PHOTO-ELICITATION: WHAT IS IT AND **HOW DOES IT WORK?**

Dr Paul Perkins

High Performance Coach Development Advisor Australian Institute of Sport Associate Professor University of Canberra Research Institute for Sport and Exercise



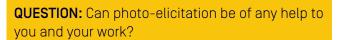
A brief overview

Photo elicitation is a **qualitative research** technique that uses visual stimuli (e.g., videos, photos, paintings, and drawings) within interview settings in an attempt to obtain more meaningful accounts of personal experiences by connecting people's emotions to their memories. 1-3 The approach presents new and interesting ways of exploring previously understood topics across the coach learning discipline and offers immense promise to researchers.

Terminology

Perhaps due to the recent widespread use and availability of visual technology and imagery, multiple terms have been used to describe the technique including:

- > Photo-elicitation^{1,2}
- > Reflexive photography³
- > Photo interviews4
- > Photo interviewing⁵
- > Hermeneutic photography⁶
- > Visual ethnography.⁷



Practical applications and considerations

Whilst the diversity in terminology could serve as a testament to the technique's broad appeal, the approaches used in the above studies to generate, analyse and interpret text-based material¹⁻⁷ were all very similar in so much as they provided researchers with a "phenomenological sense" of what the photos meant to the participants and used visual props during interviews to elicit rich accounts of the topics under



Photo by Jean Gerber and available for free on Unsplash.

investigation. Nevertheless, it should be noted that a key aspect of the process involves the polysemic nature of images (i.e., they can have multiple meanings) and the need for them to be seen as uncoded messages that require careful consideration and deciphering in order to understand how individuals make sense of the immensely complicated worlds thev inhabit.4-7

The above has been termed "double hermeneutics" and, similar to other forms of interviewing, it involves researchers attempting to understand participants who are trying to make sense of their personal experiences, and acknowledges that the researcher's interpretations are necessary in order to understand the phenomena being studied.^{8,9} Photo-elicitation, however, does not aim to replace other forms of inquiry such as yarning and interviewing. Instead, it represents a useful tool to triangulate different information sources and has the potential to establish deeper dialogues through which complementary and concurrent understandings of the social, physical and cultural milieu of the actors can be developed and explored. 1-5



Paul Perkins is an associate Professor at the University of Canberra and a member of the Australian Institute of Sport High Performance Coach Development Team. He is a dedicated, passionate and experienced coach, educator and researcher with an extensive background in the Australian sport sector and a passion for helping others and seeing people succeed. Paul is skilled at, and highly experienced in developing, implementing, monitoring and evaluating multi-layered sport-based development initiatives and has a thorough understanding of deductive, inductive and abductive reasoning and how these different processes can be used to draw conclusions, make predictions, and/or construct explanations. Whilst Paul's research has been multidisciplinary and positioned within the broader societal context, he is currently exploring the benefits of more social and collaborative approached to coach learning and is interested in contributing to long-term positive outcomes through the use of Australian First Nations methodologies.









Photo by Charu Chaturvedi and available for free on Unsplash.

For me, this image is a timely reminder that "it is an illusion that photos are made with the camera... they are made with the eye, heart, and head" - Henri Cartier Bresson.

Benefits of photo-elicitation

Although the use of photos and other visual stimuli in interview settings has raised concerns around issues such as sampling [e.g., saturation], privacy and validity¹⁰⁻¹², the technique also offers many advantages, including:

- > It can be used at any stage of a research project and produce unexpected pieces of information that can expand interview and/or research questions to new areas of interest.5-7
- > It can help trigger memories (including emotions and feelings) in ways that standardised questions may not.714
- > It helps prevent misinterpretations and can create new explanations. 13,14
- > It promotes longer and more detailed interviews in comparison with purely verbal approaches.713
- > It improves rigour, precision and systematicity by creating a component of multi-methods triangulation.4-7
- > It combines visual and verbal language. 13,14
- > It can help address some of the criticisms levelled at more traditional qualitative methods.7,14



Photo by Christina @ wocintechchat.com and available for free on Unsplash.

This image is meant to show how photo-elicitation can enhance other participatory research methods by offering an alternative to conventional interviewing.

Question: What other benefits could the approach offer you and your work?

Challenges and concerns

One of the challenges of employing a technique such as photoelicitation is the risk of power imbalances and the tendency for participants to simply comply with the researcher's agenda and demands. 15 The following attempts to address this concern and provides a list of suggestions aimed at "empowering and emancipating participants" 16, p:850 before, during and after interviews.

- > Develop mutual trust and rapport with participants before undertaking any interviews.13-15
- > Use a relaxed, interactive and conversational approach when interviewing and encourage participants (when possible and appropriate) to lead the direction of the discussions. 13-16
- > Ask participants to create and share photo diaries of their experiences (e.g., PowerPoint Presentations and electronic journals].14-17
- > Develop a model of collaboration, underpinned by a constructivist epistemological belief that researcher and participants would be working together to generate new knowledge.15-17
- > Strive to keep in touch with participants after interviews. 13-16



Photo by Hannah Busing and available for free on Unsplash.

This image is a little reminder that "no one cares how much you know until they know how much you care" - President Theodore Roosevelt.









Question: What else could be done to empower participants?

Ethical considerations

All forms of research have an element of risk. 18-20 Consideration should therefore be given to the following questions prior to undertaking any investigation and/or evaluation of a program that includes the direct involvement of participants.

- > What consent is required and how will it be provided? An example of how this could be done is provided in appendix
- > How will participants be informed of the risks? Please refer to appendix 1 and 3
- > What will participants be required to do? Please refer to appendix 2 and 3
- > To what extent can participant confidentiality and/or anonymity be protected? Please refer to appendix 1 and 3
- > How will the data be stored? An example of how this could be done is provided in appendix 3

Even when the above questions have been answered and suitable protocols are in place, it is important to remember that no set of standards can anticipate every ethical dilemma and there may still be times when the evaluation process could potentially impede the rights of a participant. 18,19 To help address these concerns, many institutions and organisations have an Institutional Ethical Review Board - a panel that reviews research proposals with respect to ethical implications and decides whether additional action is required to ensure the safety and rights of participants have been adequately addressed. Review Boards also help to protect both the organisation and individual against potential legal implications caused by overlooking important ethical issues/rights. 18,19 In the present case, members of the AIS Coach Development Team have access to such a panel and approval needs to sought and granted prior undertaking any research activities. Additional information that would greatly assist with the development of suitable protocols and minimise the risk are provided in the links below.

