Visual tools for supporting interviews in qualitative research: new approaches

Marta Olmo-Extremera and Lucía Fernández-Terol
University of Granada, Granada, Spain, and
Diana Amber Montes
University of Jaén, Jaén, Spain

Abstract

Purpose – This study aims to describe and evaluate various visual and creative tools for supporting the in-depth biographical interview aimed at analyzing educational communities and their stakeholders.

Design/methodology/approach – Researching educational spaces today requires new ways of understanding, analyzing and studying. The complex characteristics, functions and realities demand research that responds to educational singularities. It is a matter of deeply understanding the educational phenomenon's peculiarities. For these purposes, instruments and research paradigms are needed to extract data and reach information saturation regarding the data obtained from the proposed objects of study. With this in mind, the following paper suggests reflecting on data collection tools that can complement the interview and biographical-narrative research approach. The authors highlight the use of photo-elucidation, the biogram-based timeline, the organigram and the flight of the geese, all of which are instruments endowed with a visual character that allows a deeper understanding of the object studied.

Findings – The main contribution of this paper is to unpack the uses and applications of four visual tools that support the interview technique. First, photo-elucidation is presented as a sensory strategy to stimulate the narrative during the dialogical exchange of the interview. Next, the timeline is described as a visual concretization of the traditional biogram widely used in educational research. Next, the authors unravel the uses of the organizational chart in educational research, which, due to its nature and utility, provides a glimpse of the organizational functioning of an institution and is particularly suitable for research in institutional frameworks. Finally, the tool known as the flight of the geese is presented. This tool is recommended for use in educational leadership and teamwork studies due to its simplicity and high representativeness of the hierarchy of roles and functions.

Originality/value – Researching educational spaces today requires new ways of understanding, analyzing and studying. The complex characteristics, functions, and realities demand research that responds to educational singularities. It is a matter of deeply understanding the educational phenomenon's peculiarities. For these purposes, instruments and research paradigms are needed to extract data and reach information saturation regarding the data obtained from the proposed objects of study. With this in mind, the following paper invites us to reflect on data collection tools that can complement the interview and biographical-narrative research approach. The authors highlight the use of photo-elucidation, the biogram-based timeline, the organigram, and the flight of the geese, all of which are instruments endowed with a visual character that allows a deeper understanding of the object studied.

Keywords Qualitative research, Biographic research, Interview, Educational research, Visual tools

Paper type General review

1. Introduction

Educational institutions are complex objects of study due to their singularities, contexts and the people involved, who create networks and relational structures that weave a unique life

history for each school. Because of their multifaceted structure, they require a research approach to understand them and to tackle the complexity of their immediate environment. In this sense, qualitative approaches that address the object of study in depth, focusing on interpreting the data (Flick, 2015; Schilling and König, 2020), are the most suitable for analyzing multifaceted and multiple phenomena typical of the social sciences and, therefore, of the field of education.

Within the framework of qualitative approaches, biographical-narrative research has been increasingly present in education in recent years (Bolívar and Domingo, 2018). This research approach allows us to learn about the world from the perspective of others (Cisneros-Puebla *et al.*, 2004; Moriña, 2017) through not only narrated experiences that evoke events, moments and places but also thoughts, feelings and meanings given by the people who tell their stories. For this reason, this approach is relevant in education studies that emphasize the development, trajectory or identity of those involved (both of specific individuals and of communities), along with collaborative networks and institutions, telling their story through the people involved and the situations and experiences that are generated.

Words are a valuable resource in this research approach. Words evoke memories and experiences that help create an institution or person's life history and sketch the environment and the casuistry that give it shape and meaning. For this reason, the interview becomes, from this approach, an excellent instrument for data collection, which can be complemented by many others (e.g. documentary reviews, observations, field notes or diaries).

The interview allows for dialog between the interviewer and the informant, creating a connection between the two through mutual commitment and shared growth and from a situated ethic (Abad, 2016; Cisneros-Puebla *et al.*, 2004) that facilitates the discursive flow. Thus, discourse as social interaction, understood as a practical, social and cultural phenomenon from Van Dijk's (2008) perspective, provides clues for understanding phenomena from the contextual framework in which they occur. Therefore, during an in-depth interview, the researcher must ensure that the dialog flows and, at the same time, investigate the reasons, motivations and silences produced during the dialogical exchange (Ruiz, 2015). The interview, in turn, becomes a situation of observation, which helps to contemplate the social scene and provides clues for its interpretation (Beaud, 2018).

For Bolívar and Domingo (2019), interviews play a decisive role in the development of narratives. Specifically, an in-depth biographical interview sequenced according to cascades of reflexive deepening is essential for biographical studies (Cruz *et al.*, 2021; Kelchtermans, 2016).

Various visual support tools can be employed during an in-depth biographical interview, significantly contributing to the triangulation of information and thus enhancing the study's validity (Flick, 2018; Torres, 2021). These tools, characterized by their creative and graphic approach, can stimulate dialog, offering richer and more fruitful narratives than those obtained in a traditional interview (Mannay, 2017). Thus, the interview can be enriched with different tools that help to obtain more nuanced and deeper biographical accounts, awakening emotions and memories that could not be evoked by words alone. Moreover, creative methods, through the use of images, help contextually frame the phenomenon under investigation, with the genealogy of the context, as Bolívar and Domingo (2019) point out, being a key aspect for understanding the stories. Visual techniques can be used to research individual, collective and institutional life trajectories (Harper, 2012). In turn, they can be combined according to the research objectives and implemented at different stages of the cascade of reflexive deepening, depending on the nature of the technique or the research interests.

