

Creative Methods in Qualitative Interviews with Higher Education Students: A Graph Sketching and Photo-Card Activity

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Accepted: 15 July 2021 | Published: 1 August 2021

Abstract: *In education research, qualitative research methods have gained attention because they allow the investigation of several people-related issues that cannot be investigated using quantitative methods. Though qualitative and quantitative research methods lies on separate continuum, they all aimed at identifying problems using different approach. This study explains the usefulness of using creative method qualitative approaches in an effort to obtain quality data for the study. The purpose of this paper is to introduce readers with some of the creative methods that can be applied, which is not only can actively engage informants during the research process but also to more fully aware of their perceptions, experiences, feelings and life events. Data were collected among 24 final year engineering student using semi-structured interview, integrated with two creative activities namely the use of graph sketching activity and photo-card activity. The purpose of these activities are to deepening the exploration activities and understandings of intrinsic and extrinsic motivation factors that influence the retention and success of engineering students at higher education institutions. Data were analysed using a thematic coding process and ATLAS.ti software was used to assist the coding process. Using the creative methods in this study have been proved to be an effective strategy to extract quality data from the interview process where an intrinsic and extrinsic motivations of the students can be explained and expanded in more detailed.*

Keywords: Qualitative research, creative method, semi-structured interviews, visual method, higher education students

1. Introduction

Novice researchers are often facing challenges in determining suitable research technique that are relevant to their research objectives. Therefore, introducing creative methods in data collection process will be valuable to any suitable research process. In this paper, several creative methods in qualitative studies will be discussed as techniques introduced in a research that explores students learning experience. The idea of conducting this research was to identify factors contributing to students' success and retention in engineering studies. According to Halcomb (2016), implementing any creative methods during data collection stage of research is powerful for learning from other people's experiences.

Although generally creative methods is widely and often being used by people working with children and young people (Robinson & Gillies, 2012), the use of creative methods is seen more common in research that conducted among adults in qualitative research (Brown, 2019;

Schubring, Mayer, & Thiel, 2019; Kara, 2015; Mannay, 2010; Bagnoli, 2009; Kearney & Hyle, 2004). This is because creative methods offer a special way to explore problems and have a potential to make the familiar strange (Mannay, 2010) and elicit more in-depth thought on the topics under discussion (Kara, 2015).

2. Literature Review

What is creative method?

Creative methods include a wide range of often visual or arts based methods (Mannay, 2016; McNiff, 2008; Cole & McIntyre, 2008; Eisner, 2008) for example drawing (Literat, 2013; Johnson & Weller, 2001), photography (Vigurs & Kara, 2017; Johnson & Weller, 2001; Sharples, Davison, Thomas, & Rudman, 2003; Schwartz, 1989) and the use of objects (Brown, 2019; Kuhn, 2008; Davey & Hill, 1999; Prosser, 1998). Despite often being represented as art-based methods, the term 'creative' has been used by Rainford (2020), and Kara (2015), who highlighted that there is also a scope for using creativity in traditional research such as interviews and focus group in qualitative research. Creative methods are known as a playful approach to data collection process which is often used in research with children and youngsters (Literat, 2013). According to Brown (2019), the use of creative methods on adults in qualitative studies has become a norm based on the context of their respective studies. This clearly proves that creative methods can be applied to any range of ages as an effective data collection technique.

Creative methods are often introduced because such an approach may enhance reflexivity in interview circumstances (Bagnoli, 2009), and the usage can also build barriers due to a lack of creative confidence among informants (Kearney & Hyle, 2004). According to Rauth, Koppen, Jobst, and Meinel (2010), creative confidence can be obtained when someone tries something they have never done and learn something new about themselves. Kelley and Kelley (2012), have identified four creative method barriers to adults during interview sessions which are fear of the unknown, fear of judgement, fear of the first step and fear of losing control. Therefore, it is important for researchers to be aware of such barriers when conducting research using creative methods which could potentially lead to a lack of creative confidence of the informants.