- > National statement on ethical conduct in human research (2007) - updated-2018.
- > What are the ethical considerations in research design?

"Ethics is knowing the difference between what you have the right to do and what is right to do"

- Unknown

"Even the most rational approach to ethics is defenceless if there isn't the will to do what is right"

- Alexander Solzhenitsyn

Question: Are there any special ethical considerations that need to be taken into account when using photo-elicitation?

A positivistic approach to investigation: Is it suitable for this type of work?

Photo-elicitation, like other forms of qualitative investigation, is concerned with understanding a social phenomenon "through the eyes of the participants rather than the researcher"20. p:21 and therefore sits on the interpretative paradigm. The philosophical assumptions and theoretical positioning that underpin this type of work are vastly different to a positivistic approach, which relies heavily on experimentation and is generally thought of as quantitative research.^{21,22} These types of inquiries deal with things that are measurable and can be expressed in numbers, or figures, or other values that express quantity. 20-22 For example, an hypothesis concerning factors causing sustained program adherence could be proposed and put forward in question form. Empirical evidence from either direct observation and/or experience is then gathered and later analysed and formulated into a theory that attempts to explain the effect of the independent variable on the dependent variable. $^{20-22}$ If it could then be proved that **A** (training with friends) caused **B** (long-term program adherence), a theory would be formulated for wider applicability to illustrate the relation between A and B (i.e., A causes B or A leads to B). To evaluate such hypothesis, positivist researchers make use of quantitative data collected through true experiments, standardised tests and large or small scale surveys using closed ended questionnaires, which are generally created in line with the goals of the research and subjected to descriptive and/or inferential statistical analysis to make it easier to present the results in charts, graphs, and tables. 20-22



Photo by Isaac Smith and available for free on Unsplash.

I thought this photo was highly relevant as it reminds me of the famous quote attributed to Albert Einstein: "Not everything that can be counted counts and not everything that counts can be counted".







An interpretivist perceptive: Is this a more suitable option for photo-elicitation?

Interpretivists believe in socially constructed multiple realities, where truth and reality are created, and not discovered. It is therefore impossible to observe an external reality because it is always mediated by personal senses and influenced by worldviews, beliefs, backgrounds, concepts, etc.^{23,24} In the case a different well-argued interpretation about a phenomenon is presented. That interpretation is not chosen over others as the correct account, but instead the existence of multiple possibilities is accepted, with the understanding that different researchers bring different perspectives to the same issue.^{23,24} For example, if a person believes in multiple socially constructed realities, it makes sense that those realities would be approached from different perspectives by different people



Photo by Josh Couch and available for free on Unsplash.

I shared this photo to remind everyone that "when nothing is sure, everything is possible" - Margaret Drabble. I hope it resonates with you.

Key concepts from the interpretivist paradigm

Although heavy reading, the following provides a brief summary of the personal and theoretical belief systems that underpin interpretivist research and help shape our worldly views. These factors need to be considered before undertaking any type of research or inquiry.

Ontology

Is the nature of a person's beliefs about reality, how it exists and what can be known about it. It is the ontological question that leads a researcher to inquire what kind of reality exists: "A singular, verifiable reality and truth or socially constructed multiple realities". 23, p:134

Epistemology

Is the nature and process by which knowledge is acquired, validated and communicated to other human beings. Adhering to an ontological belief system (explicitly or implicitly) guides and influences epistemological assumptions. For example, if a singular verifiable truth is assumed, "then the posture of the knower must be one of objective detachment or value freedom in order to be able to discover how things really are and how things really work" Belief in socially constructed multiple realities, on the other hand leads researchers to reject the notion that people should be studied like objects of natural sciences and typically causes them to get involved with the subjects to try and understand a phenomenon in its natural setting. 24,25

Axiology

Involves defining concepts of right and wrong and aims to address the following key questions:

- > What is the nature of ethics and ethical behaviour in research?^{18,19,26}
- > What needs to be done to respect the rights of participants?^{18,19,26}
- > What cultural and moral issues need to be considered?^{18,19,26}
- > How will I address an issue if it arises?^{18,19,26}
- > How shall I secure the goodwill of participants? 18,19,26
- > How can I conduct the research in a socially respectful and peaceful manner?^{18,26}
- > How can I minimise the risk of harm?^{18,19,26}
- > What value will the research findings produce and how should they be reported?^{18,26}?



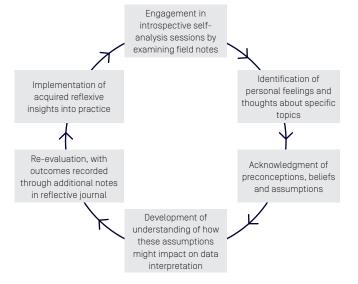
Reflexivity

Is the awareness of influence that a researcher has on the people or topic being studied and the ways in which the experience is affecting the researcher. 27-29 As can be seen in the Figure below, the process is usually pursued through repeated cycles of introspective self-analysis and offers an opportunity for researchers to consciously step away from the situation in order to theorise and make sense of what is happening by taking into account the effects of their evolving preconceptions, assumptions, attitudes and beliefs.

This is why a practice that enables researchers to become attentive to the above processes and any potential blind spots is required. Reflexivity offers that form of "epistemological surveillance"30, p.89 and provides researchers with a reliable and rigorous way to report socially constructed knowledge whilst also recognising the role power relations played in shaping the research process.31-33 Reflexivity "is [therefore] more than just reflection, which is what we get when we look in a mirror. Rather, it's like trying to look at yourself looking in the mirror".29

"It turns out that all the magic of cognition depends, just as life itself does, on cycles within cycles of recurrent, re-entrant, reflexive information-transformation processes"

- Professor Daniel Dennett.



Credibility

Refers to the level of confidence that can be placed in the truth of qualitative research findings.²⁷ My PhD thesis, for example, achieved credibility through use of the following strategies:

- > Prolonged engagement within the research setting.
- > Daily observations and interactions with program participants over an almost 5-year period.
- > Using different sources of data and methods for their collection (triangulation).
- > Adopting these approaches enabled me to identify and continuously refine areas of focus through the direct involvement of program participants.