The main contribution of this paper is to unpack the uses and applications of four visual tools that support the interview technique. First, *photo-elucidation* is presented as a sensory

strategy to stimulate the narrative during the dialogical exchange of the interview. Next, the *timeline* is described as a visual concretization of the traditional biogram widely used in educational research (De Oliveira, 2020; Domingo *et al.*, 2017). Next, we unravel the uses of the organizational chart in educational research, which, due to its nature and utility, provides a glimpse of the organizational functioning of an institution and is particularly suitable for research in institutional frameworks. Finally, the tool known as the *flight of the geese* is presented. This tool is recommended for use in educational leadership and teamwork studies due to its simplicity and high representativeness of the hierarchy of roles and functions. This study aims to describe and evaluate various visual and creative tools for supporting the in-depth biographical interview aimed at analyzing educational communities and their stakeholders.

2. Photo-elicitation, sensory strategy and narrative stimulation

The use of images – specifically photography – to support the interview was introduced by John Collier (1967) in his book *Visual Anthropology*, who called this method "photo interviewing." As the name suggests, this strategy is combined with the interview to delve deeper into the case study and evoke ideas and arguments that would not otherwise be possible with the spoken word alone.

Today, this method is better known as *photo elucidation*. The term "elucidation," synonymous with clarification or explanation, hints at the focus of this methodology. Elucidate means "to clarify and explain an issue, especially if it is confusing or controversial, for its possible resolution" (RAE, 2022). Therefore, photo-elucidation involves eliciting the informant's words and narrative through image-produced stimuli. This method uses the image as a source of stimulation for narrating the informants' experiences, situations or impressions. Its use accompanies and supports the traditional interview because, according to Mannay (2017), "images evoke deeper elements of consciousness than words alone do, so that photo-elicitation interviews do not simply elucidate more information but evoke a different kind of information" (p. 30).

Thanks to the potential of visual materials to reveal essential aspects of the cultural context that surrounds them (Collier, 1967), photo-elicitation is aligned with social science research and, more specifically, with the field of education, being considered by Harper (2012) as a "natural" method for educational studies.

The photo-elicitation interview becomes useful for retrieving latent memory and stimulating emotions and experiences associated with the informant's life (Collier, 1967). It is, therefore, a valuable resource for biographical-narrative research, as it helps to gain a glimpse of the genealogy of the context, which is essential information in this type of research, as argued by Bolívar and Domingo (2019) and Moriña (2017).

Among the benefits of photo-elucidation is also the closeness established between researcher and informant, as the image becomes a bridge between people who may see and interpret the world in very different ways (Harper, 2012), favoring a more balanced relationship between the two (Meo and Dabenigno, 2011). In this way, the image brings the interlocutors closer together, overcoming the language barrier that can sometimes occur if the two do not adopt the same discursive style. Furthermore, using the image during the interview also creates a more relaxed atmosphere for the informant, which favors their motivation to take part in the study.

This type of research is open and creative. Since it must be adapted to the phenomenon under study, there is flexibility regarding the number of images that can be used during the interview, the type of image used (e.g. photograph, drawing, collage and plan), the number of meetings required and even the person who should produce these images (Wang, 2023). The

answers to these questions (among others) depend on the aim of the research and the phenomenon under study.

As Meo and Dabenigno (2011) state, the images used during the interview can be prepared before or during the course of the research. If the first option is chosen, the researcher must prepare this material before the meeting with the informant and before preparing the rest of the data collection instruments. The images can be taken by the researcher or the team, professional photographers or even selected from archives and image repositories. These visual materials can be of a very varied nature and origin (Rose, 2006; Sarrot and Mingo, 2019). For example, they can come from magazines or newspapers, books, advertising campaigns, graffiti or websites. If the second option is chosen, that is, the images are obtained during the course of the research, whether they are provided by the researcher or by the informant, they have the clear advantage of being embedded in the research context and, therefore, loaded with meaning, which can facilitate the analysis and interpretation of the information (Meo and Dabenigno, 2011).

Within the use of images in interview research, depending on who is the producer of the photographs or images used to establish the dialog, we can distinguish a variant that has created this methodological current. We can speak of photovoice if the informant produces the photographs on which the dialogical encounter is based. The founders of the method, Wang and Burris (1997), took their inspiration from Paulo Freire and his ideas on the pedagogy of the oppressed (Freire, 1969). Photovoice is a way of empowering the informant and fostering critical consciousness. From this methodological approach, the informant takes the reins of the research, choosing and producing the images that they consider relevant to collect or capture the reality that represents the phenomenon under study. It is an integrated approach within participatory methodologies, usually used in studies that aim to empower and give a voice to the people involved (Harper, 2012).

3. From the biogram to the visual diagram: support and graphical representation of biographical data

In general terms, the biogram can be defined as an instrument for collecting biographical data that facilitates the study of personal or professional identity or the institutional development of an educational entity or organization. In the educational research framework, Parrilla (2009) describes it as a personalized chronogram of the individual's critical incidents that mark their life and their interpretation of such events.

Authors such as Domingo *et al.* (2017) have addressed two key issues concerning the use of the biogram. First, it allows the compilation of past experiences (located in diachronic time and space) to investigate and understand the events that have been a turning point in the development of an individual and the construction of their identities. Second, it is an optimal resource for helping the individual understand their personal, academic and professional backgrounds, training processes and decision-making. In short, the biogram is a tool for organizing a person's narrative and biographical data and creating schematic summaries of their life.