The purpose and rationale for using creative methods in qualitative research

Creative methods within interviews aim to collect clearly data and for deeper insights than questioning alone, which primarily help understand a specific problem from the viewpoint of the informant of the research. It is very important to understand why creative methods should be used. Firstly, creative methods within interviews may be a valuable research activity when the researcher wants a deeper and clearer discussion about the research context. The necessity for creative methods during this study was to stimulate discussion of each story that allowed the informant's reflection and deeper consideration than a question-answer format. Besides, creative methods also allow for discussion and deconstruction of the underpinning assumptions framing the 'typical' students they worked with (Rainford, 2020). 'Typical' students in this study refer to students that can endure until the final year and achieve excellent exam results. Based on their stories will be the findings of this study about how, who, and why they could be successful and can persist until the final year. Through playing activities, different ways of thinking can be opened up clearly (Gauntlett, 2007), and can help develop thinking about everyday concepts, people involved and recall all experiences that have been faced by the informant.

Secondly, the creative methods used are for building rapport and attracts informants rather than get bored with traditional structured interview questions. Creative activity can made the interview more enjoyable (Rainford, 2020), and can build a stronger and cohesive Researcher- Informant relationship (Mccusker & Gunaydin, 2014), for a clearer and more holistically investigation about research context. The enjoyment of the activity also can built level of rapport between the informant and reseacher on how creative the activity was done. So it can be concluded that the primary focus from this study was still the oral narratives surrounding intrinsic and extrinsic motivation context, therefore creative activities was done as a 'starting point for developing thoughts about personal experience' (Gauntlett & Holzwarth, 2006), about how those motivation can influence students' retention and study success.

3. Methods

In this research, the semi-structured interviews were conducted with 24 undergraduate engineering students with a CGPA of 3.60 and above at four technical universities in Malaysia for a further exploration on how they could endure until the final year and to achieve excellent exam results based on two key factors: intrinsic motivation and extrinsic motivation. Six (6) informants aged between 22 to 24 years old were selected respectively from University Tun Hussien Onn Malaysia (UTHM) located at Johor, University Technical Malaysia Melaka (UTeM) located at Melaka, University Malaysia Pahang (UMP) located at Pahang and lastly University Malasia Perlis (UniMAP) located at Perlis. They specialised in three main fields of engineering namely Civil Engineering, Mechanical Engineering and Electrical Engineering.

Each interview lasted between 00:52:04 and 01:48:10 hours. Additionally, within each interview, two creative activity were used to explore the past experiences and gain a broader and deeper perspective on students' retention and success throughout the first semester until final year. Other than using semi-structured interviews, graft sketching activity and photo card activity is the creative ways of collecting data in this study. This section describes in detail the entire process of the creative methods implemented during the data collection procedure.

Graph sketching activity

The first task used a sketching activity to gather information based on informants' achievements and relates their achievement (from first year to final year) with the students' experiences during learning process (Figure 1). In order to understand the students' learning 'stories', researchers need to be as close as possible with the informant to naturally digging out their success and perhaps failure stories. At certain point where the result shows decrement in their result, researcher will ask about the striving factors that have kept them ongoing and managed to strive back to achieve success. The information gained was not merely about students' success factor but in the case of failure situations, this strategy has been successfully implemented to understand what the students have been going through and how they managed to overcome the problem (which creates another successful stories). This activity has been innovated as a creative way of acquiring an in depth and quality data during the data collection process. According to Halcomb (2016), other than interviews, focus groups and observation which may be the most common methods of qualitative data techniques that have been applied, any innovative methods can be used as a strategy to enter into the informants' world.