Transferability

Is the degree to which qualitative research results can be transferred to other settings with other respondents.²⁷ Transferability was demonstrated in my PhD by providing detailed description of the research context over an almost 5-year period so that similarity to other environments could be assessed



This photo was taken in northern India where I was lucky enough to be part of an Australian sport-based development initiative that used a low-risk, modified form of boxing (ModBox) as a vehicle to achieve broader social outcomes (e.g., positive youth development and gender equality).







Question: What do you see when you look at this image and what does it mean to you?

Dependability

Is concerned with the consistency and repeatability of qualitative research findings.²⁷ Steps taken to ensure the findings presented in my PhD were dependable included:

- > Participation in internal and external audits so that participants involved with the study and researchers outside of the project team could examine the data collection, generation and analysis processes and provide their own interpretations and recommendations.
- > Use of peer-reviewed publications to provide detailed description of the research methods underpinning the findings.

Confirmability

Deals with the degree to which findings of a qualitative study could be confirmed by other researchers and includes the aspect of consistency.²⁷ Confirmability of the evidence presented in my thesis was achieved through the publication of findings in a series of peer-reviewed publications. This approach helped to demonstrate how the reported conclusions were not based on personal viewpoints but were interpreted from the data, thereby providing the research with an additional level of transparency.



This was taken shortly after my PhD thesis was submitted for examination. The other person in the photo is my former supervisor - the amazing Professor Allan Hahn.

Allan was, and still is a dedicated mentor, confidant and great friend of mine and I have no doubt that the completion of my PhD was only possible because of his unwavering support, gentle guidance and constant belief.

Question: Is this an example of photo-elicitation and how would you gather additional information to better understand the story?

Things to consider from the positivistic paradigm

The following summarises some of the key concepts of the positivistic research paradigm, which is based on the philosophy that a single, objectifiable reality exists independent of human perception.²⁰⁻²² The ontological positioning that underpins this type of research is therefore in stark contrast to an interpretivist perspective, since it is assumed that all phenomena can be reduced to empirical indicators and the explanation of any phenomenon can be reached through hypothesis testing.^{20,21}

Internal validity

A study is considered to have internal validity if the evidence proves it was the independent variable (and not other variables) that had an effect on the dependent variable.21

External validity

If the results of a study are generalisable, it is considered to have external validity.21

Reliability

If different researchers conduct the study in different places at different times and arrive at the same results, those results have reliability.21

Objectivity

If a study is not influenced of a researcher's personal biases, it is considered to be objective.21



I thought this image was appropriate as it helps to demonstrate that in order "to change ourselves effectively, we have to first change our perceptions" - Professor Stephen Covey.







A few more things to consider

Below, are a few more things that may need to be considered before undertaking a research and/or evaluation project. It highlights the underlying reasons why certain approaches are used and summarises the technical procedures that can make the process effective, manageable and smooth. 20-23

Methodology

Refers to the plan and critical analysis of data production techniques. It is the "strategy, plan of action, process and design that informs the choice of research methods"23, p:3 and guides the researcher in deciding what type of data are required for a study and what data collection tools will be most appropriate for the purpose of the work. It is the methodological question that leads the researcher to ask how the world should be studied.²⁰⁻²²

Methods

Are the specific means used for the collection/generation and analysis of data, (e.g., field notes, observations, survey responses, interviews, yarns, casual discussions, etc). 20,22 It should be noted that while the methods used in a study depends on the design of a project and the theoretical mindset of the researcher, the use of a particular method does not entail ontological and epistemological assumptions. 21,24

Bias

Is a term drawn from the positivistic paradigm and is therefore incompatible with the philosophical underpinnings of interpretivist inquiries. A qualitative researcher's perspective, for example, will be fully embedded within the research process rather than detached from it, due to the subjective nature of the work.34-36

"Research is seeing what everybody else has seen and thinking what nobody else has thought"

- Albert Szent-Györgyi
- "Research is formalised curiosity. It is poking and prying with a purpose"
- Zora Neale Hurston
- "Somewhere, something incredible is waiting to be known"
- Professor Carl Sagan
- "The best research you can do is talk to people"
- Sir Terry Pratchett

Something to remember: Interviewing is a method. Photo-elicitation is a technique 7,14,37

Aligning approaches, beliefs and strategies

The following is based on the work of Bates et al. 37 and aims to highlight how the configuration of an interview needs to correspond with the researcher's analytic strategy, epistemological beliefs and questions²¹⁻²³ because it is not the photographs and images that are analysed. Rather, it is the associated narratives and unstructured text-based datasets from the interviews that are subsequently examined and explored.2,7

- > Approach 1. Participant-driven unstructured interviews: Participants choose and utilise photos, video footage or other types of images that they believe are relevant to the phenomenon and/or topic.37
- > Approach 2. Participant-driven semi-structured interviews: Researchers inform participants of the interview questions in advance and the participants select and align relevant images to them.37
- > Approach 3. Researcher-driven: Researchers select the visual images and use these during interviews to promote discussions.37



Photo by Christina @ wocintechchat.com and available for free on Unsplash.

This photo is intended to highlight that regardless of the approach, the aim is to have relaxed, meaningful and highly interactive yarns.







Question: Which approach appeals to you the most?

Suggestions to help with interviews

The following outlines a number of general strategies designed to assist with the generation of high-quality data, based on the premise that the researcher has a good understanding of the subject under investigation and good rapport with participants.

Build rapport with participants

Building rapport with participants before undertaking interviews not only increases the possibility of important information being captured, but can also assist with the development of stronger relationships by creating a sense of joint endeavour that favours the willingness of both parties to candidly express their thoughts and share ideas.38-40

Work with a wide range of participants

In line with the above and to ensure that diverse perspectives are obtained, researchers should try to hold discussions with a variety of people. Consideration should also be given to the inclusion of people who would have an ability to provide detailed responses and give rich and varied accounts of their experiences.38-40



As you can probably tell from the photo, I was incredibly proud to be a part of a program that served as a vehicle for reaching young people from some of the most disadvantages sectors of the Indian community and aimed to support their personal growth and development.