Recent national and international research has made use of the biogram to study the identity of principals (Cruz *et al.*, 2021; Lucena Rodríguez *et al.*, 2021), the institutional development of a school (Fernández- Terol, 2021), teaching identity (Domingo *et al.*, 2017; Huchim Aguilar and Reyes Chávez, 2013; Panes Chavarría and Lazzaro-Salazar, 2018) and the student body (Nieto Cano *et al.*, 2018).

In general terms, the steps used to create a biogram are as follows (Lucena and Cruz-González, 2021):

(1) Use of the in-depth biographical interview;

(2) Creation of schemes of ideas and a process of comprehensive deepening;

(3) Compilation and organization of critical incidents in the biogram allow the researcher to identify the most impactful life events, the emergence of influential people and the social, cultural and professional factors that have shaped the life trajectory and

(4) Dialectical validation of the discourse.

The biogram can be created using a table where the following elements are collected: (1) chronology; (2) description; (3) milestones, key characters, themes or leitmotives and (4) identity impact. However, it is important to note that constructing the biogram and the life history is not a collection of unconnected data but rather an opportunity for the individual to construct a narrative identity and make sense of their own life (Bolívar, 2012). Although the biogram is an operational tool that outlines the narrative of the subject's life story and recreates the entire contextual, emotional and sentimental framework (Domingo *et al.*, 2017) for researchers, there are other alternative tools of a visual nature.

Considering the above, it is during fieldwork and after data analysis that there is an opportunity to conduct qualitative research and to incorporate innovative approaches and tools that support this type of research process. For example, Mas (2007) has already proposed using the biogram by incorporating sensory, emotional, metaphorical or symbolic elements alongside traditionally considered (personal, social, professional or contextual) aspects.

The potential to create a visual representation of the data collected for subsequent analysis or to present the results draws on contributions from the field of visual thinking and its application in social and educational research (Castillo and González, 2016; Katoppo and Sudradjat, 2015). Visual thinking also uses this approach as a resource based on simple drawings explaining complex concepts.

Taking the participatory research approach, the creation of the biogram can be enriched by asking the informant to make a visual representation of their life (as a diagram, understood as a timeline) or, more traditionally, by the researcher constructing it using the data gathered during the interview. With this approach, a visual diagram, understood as a timeline, provides a graphical representation of the variations of a phenomenon or the chronological relationships between the elements or parts of a whole. For this reason, using the timeline as a graphical representation of the biogram is of interest. Figure 1 shows an example of a visual diagram of the institutional development of an educational organization used in the work of Fernández- Terol (2021). This diagram will allow the researcher to synthesize the data and integrate these for further analysis and interpretation. This approach will enable the creation of a timeline or life map that allows different elements and aspects of the life history to be related chronologically. Moreover, it will make it easier to display the data to the research participant to reflect on and discuss this information.

One of the advantages for researchers who wish to enrich their interpretation and presentation of results with this diagram is that it will visually present the most important biographical data, allowing them to highlight those critical moments or those with the greatest impact on the life of a person or an educational institution.

4. The organization chart: a mental map of the school organization
The organization chart is a mental map that reflects, through shapes, colors and drawings, the most significant themes, elements and factors of a sector, department or institution (Buzan and Buzan, 2017). It allows us to graphically observe relationships and how the brain naturally processes information, thus reflecting our way of thinking. For example, through an organizational chart, it is possible to see the organizational structure of an educational institution, the hierarchical levels, the lines of authority and the staff positions based on the

Figure 1.
Diagram on the
institutional
development of an
educational
organization

Source(s): Fernández- Terol (2021)

role they play in the institution (Thompson, 2009). Similarly, it is possible to recognize horizontal or vertical leadership thanks to the lines, designs and figures that represent one type of leadership or another.

Organizational charts are heterogeneous and arise from the perceptions and senses of the people who make up an institution. For this reason, there are no equal organizational charts but rather unique and context-specific ones (Mclean and Link, 2022). An organization chart is also a tool that, among other functions, can be used in research to complement other tools, such as interviews. For example, together with the interview, the organization chart can inform us about the life history of a team, a department or a school institution (Salgueiro Caldeira, 1993). Moreover, it should be noted that there are different types of organizational charts according to their nature, purpose, scope, content, presentation and graphic layout (De Zuani, 2005; Franklin Fincowsky, 2009; Thompson, 2009). Table 1 displays the aspects mentioned above.

The various types of organizational charts can be used to determine a school's structure, relationships, hierarchies and leadership. According to Fernández (2002), the organization of a school can be viewed in a systematic way and on three levels: (1) aggregate level: teachers and individual functions; (2) structure level: which reveals information about the relationships between people in a school and (3) system level: composed of the relationships of people, functions and professions and their impact on the environment. These levels are suitable for being displayed in the organization charts because they make it possible to concretely perceive abstract elements (relationships, hierarchies, authority, positions, etc.) (Claver and Llopis, 2002).

It is also possible to find studies where organization charts have been used as data collection instruments, for example, in studies on quality management systems (Becerra *et al.*, 2019) or leadership development strategies implemented by a management team (Martínez and Granados, 2001). In addition, these charts have been used as an instrument for evaluating teaching performance based on competence in Spanish (Matos, 2012). Finally, the organization chart can serve as an element of information in biographical-narrative research (Bolívar, 2012), determining and providing concrete and specific information through graphical representations.