Figure 1 shows the graph-sketching activity chart that been used during the data collection process in this study. The activity starts with researcher explaining about the activity procedure prior to the interview. Then, informants are required to sketch their cumulative grade point average (CGPA) results throughout the four-year study. By giving the informant sufficient time

to complete it, it can control a sense of fear and judgment about the interview process. Finally, informants are encouraged to explain any stories related to their results. This is the stage where active participation is expected from both parties, informant and interviewer. The positive part of this activities is it can eliminate the fear of the first step being interviewed and reduce the fear of the unknown of what to share about their journey. By using this graph sketching activity, several earlier issues discussed about the three barriers (fear of the unknown, fear of judgement, and fear of the first step) discussed by Kelley and Kelley (2012), has been minimised.

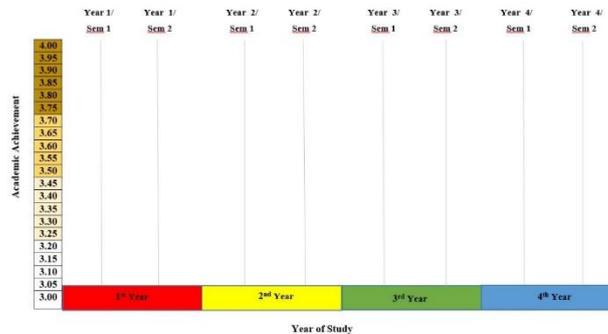


Figure 1: Graph-sketching sheet

This graph sketch activity was performed before the third question in the interview protocol was asked to the informant. By completing the graph-sketch sheet it would encourage and support informant engagement at initial level as well as increasing the informants' level of confidence and offering an outline of history from the beginning of the journey up to the end of study journey. Concept of flow are the most commonly used for increasing memory and conceptual development of someone's experiences (Crilly, Blackwell, & Clarkson, 2006). The sheet included years of study and exam results which purposely designed to explore the flow of the students' story in historic version and to help recall their past experiences easily. While informants doing the sketch session, researcher can get ready with the next questions. Using such a technique would also allow those informants who are not convenient with drawing to focus on the interview session.

As an output of the graph sketching activity, the researcher can visually assess the fluctuations plot of the informant exam results. Based on these graphs, researcher is also able to ask questions about the story of each semester in detailed. This activity also facilitates informants to reflect on what they have been going through throughout their studies. By using this activity, support and encouragement received form the external factors such as families, lecturers and friends was also revealed, especially during the story about their 'hard time'. The flow graphic formulation of the sketch will aid recall of existing memories and assist in further discussion (Prosser & Loxley, 2008). This activity is very helpful as an exposure technique whereby it enables informants to tell about the challenges their faces during study and strategies used to overcome it. The following figure (Figure 2) demonstrates one of the sketches made by the informant.

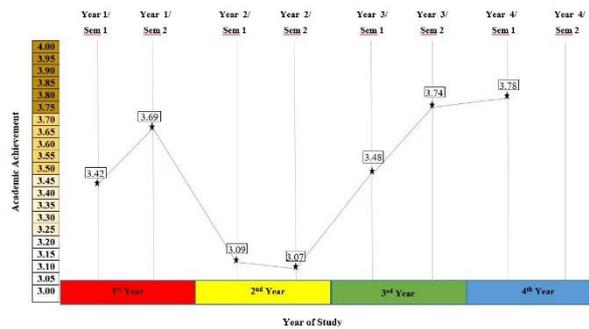


Figure 2: Graph sketched by informant.

Indirectly, this activity has managed to provide sufficient answers to the ‘real stories’ in context of this study particularly in the intrinsic and extrinsic motivation factors that influences them to survive and achieve good results. This provides a different format to the usual word-based interview, as priority is given to the story of the informants over questioning conducted by the researchers. In addition, the pace and rhythm of the interview is dictated by the thinking processes of the informants, how they making decisions of their own life, and clarifying their own deep thoughts rather than feeling the pressure to respond to a question quickly.

Photo-card activity

In order to elaborate the story about student’s retention and study success, this activity was designed in order to foster better understand of informant’s story on how they can persist until final year and be able to achieve excellent results. There is an urge to understand why some students in engineering can succeed while others do not. University used ‘retention and study success’ as a term that describes students who are successful in program of study in term of getting high CGPA which is one of the measures of student academic success and the ability to survive from the first year to the final year. When considering how to approach discussions in the interview setting, the using of creative method seemed a useful starting point (Morrison & Flegel, 2017).