Question: What do you see when you look at this photo and how would you share that story?

Use a relaxed, engaging and conversational approach

Highly effective interviewers tend to talk less, listen more and use a lot of open-ended guestions when seeking to understand the perspective, views and/or beliefs of other people. 39,40 Researchers should therefore always try to utilise the rapport and relationships they have developed with participants to ensure that a relaxed and informal approach is used to help guide, steer and encourage the conversations.38

Utilise prompts and probes

When sharing personal stories, most people tend to offer only summarised versions of the events they have experienced. 39,40 Experienced interviewers, however, follow up on these accounts by asking additional questions aimed at eliciting further detail. The following outlines suggestions for ways in which this can done and provides examples of how initial responses can be further investigated by use of a funnelling technique outlined by Smith & Osborn.41

- > **Example 1:** You mentioned before that...Can you tell me a bit more about how that happened?
- > **Example 2:** That's really interesting...Can you walk me through what happened next?
- > **Example 3:** You said early that...Can you tell me how that felt?
- > **Example 4:** You talked about...Can you help me understand that a bit more?

Discussions should begin with either an open-ended question or a brief statement about an observation. For example, "Congratulations. I thought you did very well tonight?"

A funnelling technique outlined by Smith & Osborn⁴¹ is used next to further investigate initial responses. For instance, if the initial response to the above question was: "Thanks very much, it was a really great session", an open-ended probe would be used next to draw out the meaning of the reply. For example, "That nice to hear. Was there anything in particular you liked about the session?" In the present example, the participant might answer, "I really liked the game stuff. They were a lot of fun to do and I found I actually learnt more".

An open-ended prompt would be used at this stage to further explore the previous response - "Really, in which

By this stage of the process a richer description of the original answer can usually be provided by participants, as can be seen from the following example: "For me, it was the right combination of trying to do something yourself and having a bit of guidance. After a while I sort of became less dependent on you for the answers and learn more from the other guys and from simply doing the drills".







Tips for undertaking photo-elicitation interviews

The strategies summarised below build upon the previous information and demonstrate how the use of visual stimuli during interviews can help bridge the gap between psychological and physical realities.7,14

Participant-driven unstructured interviews

Because participants get to choose the images in these settings, it is the photos that shape the structure of the interviews and determine what is discussed. Researchers therefore play more of a guiding and supportive role and generally use open-ended questions (such as those listed below) to help start conversations in natural, non-directive and free-flowing ways.37,42

- > Can you please tell me why you chose these photos?
- > How have these photos have captured your experience?
- > Why is (using something in a photo as a prompt) important to you?
- > Is there anything else you would like to discuss about your experience which is not depicted here?

Participant-driven semi-structured interviews

Responses are generally less spontaneous in these situations than what occurs during participant-driven unstructured interviews, since participants already know the questions they will be asked.³⁷ Open-ended probes and prompts can therefore be useful and effective in these types of sessions, as they provide an opportunity for participants to reflect on original responses and give more detailed accounts.8,41

Researcher-driven interviews

Researchers have much more control when using this format and use specially selected images to promote discussions and elicit key points.³⁷ This can be done by either presenting one photo at a time and asking pertinent questions, or by displaying the images all at once and assigning key questions to each one. 42 Although this approach may not necessarily be as empowering as the other two techniques, it is still likely to generate rich and interesting data.37

"If a picture is good, it tells many different stories"

- Josef Koudelka

"We are making photographs to understand what our lives mean to us"

- Ralph Hattersley

"Every artist has a central story to tell, and the difficulty, the impossible task, is trying to present that story in pictures"

- Gregory Crewdson

Analysing the data

Whilst there are different ways of analysing unstructured text-based material, thematic content analysis is probably the most widely used approach. 43,44 This method aims to find common patterns across datasets by searching and arranging observation notes, interview transcripts and any other material that might help to increase the understanding of a phenomenon.⁴³ The process typically involves categorising textbased datasets into logical and meaningful themes by reducing the amount of raw information, identifying the significant patterns within the text and building a chain of evidence through the use of inductive (findings emerge from the themes inherent in the data) or deductive (themes are developed from existing concepts and ideas) analytical methods. 43,44

Approaches to categorising/coding unstructured text-based data

Categorising (also known as coding) data is often considered the most important stage of an qualitative analysis process. 43,44 Traditionally, done with coloured pens, scissors, paper and sticky notes, the task involves identifying the key themes or topics of a study and the subsequent categorisation of that information based on their overall significance to the research question. 43-45 In more recent times and due to technological advancements, it is now possible to use specifically designed computer-assisted analysis software when coding this type of qualitative data. 43-45 The use of such software, however, merely replaces the manual tasks of marking, cutting, and sorting and, ultimately, it is the researcher who still has to interpret and give meaning to the data.44,45



Photo by Brands&People and available for free on Unsplash.

I shared this photo because it reminds me of what the early stages of a manual thematic analysis can look like.







Question: How do you presently capture, interpret and report non-numeric, conceptual information?

An example of coding in action

The information below helps to demonstrate how the words, extracts and comments recorded from interviews can be interpreted, coded and reported through the use of a six-step manual analytical process consistent with the suggestions outlined by Braun & Clarke. 44 Team members may also need to consider these points if/when attempting to undertake their own analysis.

Steps		Purpose	Potential approach
1	Become familiar with the data	Getting a sense of participants' experiences.	Rigorously explore data (e.g., survey responses, reflective journals and interview transcripts) one at a time and make notes to log early impressions.
2	Generate initial codes	Start organising the data in a meaningful and systematic way.	Undertake a systematic search of the text-based material and organise the data into small "chunks" of information by highlighting any passage or word that seems relevant to the research question.
3	Search for themes	Create initial themes by capturing patterns in the text that are specific to the research question.	Group the related codes together based on their overall significance to the research question and theoretical similarities.
4	Review themes	Review, modify and develop the preliminary themes into meaningful and authentic units.	This process usually involves combining some of the existing themes and eliminating any that do not appear to fit in with the emerging structure. The aim here is to ensure that the themes accurately reflect what was evident in the data and that when connected provide a richer account of the overall experience.
5	Define themes	Define the essence of each theme.	Consideration needs to be given to the naming of each theme during this stage of analysis so that an immediate indication of a particular theme's essence could be clearly conveyed to the reader.
6	Write it up	Report the findings in appropriate ways.	Words, extracts and comments from the original text need to be chosen to help illustrate and exemplify elements of each theme.