5. The flight of the geese: where are you and where are you going?

The flight of the geese is a unique tool in the scientific literature but has been used in social (Blanco, 2017; Correa, 2019) and business fields (Del Equipo *et al.*, 2013). For example, this instrument determines how an individual feels within a work team, a collective project or an institution. Similarly, it allows us to establish whether the person feels like a leader (Byron and Mejias, 2003) or is integrated into a workgroup.

The flight of the geese is a wise metaphor that reveals the characteristics of a team and its ways of working, the leadership of a school institution, a person's sense of belonging and their relationship with their professional, social and family context. In this sense, this instrument can be used to complement the interview in biographical-narrative studies.

This simple tool is inspired by a flock of geese flying in a V-shape. This way of flying increases the power of flight by 70% compared to a single goose. From this, and extrapolating this idea, it can be considered that people who go in the same direction and have a clear and common purpose can achieve their goals faster and easier as they travel with the support and drive of others.

Moreover, every time a goose leaves the formation and feels the resistance of the air, it appreciates the difficulty of flying alone. Hence, it immediately rejoins the group to benefit from the power of the companion in front. In this sense, learning from the metaphor of the

Organizational charts	Types
Organizational charts based on their nature	Micro-administrative: Representing a single organization or school as a whole or from a single area Macro-administrative: Covers more than one school Meso-administrative: Composed of organizations or institutions from the same sector or specific area
Organizational charts based on their purpose	Informative: They are intended to be available to the general public and accessible to everyone in an educational institution. Therefore, the design of the organization chart must be specific, representing the main or most relevant components and their primary relationships Analytical: Analyses behavioral aspects of an organization, as well as its micro or macro vision. It also provides a concrete insight into tangible elements of a school, such as the professional and personal relationships within a team, the distribution of curricular tasks in a department, decision-making in a management team etc. Formal: Represents the planned operating model of an organization. It could be considered as the official organizational chart of an institution
Organizational charts based on scope	General: Represents information about the hierarchical level in a department or team Specific: They show the structure of an area of the organization in a particular way
Organizational charts based on content	Integral: Graphic representation of all parts of a school and their hierarchical relationships Functional: Reflects the main functions carried out by a person or a team of people. In addition, it is possible to identify the units and interrelationships with this representation Posts, positions, and units: These determine specific jobs, roles, and positions so that these aspects can be identified with particular names
Organizational charts based on presentation and graphical layout	Vertical: These present units branching from top to bottom, starting from a central position at the top. From this position, the various hierarchical levels begin to branch out in a staggered manner Horizontal: Their representation starts from left to right, with their main position on the far left. Columns order the hierarchical levels, and horizontal lines mark their relationships Mixed: Combines elements of a vertical and horizontal organization chart. These are useful for schools with a large number of people Block: These are derived from vertical organization charts and allow more units to be integrated into smaller spaces so that different units appear in the prominent position Circular: In this type of organizational chart, the most important organizational unit is in the middle of a series of concentric circles. Each of these circles represents a different level of authority, decreasing from the middle towards until reaching the last circle, which is the largest and represents the lowest level of authority. Similarly, units of the same hierarchy are placed on the same circle, and lines connecting circles express their hierarchical relationships

Table 1.
Types of
organizational charts

Source(s): Adapted from Thompson (2009)

flight of the geese, teams and their members must stay in formation with those who lead and have clear goals, being open to accepting and offering help.

When the leader of the geese gets tired, he leaves his post and moves to a later position in the flock so that another goose takes his place. This can be interpreted as the need to take turns and relieve each other to tackle complex tasks and share leadership (Fullan, 2019; Leithwood, 1994).

Similarly, the geese at the back of the formation are responsible for ensuring that the geese in front maintain speed, an act of support that teaches us that, regardless of the position that each person occupies in a system, their contribution and cooperation are essential to achieve the common goals set or desired (Rodas and Sipión, 2014). Moreover, when a goose gets sick or is injured and does not keep up with the flock, two other geese leave the formation to help and protect it. They stay with him until he recovers or finally dies. Then they fly off together to join another flock or return to the original flock. The lesson from this is the importance of sticking together during challenges and becoming stronger in the face of them, i.e. building resilience as a team with no one left behind (Olmo- Extremera, 2017).

With the above, we are invited to reflect on the individual and their social relationships within a school institution, the individual and the creation of bonds of trust with external and internal members of their environment, the individual and the construction of their identity as a person and professional within a society and their work environment and the individual as a resilient being with the capacity for leadership.

The metaphor "flying like geese" can inspire the life story of a teacher in their classroom and school, as well as the actions of school management or even the improvement goals of an educational organization. This metaphor can also provide information about a school model, be used as an instrument in a biographical-narrative approach or be an additional element that broadens the information gathered in a personal or organizational interview.

These aspects can be observed in Figures 2–5, used during the data collection process of the Olmo- Extremera (2017) research. These figures show the representation of different flocks of geese (black dots) with specific locations pointed out by the interviewees, indicating how they feel within their educational center and in their work team based on the figure presented by the researcher.

From Figure 2 and the interview conducted previously, it can be considered that the person feels that they are at the center of their school organization. From this, it can be interpreted that this person is committed to the school, informed about the events taking place, and integrated into the team.

