Conducting education research

This chapter will present a detailed explanation of the methodology conducted to find the answers to the research questions and will also provide a rationale for using interviews and questionnaire as research tools in this study.

3. 2 Research Design

The research design for this study is a survey and it was carried out through the help of questionnaires and interviews. Surveys are important instruments in conducting research as they help the researcher gather participants' opinions. Interviews and questionnaires are key devices used in a survey. (Creswell, 2008)

Cohen and Manion (2007, p. 205) explain one of the main reason for using surveys: " Typically, surveys gather data at a particular point in time with the intention of describing the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events."

Morrison (1993) in Cohen and Manion (2007) illustrates the advantages of survey: they are economical, efficient, represent a large research population, generate numerical data, and capture data from various sources. In my study I had a large sample size; 300 students of both genders therefore I chose a survey because of the above explained advantages and its scope for taking a large research population into account.

Weisberg, et al. (1996) in Cohen and Manion (2007, p. 207) also observes that surveys are useful while dealing with a large scale sample: " Surveys are useful for gathering factual information, data on attitudes and

preferences, beliefs and predictions, behaviour and experiences both past and present."

3. 3 The research population

In order to measure the effectiveness of using video content as an instructional tool at the college of basic education it seemed significant to choose a large sample so that the opinions of a large group of students can be collected and analysed. The danger of selecting a small sample can be that it would only represent the views of a few and would not have the capacity of representing the views of a majority, and hence results may only reflect the view of a minority. " The quality of a piece of research stands or falls not only by the appropriateness of methodology and instrumentation but also by the suitability of the sampling strategy that has been adopted" (Cohen & Manion, 2007, p. 100).

The reason I chose the sample of students of different gender is that in the college where I did the study, there are separate campuses for men and women, and the study may also offer interesting observations as to how these male and female students view the importance of video and whether different results are obtained from male or female students.

Sapsford (1999) in Cohen & Manion (2007) argues, that when conducting a survey a researcher needs to make sure that the target population show representativeness. At the same time a researcher should think about the issues of how to access the population. In my study the students selected were doing their majors in a wide range of courses so that the data obtained is representative of students across the College. As Thompson (2000) in

Wong (2009, p. 38) states: " sample representativeness is more important than sample size". The students were doing their majors in subjects such as; Arabic Language, Art Education, Computer Science, Education Technology, English Education, Interior design, Islamic Education, Physical Education, Music Education, Social Studies, Mathematics, and Psychology. The wide range of subjects helped the researcher to understand the efficacy of using videos for educational purposes in a wide variety of courses and the views of students from various academic streams. Sample size is also determined to some extent by the style of the research. For example, a survey style usually requires a large sample. " Sample size might also be constrained by cost – in terms of time, money, stress, administrative support, the number of researchers, and resources" (Cohen & Manion, 2007, p. 102).

Accessibility issues i. e. how easy is it for a researcher to contact the participants of a research project is also something to be considered carefully. In my project, I know some of the teachers in the college where I did the data collection. These teachers were helpful and provided me with opportunity to visit the classes they were teaching and distribute my questionnaires. Without the teachers' support I would not be able to contact such a large group of students. The sample also included a group of teachers with whom I conducted semi-structured interviews. As I conducted this study in an educational institution, therefore besides students it is also important to see what teachers think about the usefulness of video content in the classes.

3. 4 Research tools

3. 4. 1 Questionnaires

As observed in the previous section, questionnaires are used as a research tool in this study. " The questionnaire is a widely used and useful instrument for collecting survey information, providing structured, often numerical data, being able to be administered without the presence of the researcher, and often being comparatively straightforward to analyse" (Wilson and McLean, 1994) cited in Cohen & Manion (2007, p. 317).

As my sample size was sizeable, therefore questionnaires appeared as the most suitable method for collecting data quickly, efficiently and economically. Interviewing such a large number of students would not have been possible. However, in the case of teachers interviews were conducted as the number was smaller.

Sellitz et al. (1976) in Cohen and Manion (2007, p. 320) outline a guide for constructing questionnaires that states that before developing a questionnaire a researcher has to think about the purpose of the questions, decisions about question wording, and about the sequence of questions. As the questionnaire was meant for the students who are not English speakers I decided to administer these questions in their native language e. g. Arabic and later translated their responses into English. " Although there is a large range of types of questionnaire, there is a simple rule of thumb; the larger the size of the sample, the more structured, closed and numerical the questionnaire may have to be, and the smaller the size of the sample, the less structured, more open and word-based the questionnaire may be". (Cohen & Manion, 2007, p. 320). As I had a large sample therefore I designed

statements with a Likert scale and also added tick the appropriate answer in the first section.