Step 1: Become familiar with the data

The aim during this early phase of analysis is to get a sense of the participants' experiences by reading and re-reading the generated text. 43,44

Step 2: Generate initial codes

During the second phase of analysis, attention shifts to the organisation of data. This is done by highlighting and logging any passage or word that might seem relevant to the research question, along with any early impressions^{43,44} onto a blank word document, as can be seen in the example below.

Kim said she really enjoys the game-based drills and activities at Tuesday's sessions because they are a great way to get fit and a lot of fun to do. Kim also likes the friendly and welcoming nature of the program.

Steve said he likes Tuesday's sessions a lot because of the game-based activities. However, Steve also said that he really enjoys Thursday's strength and conditioning sessions because he finds them challenging and beneficial.

The important thing here is to choose a name for each code that captures the essence of the text so that when additional wording with the same meaning is encountered it can be added to the same category. For instance, depending on the research question, both of the sentences presented above could be coded as "training sessions". In that case each sentence, along with any initial thoughts would be logged and recorded as a single code, as can be seen in the Table below.

CODE: TRAINING SESSIONS

Journal entries

Kim said she really enjoys the game-based drills and activities at Tuesday's sessions because they are a great way to get fit and a lot of fun to do. Kim also likes the friendly and welcoming nature of the program.

Steve said he likes Tuesday's sessions a lot because of the game-based activities. However, Steve also said that he really enjoys Thursday's strength and conditioning sessions because he finds them challenging and beneficial.

Initial thoughts

- > Both athletes like Tuesday's training sessions.
- > The game-based drills and activities are popular.
- > Thursday's strength and conditioning sessions are enjoyable because they are challenging and beneficial.
- > A friendly and welcoming environment appears to be important.

Step 2: Continued

If the research question was more specific, however, (e.g., what factors have influenced sustained participation in a communitybased sport program?), it is likely that different codes would be developed. For example, "game-based drills and activities" and "strength and conditioning" could be coded as "different types of training" and "enjoys, fun, challenging and beneficial" as "potential motivational factors". In this case, two separate but potentially overlapping codes would be created and subsequently scrutinised, as can be seen below.

CODE: DIFFERENT TYPES OF TRAINING

CODE: POTENTIAL MOTIVATIONAL FACTORS

Initial thoughts and impressions

- > Tuesday's game-based drills and activities sessions are popular.
- > Athletes appear to gain enjoyment from having fun and being challenged.
- > Conducting separate training sessions for the development of skills and physical qualities provides athletes with more choices and options.
- > Having fun and being challenged at training is important.
- > There is a perception that the training is beneficial.
- > A sense of enjoyment is associated with different types of training.
- > A flexible approach to program delivery appears to be important.
- > A friendly and welcoming environment appears to be influential.

Journal entries

Kim said she really enjoys the game-based drills and activities at Tuesday's sessions because they are a great way to get fit and a lot of fun to do.

Kim also likes the friendly and welcoming nature of the program.

Steve said he likes Tuesday's sessions a lot because of the game-based activities.

However, **Steve** also said that he really enjoys Thursday's strength and conditioning sessions because he finds them challenging and beneficial.









Step 3: Search for themes

Often performed inadvertently and in conjunction with Step 2, the aim during the third phase is to group the related codes together based on their theoretical similarities and overall significance to the research question. 43,44 For example, the above codes could be subsequently organised into an initial theme titled: "Providing options" because they both appear to be of relevance to the overarching research question.

Initial Theme: Providing options

CODE: DIFFERENT TYPES OF TRAINING

CODE: POTENTIAL MOTIVATIONAL FACTORS

Initial thoughts and impressions

- > Tuesday's game-based drills and activities sessions are
- > Athletes appear to gain enjoyment from having fun and being challenged.
- > Conducting separate training sessions for the development of skills and physical qualities provides athletes with more choices and options.
- > Having fun and being challenged at training is important.
- > There is a perception that the training is beneficial.
- > A sense of enjoyment is associated with different types of training.
- > A flexible approach to program delivery appears to be important.
- > A friendly and welcoming environment appears to be influential.

Journal entries

Kim said she really enjoys the game-based drills and activities at Tuesday's sessions because they are a great way to get fit and a lot of fun to do.

Kim also likes the friendly and welcoming nature of the program.

Steve said he likes Tuesday's sessions a lot because of the game-based activities.

However, **Steve** also said that he really enjoys Thursday's strength and conditioning sessions because he finds them challenging and beneficial.

Step 4: Review themes

By this stage of the analysis, the aim is to further develop the preliminary themes into meaningful and authentic units. This process usually involves combining some of the existing themes and eliminating any that do not appear to fit in with the emerging structure. 43,44 For instance, any codes that are considered unnecessary or turn out to be more of a standalone factor contributing to the development of an outcome would be repositioned and subsequently reused as a subtheme to support the findings and to ensure that the data are presented in the most meaningful, logical and accurate way.



Photo by Firmbee and available for free on Unsplash.

This photo is intended to highlight the dynamic, intuitive and creative nature of qualitative research which has been beautifully summarised below by the late, great **Professor** James Spradley.

"I want to understand the world from your point of view. I want to know what you know in the way you know it. I want to understand the meaning of your experience, to walk in your shoes, to feel things as you feel them, to explain things as you explain them. Will you become my teacher and help me understand?"







Question: To what extent does the above resonate with you and can the underlying philosophy enhance your current practices?

Step 5: Define themes

In this phase consideration should be given to the naming of each major/overarching theme so that an immediate indication of its essence can be clearly conveyed to the reader. 43,44 An example of three possible themes that could arise from an analysis of the above data is presented below.