Figure 3 shows how the participant has placed themselves at one end and at the front of the flock, as they occupied a management role within the management team (secretary). This
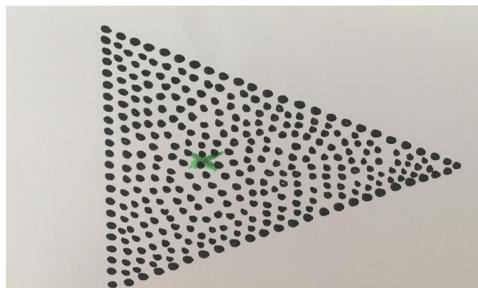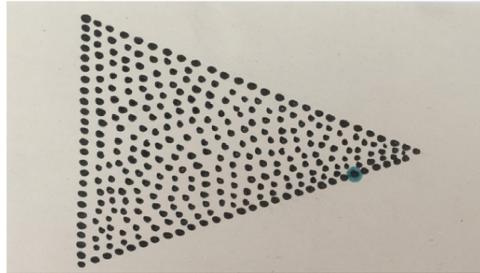

Source(s): Olmo- Extremera (2017) unpublished data

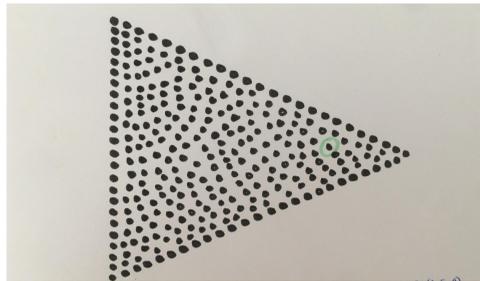Figure 2.
Central position

Figure 3.
Leadership position

Source(s): Olmo- Extremera (2017) unpublished data
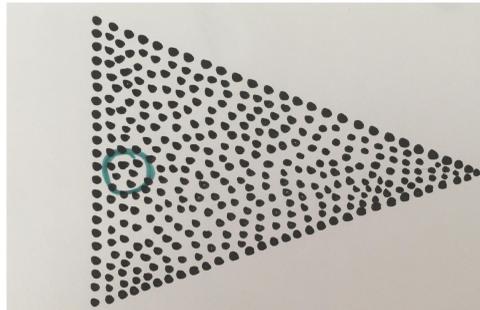

Figure 4.
Central leading position

Source(s): Olmo- Extremera (2017) unpublished data

Figure 5.
Rearguard position

Source(s): Olmo- Extremera (2017) unpublished data

position suggests that the person feels that they are a leader and that, from such a position, they can offer support and strength while observing other colleagues.

In Figure 4, it can be seen how the participant has placed themselves in a frontal position among other geese. In this case, the informant held a position in the management team (head of studies), which is why they occupied a front and centralized position. From this, it can be interpreted that this participant feels they are a leader because they are in a front position and, simultaneously, protected by their team of colleagues.

However, Figure 5 points to a very different position from those described previously, i.e. at the back of the flock. This could be taken to indicate that the interviewee (who held a position in the management team, namely head of studies) does not feel integrated into their work team, as reflected in a position that is far from one that would be occupied by a leader. Despite this, being in this position allowed them, from the rear, to observe the actions and functions carried out by the school and the work team.

Moreover, to interpret these images, they must be supported by an explanation from the informant, specifying why they have placed themselves in this position and what it means to them to be there. This is why, for this tool to be used effectively, other tools, such as the interview, must complement it.

6. Concluding reflections

Given the growing interest in biographical-narrative research (Domingo *et al.*, 2017; Bolívar and Domingo, 2019), the present work broadens the scope of authors and researchers concerned with developing and consolidating a methodological framework that facilitates research in the social and educational fields (Ávila and Ramalho, 2004; Bolívar, 2012; Bolívar and Domingo, 2018).

The cascade and in-depth interviews become the main means for gathering life story data and evoking the participants' critical life events. However, due to the need to develop more participatory research processes and to approach the subjects under investigation from more subjective, personal and human approaches – with special emphasis on their trajectories – it is necessary to use other instruments that complement the interview (Rivas and Herrera, 2010).

The tools presented in this paper invite us to reflect on the impact of their use. They are instruments with a visual character, so their application represents a break from traditional data analysis and extraction paradigms (Wang, 2023). Nevertheless, they can be considered complementary tools, especially appropriate in biographical-narrative research that seeks to achieve a deep understanding of the phenomenon under study. Adopting this complementary approach enriches the research and ideas, scenarios and latent memories emerge, which provide the information with greater meaning, favoring its understanding (Mannay, 2017).

Moreover, these instruments can be considered creative data-collection techniques that provide the researcher and the participant with information from other perspectives and sources. At the same time, they facilitate the interpretation and conversion of abstract data into more concrete information. Visual techniques provide a clear and direct understanding of the object of study, allowing the researcher and the researched to capture information that would not otherwise be possible using other procedures (Rodrigues, 2017). In using and applying the strategies described above, the participatory methodologies approach (Reason and Bradbury, 2001) has been taken as a reference. From this approach, the proposed tools empower the informant, foster critical awareness and involve them in the research process.

Another reason for using such tools is the evolution of qualitative data collection techniques. The use of creative instruments and processes – whether complementary or additional to traditional instruments – provides an opportunity to strengthen data collection and understanding. In research areas of a subjective nature within the social sciences, such as the educational sciences, the use of creative and innovative tools to enrich the data-collection process can contribute to enhancing biographical-narrative research by providing nuances, filling in gaps and analyzing whispered silences.

