The collection of irrefutable facts, based upon observation, experimentation and the collection of measurements, must be reproducible.

And Theoretical research is a logical exploration of a system of beliefs and assumptions. This type of research includes theorizing or defining how a cyber-system and its environment behave and then exploring or playing out the implications of how it is defined. This research is very valuable in understanding the bounds, edge cases, and emergent behaviors of a system. Often theoretical research is decried as out of touch with reality, so-called "ivory tower" research. Frankly, any research type or approach can run the risk of being irrelevant or out of touch if done incorrectly. In some scientific fields, theoretical research is so far ahead of engineering and technological progress that experiments to validate or refute them are hundreds of years away. In cyber security research, **theoretical work often overlaps with mathematics, logic, or theory of computation; cryptography, of course, is a great example of this**.

Empirical research is defined as any research where conclusions of the study is strictly drawn from concretely empirical evidence, and therefore "verifiable" evidence.

This empirical evidence can be gathered using quantitative market research and qualitative market research methods.

For example: A research is being conducted to find out if listening to happy music while working may promote creativity? An experiment is conducted by using a music website survey on a set of audience who are exposed to happy music and another set who are not listening to music at all, and the subjects are then observed. The results derived from such a research will give empirical evidence if it does promote creativity or not.

vi. What are the attributes of good research topic? Please discuss in your own words with references.

Answer: 1. a good researcher must be open-minded and must also adopt a critical way of thinking. 2. Besides, he/she should be hard working, diligent, focused and devoted to his/her specific field of interest.

3. Updating his/her knowledge is of utmost importance and can be accomplished in several ways, such as following the current literature, attending conferences or exchanging ideas with colleagues working in a relevant field.

4. Furthermore, a modern researcher must be resourceful and inventive in order to transform his/her scientific queries and hypotheses into a realizable protocol.

5. Characteristics of the good researcher: innate talent or acquired skills.

(Reference Stefanadis, C. I. (2006). Hellenic J Cardiol, 47, 52-53.)

Q3. Determine which type of research (descriptive, exploratory, explanatory, predictive) applies to the following short cases. Give reasons to your answers.

Answer: 1. exploratory research applies in the short cases (short cases mention in Question paper)

In the context of marketing research, every research problem is unique in its own way, but almost all research problems and objectives can be matched to one of three types of research designs—exploratory, descriptive, or causal. The researcher's choice of design depends on available information such as nature of the problem, scope of the problem, objectives, and known information. Exploratory research design is chosen to gain background information and to define the terms of the research problem. This is used to clarify research problems and hypotheses and to establish research priorities. A hypothesis is a statement based on limited evidence which can be proved or disproved and leads to further investigation. It helps organizations to formulate their problems clearly.

Exploratory research design is conducted for a research problem when the researcher has no past data or only a few studies for reference. Sometimes this research is informal and unstructured. It serves as a tool for initial research that provides a hypothetical or theoretical idea of the research problem. It will not offer concrete solutions for the research problem. This research is conducted in order to determine the nature of the problem and helps the

researcher to develop a better understanding of the problem. Exploratory research is flexible and provides the initial groundwork for future research. Exploratory research requires the researcher to investigate different sources such as published secondary data, data from other surveys, observation of research items, and opinions about a company, product, or service.

2. **Predictive analytics** and business intelligence can **help** forecast the customers who have the highest probability of buying your product.

Improve customer service by planning appropriately. Businesses can better predict demand using advanced analytics and business intelligence.

For example, consider a hotel chain that wants to predict how many customers will stay in a certain location this weekend so they can ensure they have enough staff and resources to handle demand.

How Does Predictive Analytics Work?

An accurate and effective predictive analytics takes some upfront work to set up. Done right, predictive analytics requires people who understand there is a business problem to be solved, data that needs to be prepped for analysis, models that need to be built and refined, and leadership to put the predictions into action for positive outcomes.

Diagram of factors that influence projects that use predictive analytics

Any successful predictive analytics project will involve these steps.

First, identify what you want to know based on past data. What questions do you want to answer? What are some of the important business decisions you'll make with the insight? Knowing this is a crucial first step to applying predictive analysis.

Next, consider if you have the data to answer those questions. Is your operational system capturing the needed data? How clean is it? How far in the past do you have this data, and is that enough to learn any predictive patterns?

Train the system to learn from your data and can predict outcomes. When building your predictive analytics model, you'll have to start by training the system to learn from data. For example, your model might look at historical data like click action. By establishing the right controls and algorithms, you can train your system to look at how many people that clicked on a certain link bought a particular product and correlate that data into predictions about future customer actions.

Your predictive analytics model should eventually be able to identify patterns and/or trends about your customers and their behaviors. You could also run one or more algorithms and pick the one that works best for your data, or you could opt to pick an ensemble of these algorithms.

Another key component is to regularly retrain the learning module. Trends and patterns will inevitably fluctuate based on the time of year, what activities your business has underway, and other factors. Set a timeline—maybe once a month or once a quarter—to regularly retrain your predictive analytics learning module to update the information.

Schedule your modules. Predictive analytics modules can work as often as you need. For example, if you get new customer data every Tuesday, you can automatically set the system to upload that data when it comes in.

Use the insights and predictions to act on these decisions. Predictive analytics is only useful if you use it. You'll need leadership champions to enable activities to make change a reality. These predictive insights can be embedded into your Line of Business applications for everyone in your organization to use.

Predictive analytics has its challenges but can lead to priceless business outcomes—including catching customers before they churn, optimizing business budget, and meeting customer demand. It's not magic, but it could be your company's crystal ball.

The End.....