Example of possible major/overarching themes

The training	The experience	The structure
Sub-themes	Sub-themes	Sub-themes
> Physically demanding	> Challenging	> Accommodating
> Purposeful	> Fun	> Flexible
> Beneficial	> Rewarding and enjoyable	> Friendly and welcoming

CODE: DIFFERENT TYPES OF TRAINING

CODE: POTENTIAL MOTIVATIONAL FACTORS

Initial thoughts and impressions

- > Tuesday's game-based drills and activities sessions are popular.
- > Athletes appear to gain enjoyment from having fun and being challenged.
- > Conducting separate training sessions for the development of skills and physical qualities provides athletes with more choices and options.
- > Having fun and being challenged at training is important.
- > There is a perception that the training is beneficial.
- > A sense of enjoyment is associated with different types of training.
- > A flexible approach to program delivery appears to be
- > A friendly and welcoming environment appears to be influential.

Journal entries

Kim said she really enjoys the game-based drills and activities at Tuesday's sessions because they are a great way to get fit and a lot of fun to do.

Kim also likes the friendly and welcoming nature of the program.

Steve said he likes Tuesday's sessions a lot because of the game-based activities.

However, **Steve** also said that he really enjoys Thursday's strength and conditioning sessions because he finds them challenging and beneficial.







Step 6: Write up

Here it is important that certain words, extracts and comments from the interviews are included in any reports as this helps to illustrate and exemplify the different elements of each theme. 43,44 The following aims to help with this task and provides a number of suggestions aimed at assisting with the effective use of quoted material.

Formatting considerations

As a general rule quotations of fewer than 40 words are presented in quotation marks directly within the text. Quotations of more than 40 words are presented with quotation marks in a block indented below the text⁴⁶⁻⁴⁹ (please, see the examples below).

Example 1: Using quoted material with 40 words or less When asked what was the best feature of the program, the young person said: "training with my friends" and used descriptions such as "it's the best" and "it makes the training much more fun and enjoyable" to express her feelings.

Example 2: Using quoted material with 40 words or more

A vast majority of program participants [17 males and 16 females across all age groups, amounting to 87% of program attendees] described the training as highly beneficial for achievement of a number of important personal, health and/or sport-specific outcomes, as exemplified by the following comment:

"I used to be very tentative about what I was physically capable of doing and lacked the confidence to try new things. Participation in this program, however, has increased my confidence and improved my ability to face new challenges. I've found the mindset I've developed during the training sessions has been really beneficial and have started to adopt a similar mindset to situations and environments outside of the program"

- Female participant, 37 yrs old

Is the quote illustrative?

Using quoted material effectively requires an appreciation of the intended purpose of its use. Essentially, this kind of material is meant to help readers better understand the data from which findings are reported, rather than prove that they are true, valid or credible. They cannot logically perform the latter functions and authors who forget this often lose credibility with readers. 46,47

"The power of statistics and the clean lines of quantitative research appealed to me, but I fell in love with the richness and depth of qualitative research"

- Professor Brené Brown

"The practice of storytelling sustains communities, validates experiences, nurtures relationships and serves as a form of important cultural continuation for Indigenous people"

- Dr Judy Iseke

"You may have heard that the world is made up of atoms and molecules, but it's really made up of stories. When you sit with an individual that's been here, you can give quantitative data a qualitative overlay"

- William Turner

Is the quote representative?

Quoted selections need to best represent the shared opinion of participants so that an immediate indication of its importance and relevance can be clearly conveyed to the reader.⁴⁸⁻⁴⁹

Is the quote succinct?

A final consideration when using quoted material is to ensure the selected quotes succinctly illustrate the points being made and/or support the presented findings. 46,47 This can sometimes be aided by changing a quotation so that it maintains grammatical integrity, such as establishing consistent tense. While not usually problematic, there is always a risk of violating the authenticity principle and any changes should therefore be implemented thoughtfully and signalled by the use of square brackets. 48,49

Example of presenting qualitative data

The following example illustrates how quoted material can be used to support a key point by providing sufficient context and information about the situation and best representing the shared opinion of the participants. Parentheses indicating the total number of participants who noted a particular point are also shown in an attempt to further emphasise its importance.

Participants who had to juggle work and family commitments with their commitment to training (12 males and 8 females, aged 25–36 yrs) made it clear during the interviews that having different training sessions to choose from was "essential" [9] and "vital" [11] for their uptake and sustained participation in the program, as is evident from the following example:

"The flexible training times and a variety of different sessions encouraged repeated participation and made it easy to commit"

- Male participant, 36 yrs old

Participants, however, '[challenged]' the assumption that sporting environments are all about winning and losing [verb tense changed from present to past] and described their setting as a "positive" [14], "friendly" [17], and "supportive" [12] place that promoted "whole family participation" [9] and is always "welcoming" [15] and "encouraging" [13]. One pertinent and representative comment was as follows:

"I have been involved in quite a few other sports but have never seen a more family-friendly one or one that makes you feel so comfortable and welcomed. The place quickly becomes an extension of your life and going there is the highlight of my day"

- Female participant, 31 yrs old



Reflections and critical self-analysis

The following aims to assist the knowledge production process and help with the development of new ideas by critically examining, reformulating and challenging existing beliefs, assumptions and practices. 50,51

- > Can photo-elicitation be of any help to you and your work?
- > How would you use it?
- > What ethical and axiological considerations does the approach raise and how can you manage those risks?
- > What is your ontological belief about reality and where do you sit on the quantitative vs qualitative research paradigms?
- > What is you epistemological understanding about knowledge and the ways in which it can be generated, acquired, validated, and communicated?
- > How would you design a photo-elicitation evaluation process?
- > What resources are required to achieve that task?
- > How will the data be captured, stored and analysed?
- > How will the findings be reported?

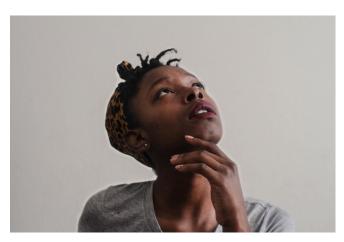


Photo by Tachina Lee and available for free on Unsplash.

A little share to remind us that "without reflection, we go blindly on our way, creating more unintended consequences, and failing to achieve anything useful" - Margaret J. Wheatley.