Constructing a flow chart, using the flight of geese metaphor, visual diagrams and photo-elucidation will help the researcher delve into the meanings the informant attaches to their own world and to consider these within the social and political contexts that surround them. For this reason, and in line with other authors (Bolívar and Domingo, 2019; Moriña, 2017),

these resources are very useful for organizing, exploring and investigating the narratives that emerge from the voices of the subjects and promote reflection and a dialectical interaction between researcher and researched.

Contributions from the field of visual methods and their application in social and educational research have heralded the potential of applying visual techniques and resources during fieldwork (Banks, 2019; Mannay, 2017). Previous studies (Bolívar, 2012; Correa, 2019; Fernández- Terol, 2021; Meo and Dabenigno, 2011) have shown that these tools help the researcher to (1) create a contextual framework of the cases, subjects and institutions under investigation; (2) delve into emerging themes and aspects of a more subjective nature with the informant; (3) inquire into the networking and relational structures of an educational institution and (4) delve into the development and trajectory of an educational institution or the identity dimension of the school's professionals, areas of growing interest in the field of social sciences (Cruz *et al.*, 2021; Domingo *d* 2017). However, it must be considered that the form of these methods and their application may vary depending on the interests and needs of the research. In short, this work highlights the utility of employing various creative and visual tools that complement conventional techniques and strategies in the collection of qualitative data.

7. Finding

References

Abad, B. (2016), "Investigación social cualitativa y dilemas éticos: de la ética vacía a la ética situada", *Empiria. Revista de metodología de ciencias sociales*, No. 34, pp. 101-120, doi: 10.5944/empiria.34.2016.16524.

Ávila, M.A. and Ramalho, L. (2004), "Devolutiva de entrevistas: o biograma na pesquisa em educação", *Psicologia da Educação*, No. 19, pp. 185-192.

Banks, M. (2019), *Los datos visuales en investigación cualitativa*, Morata, Madrid.

Beaud, S. (2018), "El uso de la entrevista en las ciencias sociales. En defensa de la entrevista etnográfica", *Revista colombiana de antropología*, Vol. 54 No. 1, pp. 175-218.

Becerra, F.Á., Andrade, A.M. and Díaz, L.I. (2019), "Sistema de gestión de la calidad para el proceso de investigación: universidad de Otavalo, Ecuador", *Actualidades investigativas en educación*, Vol. 19 No. 1, pp. 571-604.

Blanco, C.L. (2017), "Promoción de la organización, la interrelación y la gestión comunal. Material de orientación para el trabajo educativo con hombres y mujeres líderes de barrios precario-urbanos", Fundasal, El Salvador, available at: https://www.google.com.br/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjujbic48aBAxVBALkGHYSdDRwQFnoECBYQAQ&url=http%3A%2F%2Frepo.fundasal.org.sv%2F262%2F&usg=AOvVaw0twERx1muvuSbmieMsW5Kk&opi=89978449

Bolívar, A. (2012), "Metodología de la investigación biográfico-narrativa: recogida y análisis de datos", *EDIPUCRS*, Vol. 12 No. 3, pp. 79-109.

Bolívar, A. and Domingo, J. (2018), "La investigación (auto) biográfica y narrativa en España: principales ámbitos de desarrollo en educación", *Revista Brasileira de Pesquisa (Auto) biográfica*, Vol. 3 No. 9, pp. 796-813.

Bolívar, A. and Domingo, J. (2019), *La investigación (auto)biográfica y narrativa en educación*, Octaedro, Barcelona.

Buzan, T. and Buzan, B. (2017), *El libro de los mapas mentales: cómo usar al máximo las capacidades mentales*, Urano, Barcelona.

Byron, M. and Mejias, F.S. (2003), *Liderazgo y desarrollo de equipos*, IICA, San José.

Castillo, R. and González, D. (2016), "Design thinking aplicado a procesos de investigación cualitativa. Experiencia con una tesis doctoral", working paper, Congreso Internacional de gestión, tecnología de la innovación, Bucaramanga, Colombia, 25 March.

Cisneros-Puebla, C.A., Faux, R. and Mey, G. (2004), "Qualitative researchers—stories told, stories shared: the storied nature of qualitative research. An introduction to the special issue", *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, Vol. 5 No. 3, available at: http:// nbn-resolving.de/urn:nbn:de:0114-fqs0403370

Claver, E. and Llopis, J. (2002), *Manual de Administración de Empresas*, Civitas, Madrid.

Collier, J. (1967), *Visual Anthropology: Photography as a Research Method*, Holt Rinehart and Winston, Germany.

Correa, J.A. (2019), "Gansos volando en forma de V: construcción de comunidad, eficacia colectiva y espacio defendible en un barrio de Cali, Colombia", *Hallazgos*, Vol. 15 No. 29, pp. 157-183, doi: 10. 15332/1794-3841.2018.0029.07.

Cruz, C., Viseu, S. and Domingo, J. (2021), "Research of professional identity of female school principals through life stories", *The International Journal of Interdisciplinary Social and Community Studies*, Vol. 16 No. 1, pp. 163-179.

De Oliveira, R.V. (2020), "O biograma como referencial teórico-metodológico para construção de trajetória de vida-científica na educação musical", *Revista Brasileira de Pesquisa (Auto) biográfica*, Vol. 5 No. 16, pp. 1765-1785.

De Zuani, E.R. (2005), *Introducción a la Administración de las Organizaciones*, Valletta, Buenos Aires.