The questions were designed to get response to the following areas: how videos for educational purposes are used in the institution, how often students watch these videos, how comfortable they are with these videos, how stimulating and enjoyable they find them, whether they prefer them to lectures (Please see appendix 1 for the complete questionnaire). It is also necessary to note that Likert scale and tick box questions are suitable to be used with students as they do not have to give detailed responses and can easily complete the questionnaires.

" In general closed questions (dichotomous, multiple choice, constant sum, and rating scales) are quick to complete and straightforward to code (e. g. for computer analysis), and do not discriminate unduly on the basis of how articulate respondents are" (Wilson and McLean, 1994) cited in Cohen & Manion (2007, p. 321). However, at same time as making the questionnaire more comprehensive, respondents were also encouraged to add their comments in Part 1 of the questionnaire. Therefore, not all the questions are of the closed type.

" On the other hand, [closed questions] do not enable respondents to add any remarks, qualifications and explanations to the categories, and there is a risk that the categories might not be exhaustive and that there might be bias in them" (Oppenheim, 1992) cited in Cohen & Manion (2007, p. 321).

" Open questions enable participants to write a free account in their own terms, to explain and qualify their responses and avoid the limitations of pre-set categories of response" (Cohen & Manion, 2007, p. 321).

3. 4. 2 Piloting Questionnaire

" A pilot has several functions, principally to increase the reliability, validity and practicability of the questionnaire" (Wilson and McLean, 1994) cited in Cohen & Manion (2007, p. 341). It also helps in checking the reliability and to see whether the objectives of answering the research questions can be achieved or not. For a novice researcher like me who was doing such a project for the first time it was necessary to test the questionnaire and to get some confidence before starting to collect the data. The main goal of the questionnaire was to collect data which I needed to answer my research questions. It was the first time for the researcher to create a questionnaire. He built two types of questions which are open ended questions and Likert scale. The piloted version revealed a number of difficulties:

- Most of the students did not answer the open ended questions. They left them blank.
- They complained that the questionnaire was too long and they needed more time.
- The researcher noticed that the students prefer the Likert scale questions.
- The students did not understand some of the questions very clearly.
- On the other hand, some more useful points were noted from the pilot:
- Some answers were useful and unexpected.

- The questionnaire concluded that in general the students prefer using video content during the lesson because it makes the lesson more interesting, and clear.

- Respondents felt traditional ways of teaching were thought to be very boring and not efficient anymore.

3. 4. 3 What was changed after piloting

The researcher rewrote the questionnaire in two parts using Liker scale questions only but also giving an opportunity to add their comments.

The researcher changed the questions slightly by adding more questions about the content of educational videos.

3. 4. 4 Interviews

The second tool of collecting data was interviews. The researcher conducted interviews with teachers who were involved in teaching the students to whom the questionnaires were given. Interview is a very useful research tool that helps in obtaining an in depth analysis and also gives a detailed view of respondents' opinions. This opportunity is not usually provided in questionnaires and this is one of their main drawbacks. Questionnaires are often too brief, short and do not often provide the chance to the respondents to give detailed answers to the researcher's questions. Using interviews also added a mixed method approach to research which according to Lodico (2006) is helpful for researcher as it enables him or her to gain ' an in-depth view', though the mixed method approach is quite new, however many researchers follow this. Most qualitative research includes interviews. " The interview might be the major data collection tool of the study (particularly

when the behavior of interest cannot be easily observed) or may be used to corroborate or verify observations" (Lodico, 2006, p. 121).

An interview is basically a purposive conversation with a person or a group of persons. Cohen & Manion (2007, p. 349) state: " Interviews enable participants – be they interviewers or interviewees – to discuss their interpretations of the world in which they live, and to express how they regard situations from their own point of view. In these senses the interview is not simply concerned with collecting data about life: it is part of life itself, its human embeddedness is inescapable". The quote just cited explains the same argument taken by the researcher that interviews help in considering people's point of views, and for any study, it is extremely vital to do this because it affects data collection.

Tuckman (1972) quoted in Cohen & Manion (2007, p. 351) points out " By providing access to what is ' inside a person's head', it makes it possible to measure what a person knows (knowledge or information), what a person likes or dislikes (values and preferences), and what a person thinks (attitudes and beliefs)".