Key points

- > Whilst presently underutilised, photo elicitation is a refreshing, new and innovative way to research coach learning and development as it offers a flexible and contemporary framework to pursue the work without compromising on rigour. 1,7,37
- > The approach can be easily adapted to suit a variety of epistemological positions and analytical strategies^{1,2,7} and has the potential to generate rich data in contexts that may not be accessible with conventional interviewing methods.14-16
- > Importantly, the technique provides opportunities to understand complex situations in different ways to quantitative designed approaches by eliciting data that reflects the participant's experience and placing the expert of that experience at the centre of an inquiry.3-6

Final remarks

- > The significance of promoting the use of photo-elicitation as a way of understanding the complex and serendipitous nature of coach learning cannot be overemphasised and it is hoped this paper (in some small way) can help promote its use.
- > Please remember that we should always try to inspire before we perspire because nothing is promised or guaranteed.



Photo by Bewakoofofficial.com Official and available for free on Unsplash.

This image is intended to show how knowledge production in the present context is considered a socially constructed activity that involves the re-shaping, re-producing and re-using of shared information rather than the direct transfer of original material.50-52







References and further reading

- Harper, D. (1986). Meaning and work: A study in photo elicitation. Current sociology, 34(3), 24-46.
- Harper, D. (2002). Talking about pictures: a case for photo elicitation. Visual Studies, 17(1), 13-26.
- 3. Harrington, C. F. & Lindy, I. E. [1999]. The use of reflexive photography in the study of the freshman year experience. Journal of College Student Retention: Research, Theory and Practice, 1(1), 13-22.
- 4. Collier, J. J. [1957]. Photography in anthropology: a report on two experiments. American Anthropologist, 59, 843–859.
- Dempsey, J. V. & Tucker, S. A. [1991]. Using Photo-Interviewing as Tool for Research and Evaluation, 167-189.
- Hagedorn, M. (1994). Hermeneutic photography: an innovative esthetic technique for generating data in nursing research. Advances in Nursing Science, 17(1), 44-50.
- Pink, S. (2007). Doing Visual Ethnography: Images, Media and Representation in Research. London. Sage (first edition 2001).
- 8. Smith, J. A., Flower, P. & Larkin, M. (2009). Interpretative Phenomenological Analysis, Theory, Method and Research. London: Sage Publications Ltd.
- Chapman, E. & Smith, J. [2002]. Interpretative Phenomenological Analysis and the New Genetics. Journal of Health Psychology, 7, 125-130.
- 10. Wang, C. C. [2001]. Photovoice Ethics. Health Education and Behaviour, 28(5), 560-572.
- Fang, W. I. & Elwein, M. C. (1990). Photography and Ethics in Evaluation. Evaluation Review, 14(1), 100-107.
- 12. Becker, H. S. [1978] Do Photographs Tell the Truth? Afterimage, 5, 9-13.
- 13. Hill, L. (2014). 'Some of it I haven't told anybody else': Using photo elicitation to explore experiences of secondary school education from the perspective of young people with a diagnosis of Autistic Spectrum Disorder. Educational and Child Psychology, 31(1), 79-89.
- 14. Banks, M. (2001). Visual Methods in Social Research. London, Sage.
- Duckett, P. S. & Fryer, D. [1998]. Developing empowering research practices with people who have learning disabilities. Journal of Community and Applied Social Psychology, 8(1), 57-65.
- Oliffe, J. L. & Bottorff, J. L. (2007). Further than the eye can see? Photo elicitation and research with men. Qualitative Health Research, 17(6), 850-858.
- Van Auken, P. M., Frisvoll, S. J. & Stewart, S. I. (2010). Visualising community: using participant-driven photo-elicitation for research and application. Local environment, 15(4), 373-388.
- National Statement on Ethical Conduct in Human Research. [2007].
 Updated May 2018. Canberra: Australian Research Council. Available from: https://www.nhmrc.gov.au/about-us/publications/nationalstatement-ethical-conduct-human-research-2007-updated-2018
- Enago Academy. [2022]. What are the ethical considerations in research design? Available from: https://www.enago.com/academy/what-are-the-ethical-considerations-in-research-design/
- 20. Cohen, L., Manion, L. & Morrison, K. (2007). Research methods in education (6th ed.). New York, NY: Routledge.
- 21. Guba, E. G. & Lincoln, Y. S. (2005). Paradigmatic controversies, contradictions, and emerging confluences. In N. K. Denzin & Y. S. Lincoln (Eds.), The Sage handbook of qualitative research (3rd ed., pp. 191–215). Thousand Oaks, CA, Sage.
- 22. Grix, J. [2004]. The Foundations of Research. New York, NY: Palgrave Macmillan.
- Patton, M. Q. [2002], Qualitative research and evaluation methods [3rd ed.]. Thousand Oaks, CA: Sage.
- 24. Crotty, M. (1998). The foundations of social research: Meaning and perspective in the research process. Thousand Oaks, CA: Sage.
- Richards, K. (2003). Qualitative inquiry in TESOL. New York, NY: Palgrave Macmillan.
- 26. Finnis, J. [1980]. Natural Law and Natural Rights. Oxford: Clarendon Press.