Del Equipo, I., Testamento, A. and Testamento, N. (2013), *Los Equipos*, Universidad Nacional Abierta y a Distancia, No. 7, pp. 1-8, available at: https://www.misionessim.org/sites/default/files/ images/Equipo_adjuntos/Trabajo_en_equipo.pdf

Domingo, J., Domingo, L. and Martos, A. (2017), "Los biogramas como trama y oportunidad para ubicar y comprender los procesos de desarrollo profesional e identitario", *Revista del IICE*, No. 41, pp. 81-96.

Fernández, J.M. (2002), "Cultura de la organización y centro educativo", available at: https://eprints. ucm.es/id/eprint/4580/ (accessed 2 February 2023).

Fernández- Terol, L. (2021), *"Implicación de los estudiantes y mejora de los resultados educativos en contextos retantes. Estudio de caso"*. Tesis doctoral. Universidad de Granada. Facultad Ciencias de la Educación, Departamento de Didáctica y Organización Escolar, Granada, available at: https://dialnet.unirioja.es/servlet/tesis?codigo=294291 [Consulta: 13 de mayo de 2023].

Flick, U. (2015), *El diseño de la investigación cualitativa*, Morata, Madrid.

Flick, U. (2018), *Handbook of Qualitative Data Collection*, SAGE, California.

Franklin Fincowsky, E. (2009), *Organización de empresas*, McGraw Hill, New York.

Freire, P. (1969), *Pedagogía del oprimido*, Siglo Veintiuno, Madrid.

Fullan, M. (2019), *Nuance: Why Some Leaders Succeed and Others Fail*, Corwin, California.

Harper, D. (2012), *Visual Sociology*, Routledge, available at: https://www.taylorfrancis.com/books/ mono/10.4324/9780203872673/visual-sociology-douglas-harper

Huchim Aguilar, D. and Reyes Chávez, R. (2013), "La investigación biográfico-narrativa, una alternativa para el estudio de los docentes", *Actualidades investigativas en Educación*, Vol. 13 No. 3, pp. 392-419.

Katoppo, M. and Sudradjat, I. (2015), "Science direct combining participatory action research (PAR) and design thinking (DT) as an alternative research method in Architectur", *Procedia - Social and Behavioral Sciences*, No. 184, pp. 118-125, doi: 10.1016/j.sbspro.2015.05.069.

Kelchtermans, G. (2016), "The emotional dimension in teachers' work lives: a narrative-biographical perspective", in Zembylas, M. and Schutz, P.A. (Eds), *Methodological Advances in Research on Emotion and Education*, Springer, pp. 31-42.

Leithwood, K. (1994), "Leadership for school restructuring", *Educational Administration Quartely*, Vol. 30 No. 4, pp. 498-518.

Lucena, C. and Cruz-González, C. (2021), "El biograma como herramienta para el estudio del desarrollo identitario", in Romero, J.M., Ramos, M., Rodríguez, C. and Sola, J.M. (Eds), *Escenarios educativos investigadores hacia una educación sostenible*, Dykinson, Madrid, pp. 661-672.

Lucena Rodríguez, C., López, A., Domingo Segovia, J. and Cruz González, C. (2021), "Alberto's life story: transforming a disadvantaged school by appreciating the child's voice", *Journal of Educational Administration and History*, Vol. 53 Nos 3-4, pp. 249-270.

Mannay, D. (2017), *Métodos visuales, narrativos y creativos en investigación cualitativa*, Narcea, Madrid.

Martínez, R. and Granados, J. (2001), "El clima organizacional en una institución tecnológica de educación superior", *Tiempo de educar*, Vol. 3 No. 5, pp. 105-131.

Mas, X. (2007), "Una mirada creativa hacia el método biográfico", available at: https://repositorio.uam. es/bitstream/handle/10486/679483/M_27_2.pdf?sequence=1 (accessed 15 June 2023).

Matos, E.T. (2012), "Propuesta de instrumento evaluativo basado en competencias de los docentes de primera etapa de educación básica del área de español de la UE", available at: https://scholar. google.com/scholar?hl=es&as_sdt=0%2C5&q=MATOS%2C+E.+T.+A.+%282012%29% 3A+Propuesta+de+instrumento+evaluativo+basado+en+competencias+de+los+doc entes+de+Primera+Etapa+de+Educación+Básica+del+área+de+español+de+la+UE +Colegio+Academia+Merici.&btnG= (accessed 8 June 2013).

McLean, P. and Link, C. (2022), "Concept mapping as a method of analysis and visualization of frames", *Forum Qualitative Sozialforschung Forum: Qualitative Social Research*, Vol. 23 No. 1, doi: 10.17169/fqs-23.1.3537.

Meo, A. and Dabenigno, V. (2011), "Imágenes que revelan sentidos: ventajas y desventajas de la entrevista de foto-elucidación en un estudio sobre jóvenes y escuela media en la Ciudad de Buenos Aires", *EMPIRIA Revista de Metodología de Ciencias Sociales*, No. 22, pp. 13-42.

Moriña, A. (2017), *Investigar con historias de vida: Metodología biográfico-narrativa*, Narcea, Madrid.

Nieto Cano, J.M., Portela Pruaño, A., Torres Soto, A. and Rodríguez Entrena, M.J. (2018), "Del abandono educativo temprano al reenganche formativo: un estudio narrativo con biogramas", *Educatio siglo XXI: revista de la Facultad de Educación*, Vol. 36 No. 2, pp. 93-114, doi: 10.6018/j/333041.