" Every word that people use in telling their stories is a microcosm of their consciousness" (Vygotsky, 1987) quoted in Siedman (2006, p. 7).

Interviewing, then, is a vital mode of inquiry. " Recounting narratives of experience has been the major way throughout recorded history that humans have made sense of their experience" (Siedman, 2006, p. 8). These narratives are key steps in understanding a participants' mind make up, and while narrating their experiences they may often come up with examples,

reflections, their preferences, etc which add more credibility to the data collected in the process.

Reason (1981) quoted in Siedman (2006, p. 8) argues, that the " best stories are those which stir people's minds, hearts, and souls and by so doing give them new insights into themselves, their problems and their human condition. The challenge is to develop a human science".

Questionnaires also do not exhibit the spontaneity which can be seen in an interview when the researcher is in a one-to-one discussion. Interviews further help in understanding the complexity of the situation and researcher is in position for pressing for important answers he or she is looking for.

Cohen & Manion (2007) argue, that interviews hold many aspects of everyday life which makes them an interesting data collection exercise and note that in a survey an interview can be the one of the most effective tools along with a questionnaire. This is the reason why the researcher chose interviews and questionnaire as a research tool. The researcher was aware of the fact that using interviews with such a large number of student participants would not be practicable and even if the number was small students are generally not comfortable with answering detailed interview questions as observed by Cohen & Manion(2007).

In Kuwait, it was felt that the students might also be reluctant in doing interviews with a researcher. However, with teachers, the researcher was hopeful in getting detailed one-to-one conversations and obtain answers. Therefore interviews were thought to be a key element in this study.

The interview type the researcher chose was a semi-structured interview that allows focusing on the main ideas and at the same time gives the scope of letting participants add something more or let the researcher ask anything that emerges as a result of the discussion which was not originally part of the list of questions to be asked.

Siedman (2006) favor the use of semi-structured interviews as they have much more flexibility and provide the scope for the researcher to add things he thinks are necessary. It is clear that in structured interviews the researcher only asks the pre-designed questions. However semi-structured interviews are better option in a study like this.

The next step is to tabulate questions for the interview. Cohen & Manion (2007, p. 356) suggest that this process is about " translating the research objectives into the questions that will help researcher outline questions and plan the interviews. This needs to be done in such a way that the questions adequately reflect what it is the researcher is trying to find out".

The questions the researcher asked during these interviews were about using videos in class and he sought examples from teachers how this was being done in their classes. There was also a particular emphasis on exploring the difficulties teachers experienced during the process, and whether they felt satisfied by this exercise, and to what extent they thought that using videos impact the motivation level of students in class, and whether they thought it important to use videos, and how their students generally responded to the phenomenon of using videos. Teachers were also asked about the state of facilities provided to them when they used videos,

and did they think these were appropriate enough. (Please see appendix 2 for the list of the questions). It is clearly shown that these questions were designed in order to obtain answers to the research questions.

3. 4. 5 Piloting interviews

On the similar pattern of piloting questionnaire, the researcher also piloted the interview. This piloting was done with a teacher who frequently used videos in his class. Siedman (2006, p. 39) notes the " unanticipated twists and turns of the interviewing process and the complexities of the interviewing relationship deserve exploration before the researchers plunge headlong into the thick of their projects". Siedman (2006) strongly suggests researchers to pilot the interview questions with participants in order to know whether their research strategy is appropriate for the study. The researcher will also come to grips with some of the practical aspects of establishing access, such as making contacts, and how to actually administer an interview. The pilot can also point towards the elements of the interview techniques that support the objectives of the study and to those that serve as a digression from the laid down objectives.

3. 5 Research Ethics

Ethics is an important aspect of any research that underlines the need to preserve the identity of the participants and maintain confidentiality. The participants were told about the nature and objectives of the study and were guaranteed complete confidentiality. For the purpose of interviews and questionnaires the consent of participants was obtained through ER2 form. They were also told that they can withdraw from the research before the final report is submitted.

3. 6 Conclusion

The process of data collection is significant for this study. This chapter has explained the tools, methodology, and the logic behind using these tools and strategies. The researcher particularly found the interviews quite interesting in getting answers to his research questions. Interviews were helpful in increasing the researcher's knowledge about the effectiveness of videos in classes. The data collected during this process is analysed in detail in the next chapter which is Data Analysis and Discussion.

3. 6 Conclusion