This photo-card activity is based on informant-generated visual data which has been widely used as technique in qualitative inquiry (Prosser & Loxley, 2008). One of informant-generated visual data related in this study is photo-elicitation. Photo-elicitation is a method of interview in visual psychology research that uses visual image to elicit comments. The type of image used including photographs, cartoons, video, drawings, diagrams and artefacts (Harper, 2002). According to Bignante (2010), photo-elicitation does not aim to replace other forms of enquiry such as traditional interviews. On the contrary, it is a useful tool for both triangulating between different sources of information, and potentially bringing different insights into the research.

This activity was introduced to create an informal interaction between interviewer and informants, and, to allow for more in-depth exploration. According to Solomon and Grimley (2011), the technique of creative activity is rarely used in adult interviews but has been recognised as techniques used to facilitate the imagination of informants to explain more fully the feasibility of the ongoing research. Moreover, such activity using visual photography have also well documented as being used in qualitative interviews (Vigurs & Kara, 2017; Mannay, 2010). By engaging in this activity, informants were able to ‘recall’ their past memory and researcher gain clearer information about the informant experiences. Figure 3 shows the photo-card activity used in this study.



Figure 3: Photo-card activity

This study uses cartoon image as an intermediate medium for researchers when questioning. The use of unreal picture can be a useful way of reducing biases through likeness to real people (Rainford, 2020). Images can make informant to pay attention to things in new ways and they are likely to be memorable because images can be used to communicate more holistically, incorporating multiple layers, and evoking stories (Hammarberg, Kirkman, & Lacey, 2016). Using the photo as a tool is also to provide some degree of construct validity and reliability to explore informants' understanding of their own situation within their interviews (Prosser & Loxley, 2008). Unlike the traditional interviews that were perceived as 'less structured and rambling', the use of photos added a focus due to the informants' response to the image probes'. Other than that, building rapport also occurs because engaging in interesting activities reduce the level of formality in an interview.

In this study, the researcher deals with the use of smaller and interesting cards but with the same purpose through the addition of student-related activities. The photo-card activity in this study is divided into two sets of card groups namely emotion cards and external motivation factor cards set. Shepherd (2002), states that the subject matter of individual emotions has proven to be one of the most difficult to see and explore especially in terms of adult students. Therefore, the uses Newman's patents as an approach to help students express their emotions. Newman's patent has four panels each depicting an emotional face. Therefore, the implementation of this activity is in line with Shepherd's work of helping students express their emotions with the help of photo that describe emotions.

The second set of photo cards in this study represents extrinsic motivational factors based on factors in Student Success Model. Jamaludin, Ku Johari, and Amat (2018), study based on Adlerian theory or better known as individual therapy created by Alferd Adler states that through student play activities can express ideas, thoughts, emotions and behaviors. As such, it was seen that informants were able to delve deeper into the factors influencing their success and retention, especially in the context of engineering students based on emotional expression.

This photo-card activity is played after all the interview questions have been asked to the informant. Each informant was provided with 19 external motivation factor cards namely peers, family, lecturers, engineering professions, industrial training, industrial visit, programs and activities, real situations, course requirements and ten pieces of blank card as an additional factor to represent the informant's perspective. Then researcher questioned the informant using 10 emotion card set namely happy, dreams, excitement, hope, satisfaction, interest, sadness, stress, anger, confusion and fatigue. Figure 4 shows the activity in progress.