Olmo- Extremera, M. (2017): "*Liderazgo resiliente en directores de educación secundaria en contextos desafiantes*". Tesis doctoral. Universidad de Granada. Facultad Ciencias de la Educación, Departamento de Didáctica y Organización Escolar, Granada, available at: https://digibug.ugr. es/handle/10481/49016 [Consulta: 05 de junio de 2023].

Panes Chavarría, R. and Lazzaro-Salazar, M. (2018), "Trayectorias formativas y la identidad profesional de futuros profesores de matemáticas", *UCMaule*, No. 54, pp. 9-34, doi: 10.29035/ ucmaule.54.9.

Parrilla, A. (2009), "¿Y si la investigación sobre inclusión no fuera inclusiva? Reflexiones desde una investigación biográfico-narrativa", *Revista de Educación*, No. 349, pp. 101-118.

RAE (2022), "Real academia española y asociación de Academias de la Lengua española", available at: https://del.rae.es/contenido/actualizaci%C3%B3n-2022 (accessed 10 June 2023).

Reason, P. and Bradbury, H. (2001), *Handbook of Action Research: Participative Inquirí and Practice*, Sage, available at: https://books.google.com.br/books/about/The_SAGE_Handbook_of_Action_Research.html?id=2fTlmcue2p0C&redir_esc=y

Rivas, J.I. and Herrera, D. (2010), *Voz y educación. La narrativa como enfoque de interpretación de la realidad*, Octaedro, Barcelona.

Rodas, H.D. and Sipión, L.M. (2014), "El liderazgo transformacional como apoyo en la gestión pedagógica del director", *UCV Hacer*, Vol. 3 No. 2, pp. 3-8.

Rodrigues, A.I. (2017), "Análisis de datos visuales: nuevos contextos de interpretación para la investigación cualitativa", available at: https://www.webqda.net/analisis-de-datos-visuales-nuevos-contextos-de-interpretacion-para-la-investigacioncualitativa/?lang=es (accessed 02 May 2023).

Rose, G. (2006), *Visual Methodologies an Introduction to the Interpretation of Visual Materials*, Sage, available at: https://www.miguelangelmartinez.net/IMG/pdf/2001_Rose_Visual_Methodologies_book.pdf

Ruiz, J.J. (2015), "Las entrevistas en profundidad y la biografía", *Revista San Gregorio*, No. 1, pp. 48-55.

Salgueiro Caldeira, A.M. (1993), "La práctica docente cotidiana de una maestra y el proceso de apropiación y construcción de su saber: un estudio etnográfico", available at: https://portalciencia.ull.es/documentos/5ef13aae2999520503af7d0e (accessed 21 February 2023).

Sarrot, E. and Mingo, G. (2019), "Materiales visuales en investigación social", *Del prudente saber y el máximo posible de sabor*, No. 11, pp. 95-129.

Schilling, E. and König, A. (2020), "Challenging times—methods and methodological approaches to qualitative research on time [16 paragraphs]", *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, Vol. 21 No. 2, doi: 10.17169/fqs-21.2.3508.

Thompson, I. (2009), "Tipos de organigramas", available at: https://www.promonegocios.net/organigramas/tipos-de-organigramas.html (accessed 13 May 2023).

Torres, A.E. (2021), "El transitar en la investigación cualitativa: un acercamiento a la triangulación", *Revista Scientific*, Vol. 6 No. 20, pp. 275-295, doi: 10.29394/Scientific.issn.2542-2987.2021.6.20.15.275-295.

Van Dijk, T. (2008), *El Discurso Como Interacción Social*, Gedisa, Barcelona.

Wang, C. and Burris, M. (1997), "Photovoice: concept, methodology, and use for participatory needs assessment", *Health Education and Behavior*, Vol. 24 No. 3, pp. 369-387.

Wang, A.H. (2023), "I took the photograph just to show you a little bit of perspective: photo-elicitation interviewing with family caregivers in the dementia context", *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, Vol. 24 No. 1, doi: 10.17169/fqs-24.1.3928.

Further reading

Domingo, J. and Bolívar, A. (2019), *La investigación (auto) biográfica en educación*, Octaedro, Barcelona.

About the authors
Marta Olmo-Extremera is a member of the FORCE research group (school-centred teacher education), researcher in the area of leadership, resilience, professional learning communities and school improvement. Marta Olmo-Extremera is Visiting Professor at the Federal University of the State of Rio de Janeiro and the State University of Ceará (Brazil), active member of the research networks, interleader (México) and School Leadership Network (UNESCO) and educational consultant for government agencies. Marta Olmo-Extremera is the corresponding author and can be contacted at: olmoextremera@gmail.com
Lucía Fernández-Terol is Primary Education Teacher with specialization in Therapeutic Pedagogy and has PhD in Education from the University of Granada. Lucía Fernández-Terol is also a teacher at the University of Granada (Melilla, Spain), member of the research group School-Centered Teacher

298

Education (FORCE, HUM-0386) at the University of Granada and an active member of the Research Network on Leadership and School Improvement (RILME) and the Atlántida Project. The lines of research in which his work is framed are educational improvement, curricular, professional and institutional development and vulnerability, diversity and equity in education.

Diana Amber Montes is Lecturer at the Department of Theory and History of Education in the Department of Pedagogy at the University of Jaén and has PhD with international mention from the University of Granada. Master in Research, Innovation and Intervention in Curriculum and Training. Diana Amber Montes is member of the FORCE research group (School-Centered Education) at the University of Granada and member of the Ibero-American Research Network for the Development of the Professional Teaching Identity (RIDIPD Network). Her main lines of research focus on training and labor market insertion and higher education.