- 27. Lincoln, Y. S. & Guba, E. G. [1985]. Naturalistic inquiry. Newbury Park, CA: Sage.
- Gilgun, J. F. (2008). Lived Experience, Reflexivity, and Research on Perpetrators of Interpersonal Violence. Qualitative Social Work, 7[2], 181–197
- Markham, A. (Feb 28. 2017). Reflexivity: Some techniques for interpretive researchers. Available from: https://annettemarkham.com/2017/02/reflexivity-for-interpretive-researchers/
- 30. Bourdieu, P. [2004]. Science of science and reflexivity. Palo Alto, CA: Stanford University Press.
- Gilgun, J. F. (2008). Lived Experience, Reflexivity, and Research on Perpetrators of Interpersonal Violence. Qualitative Social Work, 7(2): 181–197
- 32. Phillips, B. S. [1988]. Toward a Reflexive Sociology. The American Sociologist, 19[2]: 138–151.
- 33. Tsekeris, C., & Katrivesis, N. [2008]. Reflexivity in Sociological Theory and Social Action, Philosophy, Sociology, Psychology and History, 7[1]: 1-12.
- Thorne, S., Stephens, J. & Truant, T. (2016). Building qualitative study design using nursing's disciplinary epistemology. Journal of Advanced Nursing, 72(2), 451–460.
- Thirsk, L. M. & Clark, A. M. [2017]. Using Qualitative Research for Complex Interventions: The Contributions of Hermeneutics. International Journal of Qualitative Methods.
- Galdas, P. [2017]. Revisiting Bias in Qualitative Research: Reflections on Its Relationship With Funding and Impact. International Journal of Qualitative Methods. P. 1. ISSN 1609-4069.
- 37. Bates, E. A., McCann, J. J., Kaye, L. K. & Taylor, J. C. [2017]. "Beyond words": A researcher's guide to using photo elicitation in psychology. *Qualitative Research in Psychology, 14*[4], 459–481.
- 38. Perkins, P. & Hahn, A. [2020]. Positive Youth Development through a Co-Designed Modified Boxing Program. Open Journal of Social Sciences, 8, 148-199.
- 39. Roulston, K. (2010). Reflective interviewing: A guide to theory and practice. London & Thousand Oaks, CA: Sage.
- 40. Roulston, K., deMarrais, K. & Lewis, J. B. [2003]. Learning to interview in the social sciences. Inquiry, 9[4], 643-668.
- Smith, J. A. & Osborn, M. [2003] Interpretative Phenomenological Analysis. In: Qualitative Psychology: A Practical Guide to Methods, 2nd Edition, Sage Publications, London, 53-80.
- 42. Smith, C. Z. & Woodward, A. M. [1999]. Photo-elicitation method gives voice and reactions of subjects. Journalism and Mass Communication Educator, 53[4], 31.
- 43. Pope, C., Ziebland, S. & Mays N. (1999). Analysing qualitative data. In Pope C, Mays N (eds) Qualitative research in health care. 2nd ed. London: BMJ
- 44. Braun, V. & Clarke, V. [2006]. Using Thematic Analysis in Psychology. Qualitative Research in Psychology, 3, 77-101.
- 45. Basit, T. N. [2003]. Manual or electronic? The role of coding in qualitative data analysis. Educational Research, 45[2], 143–54.
- 46. Corden, A. & Aziz, A. F. [2006]. Using Verbatim Quotations in Reporting Qualitative Social Research: Researchers' views. University of York.
- 47. Thorne, S. [2020]. On the Use and Abuse of Verbatim Quotations in Qualitative Research Reports. Nurse & Author Editor, 30[3], 2.
- 48. American Psychological Association. [2020]. Style and Grammar Guidelines. Section 8.36 of the APA Publication Manual, Seventh Edition.
- 49. Lingard, L. [2019]. Beyond the default colon: Effective use of quotes in qualitative research. Perspect Medical Education. Dec;8(6), 360-364.
- 50. Moon, J. A. [2004]. A handbook of reflective and experiential learning: Theory and practice. London: Routledge Falmer.
- 51. Gibbs, G. (1988). Learning by Doing: A Guide to Teaching and Learning Methods. Further Education Unit. Oxford: Oxford Polytechnic.
- 52. Wenger-Trayner, E., & Wenger-Trayner, B. [2020]. Learning to make a difference: Value creation in social learning spaces. Cambridge University Press.



APPENDIX 1

An example of a photograph & video release form

I the undersigned hereby give permission for the Australian Institute of Sport (AIS) to capture my image, likeness and voice in photographs, videos and/or other forms of digital recordings. In addition, I waive any rights to royalties or other benefits arising or related to the use of my image and/or recording. I acknowledge that the AIS will own any image and grant permission for that organisation to display, publish, distribute, use, modify, print and reprint such images in any manner relating to their business. I understand that this may include:

- > Publications
- > Advertisements
- > Brochures
- > Web sites and other electronic displays
- > Educational recourses (including online courses)
- > Conference presentations

I understand that my image may be edited, copied, exhibited, published or distributed and waive the right to inspect and/or approve the finished product. In addition, I acknowledge and understand that there are no time limits on the validity of this release, nor any geographic limitations on where these materials may be distributed.

By signing this form I acknowledge that I have completely read and fully understand the above release and agree to be bound thereby. I hereby release any and all claims against any person or organisation utilising this material for the purposes mentioned above.

Full name:	
Phone/Mobile:	
Email address:	
Signature:	
Date:	



APPENDIX 2

An example of a participation waiver form

DISCLAIMER: Warning, this is a legal document that affects your rights

Agreement for participation in the Australian Institute of Sport [insert name of program here]

Please note: The title 'coordinator' in this document refers to the person who will be leading the training/learning event. The term 'activity' refers to: (insert what participant is required to do here).

- > I accept all risks and hereby indemnify and release the coordinator, the Australian Institute of Sport and its employees, sponsors, promoters and any other person or organisation directly and indirectly associated with the coordinator, against all liability claims, demands and proceedings arising out of or connected with my participation in the activities.
- > I acknowledge that participating in today's activities may involve a risk of injury from various causes including: over exertion, dehydration, equipment failure and accidents with equipment and surroundings.
- > I recognise the difficulties associated with the activities and attest I am physically fit to participate and that a qualified medical practitioner has not advised me otherwise.
- > I understand the demanding physical nature of the activities and am not aware of any medical condition, injury or impairment that will be detrimental to my health.

I certify that I am 18 years or older; have read this document and fully understand its content.
Signature:
Full name:
Date:

APPENDIX 3

An example of an informed consent form

- > I hereby consent to be a participant in (insert name of program here) and acknowledge that I have read and understand the scope and nature of the program and have been able to ask questions. I also acknowledge that my questions have been answered to my satisfaction and understand that I can refuse to answer further questions and withdraw from the program at any time without having to give a reason.
- > I understand and acknowledge that taking part in the program involves voluntarily participation in a range information-gathering activities, including: audio-recorded interviews, information sharing circles, video-recorded focus groups, and undertaking survey questionnaires.
- > I give permission to the Australian Institute of Sport to use, display, modify, publish, distribute, print and reprint any information generated from those activities in any manner and format, including research outputs.
- > I also give permission for my real name and any journal/diary entries created from my involvement in the program to be used and hereby release any and all claims against any person or organisation utilising this material for the purposes mentioned above.
- > I acknowledge and understand that the above personal information will be stored at **(insert name of data repository here)** so it can be used for future research and learning and give permission for the data to be used in such ways.

Full name:	
Phone/Mobile:	
Email address:	
_	
Signature:	
Date:	