Figure 4: Performing photo card activity

This process of photo-card activity is conducted by asking the informant to select several cards that represent a variety of extrinsic motivational factors and responding to the emotion card that the researcher has proposed to question informants. The informant then explained in detail the suggested external motivation factor cards in order to reflect emotion card that were asked and related them to their success and retention until the final year. For example, researcher shows an 'excited' emotion photo card, then the informant is asked to suggest external motivation card that feels appropriate for the emotion. This activity is also in line with Weber (2008), who argues that there are two good reasons for using photographs in qualitative research, which is by using the power of images to 'jog memories' and 'provoke emotional and intellectual responses'. It is proven that using photos enables the researcher to get a comprehensive story in order to be a solid answer to a study. This task was anticipated to provide insights into how informants conceptualized their retention and study success through consideration of the reasoning of their chosen card.

When considering the creative method barriers identified by Kelley and Kelley (2012), researcher has been able to control those barriers by explaining clearly about the activity before started and providing a photo-card that requires informant only to select the related card to answer the researcher's question. That is way it can eliminate the fear of the first step and reduce the fear of the unknown. By giving the informant a blank card to represent personal perspective of the informant, it allows for a more spontaneous response and can control a sense of judgment.

4. Data Collection Process

All data collection were collected by the main author herself. Ethical considerations were observed and full consent was obtained from the Universities, the faculties and the informants themselves before data were collected. Each participant was given the consent form which must be read, understood and signed before interview sessions were conducted. Prior to the recording, the researcher sought permission from the participants and explained the purpose of the recording, which was to aid the transcription of the conversation for analysis.

The researcher first had established good rapport and built positive relationship with the informants before conducting interview sessions in order to obtain more meaningful data based on their experiences. The interview sessions were carried out in either English or Malay, depending on the informants' language proficiency and preferences. Apart from being questioned based on interview questions, informants were involved in two (2) creative activities namely graph sketching activity performed before the third question in the interview session was asked to the informant and photo-card activity played after all interview questions

were asked to the informants. Lastly, transcription of these interview session were analyzed as a source of data. The interview was recorded via a standard audio recorder, the interviewer transcribed it verbatim and were analyzed using thematic coding approach and Atlas.ti software was used to assist the coding process.

5. Result and findings

After the interview transcription, thematic analysis was undertaken to identify common themes using the ATLAS.ti. By using semi structured interview and creative methods, there are seven (7) themes that have emerged from this study. Four themes for intrinsic motivation, namely desire, inventive resourcefulness, initiative and persistence. For extrinsic motivation, the findings found three themes, namely human, study programs and incentives.

6. Discussion

The overall use of graph sketching activity greatly benefits to build a Researcher-Informant relationship and enables researchers to access information, stories and identify factors influencing informants based on their sharing. Through the graphs they have also been able to explain in detail the problems experienced during the study which are seen from the standpoint of increasing or decreasing examination results. This also proves that each semester's exam results have a story behind it. Therefore, by using this method the researcher is able to discover and gain a clear picture of the student experience involving internal and external factors that influence them.

Besides, use of photo-card activity proven that using photos enables the researcher to get a comprehensive story about the topic of interest in the study. Each photo-card is subjective to each of the different informants and each provides an answer that relates to the experience they have had throughout their studies. In addition, these activities are conducted also to help achieve data saturation. Fusch (2015), stated that interview activity is a practical method introduced in the current study to provide evidence of data saturation that is seen as important for qualitative research. This clearly shows that these methods have successfully discovered new factors under extrinsic motivation factors namely community, facilities and environment, loans, scholarships and rewards that explain in more detail using of blank card provided to give informants the opportunity to provide personal answers based on their experiences. Moreover, it also makes it easier for informants to express their emotions and storylines in more detailed.

7. Conclusion

This study demonstrated many of the positive effects using of creative method, and manage to control barriers of creative confidence mentioned by Kelley and Kelley (2012). Furthermore, the introduction of graph sketching and photo-card activity also help to create 'less stress' and more enjoyable interview sessions. The creative method used in this research have evidently proved to be useful approach to get a more in-depth and quality data even though the exploration involves difficult topics since it allows ample space for informant to rethink and reconstitute their thoughts. Using this creative method has also been proven as a recommended strategy to facilitate informant engagement during the interview processes.

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