

## ***Gathering the Story: Documentary Film Research and Data Collection***

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### **Abstract**

The documentary film genre is a powerful and influential information and communication medium that educates, “embraces difference,” inspires, and motivates its audience. Its increasing utilization in education timely coincides with technological advances in film and video production today. What has historically been a prohibitive undertaking is now a progressively egalitarian vocation using inexpensive equipment and software. Yet the literature on the research and collection aspect of documentary filmmaking, which is crucial to the production process, is still limited. This qualitative study explores professional documentary filmmakers’ experiences with research and data collection. A motivational model served as the framework to develop and design the instrument, as well as data analysis. The questions were reviewed by three researchers, and a pilot test was conducted with a veteran filmmaker. Eleven professional documentary filmmakers in the Asia-Pacific region were interviewed using a purposive sampling. Journaling, field notes, and observations were used in addition to the in-depth interviews. After analysis and interpretation were completed, five major themes emerged on how the filmmakers approached research and data collection for documentary film: 1) do the research, 2) tell the story visually, 3) find strong characters, 4) support universal themes, and 5) relate to your audience. This research uniquely summarized the knowledge and experiences of professional filmmakers acquired from the actual filmmaking process. These significant results provide relevant and important information and recommendations for beginner and student filmmakers learning about and exploring documentary film. This study was designed to contribute to the practice and literature of documentary film research and studies, data collection and education.

Keywords: Documentary Film, Documentary Film Research and Data Collection, Documentary Filmmakers’ Experiences, Documentary Filmmaking Recommendations, Motivational Design

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## Introduction

The film documentary is a genre in the motion picture, film and video media field. It is a nonfictional documentation of fact-based reality, and its purpose can be to provide information, increase understanding, or preserve historical records. Aufderheide (2007) defines a documentary as a film or video that “tells a story about real life, with claims to truthfulness” (p. 2). Documentary film’s grounding in reality and facts, rather than fiction, makes it an extremely powerful medium, providing images, narratives, sounds and experiences that educates, “embraces difference,” inspires, and motivates its viewer audience (Loustaunau & Shaw, 2018). The documentary film’s accessibility and relevance to broad and diverse audiences can increase engagement in a technology-connected world (Friend & Caruthers, 2016; Loustaunau & Shaw, 2018). It is an extremely popular and well-received medium for information, communication, training and education for all audiences (Bugis, 2018; Goldman, Pea, Barron, & Derry, 2007; Loustaunau & Shaw, 2018; West, Hoffman, & Costello, 2017).

Historically, documentary filmmaking was a very expensive and prohibitive undertaking. However, increased accessibility to the necessary technology, inexpensive equipment, software applications and smartphones (Loustaunau & Shaw, 2018; Winston, Vanstone & Chi, 2017) is helping the genre to become a progressively egalitarian vocation. Despite the fact that technology has evolved and nearly everyone in the industry uses digital video recording methods rather than photographic film stock, the terms “film,” “filmmaking,” and “filmmaker” are still used today and will be used in this study to define traditional film stock or digital video and the person who controls and communicates perceptions, ideas, stories, and feelings using moving images and sound (AMC Filmsite, 2020; Studio Binder, 2020).

Democratizing the industry from restrictive costs allows more people, young and old, from diverse populations, to actively participate in telling meaningful stories globally via documentary film. The people making documentary films vary widely, from high-profile celebrities to relatively unfamiliar, perhaps beginner and student filmmakers. While one end of the documentary film spectrum lists significant, successful filmmakers such as Michael Moore, whose *Fahrenheit 9/11* earned over \$221 million in U.S. and international box office revenues in 2015 (IndieWire, 2014), and 33 million Americans watched Ken Burns’ *The Roosevelts: An Intimate History* (Burns, 2014), the other end is no less important.

Although information about the overall filmmaking process is available, scholarly and popular literature on the research and collection step of documentary filmmaking, is still limited. An academic search resulted in a list of significant scholarship about the extensive and diverse world of documentary research and analysis studies, and popular sources may address it briefly; however, there is a lack in both about *how* to conduct this important step in the documentary film process. This step is essential because it determines the content of the film (Aufderheide, 2007; Bell, 2011; Frank 2013; Winston et al., 2017). According to sources (Adorama Learning Center, 2018; Desktop Documentaries, 2018; IndieWire, 2014), this second step after deciding upon the subject of the film encourages the filmmaker to search out material, gather facts, follow leads and recommendations on sources, and conduct interviews.

With documentary filmmaking becoming an increasingly democratic pursuit (Loustaunau & Shaw, 2018; Winston et al., 2017) with increased applications in education (West, et al., 2017; Winston et al., 2017), there should be a corresponding amount of information and educational resources on how to conduct subject research and data collection for documentary film, a crucial step in the documentary film process. This lack of information and educational resources is a problem because many beginners and students exploring documentary film production might not know how to begin subject research and data collection for documentary film.

Therefore, this study explores professional documentary filmmakers' experiences with subject research and data collection for documentary film. The discovery, analysis and interpretation of the wisdom and knowledge of professional filmmakers from the actual filmmaking process would add a relevant and valuable educational resource to the limited body of knowledge in this area. This information is intended to help guide and assist beginner and student filmmakers learning about and exploring documentary film production so they can share their valuable stories with the world using the increasingly accessible and effective medium of documentary film (Loustaunau & Shaw, 2018). This contribution to the literature and field of documentary film research and data collection, as well as film studies and education, was the overall goal of this article. As far as the researcher's knowledge, no previous research has explored and examined this topic in this manner before.

## **Literature Review**

### **Documentary Film Production**

For the most part, producing a traditional documentary film takes a highly subjective approach; the filmmaker directs the entire process, from subject selection, research, and data collection, to creative approaches (Bell, 2011; Friend & Caruthers, 2016). Filmmakers declare that making a documentary can be one of the most enjoyable and satisfying creative projects, yet acknowledge that it is indeed an extremely challenging pursuit with many obstacles. (Adorama Learning Center, 2018). A thrilling artistic adventure, but difficult; one with often no definitive rules or methodical procedures, and that a filmmaker usually learns by simply and intuitively doing (Desktop Documentaries, 2018). Paradoxically, filmmaker Michael Moore (IndieWire, 2014) insists that the first step to documentary filmmaking is to not make a documentary. Instead, he emphasizes, one should make a movie. "Stop making documentaries. Start making movies. You've chosen this art form – the cinema, this incredible, wonderful art form, to tell your story. You didn't have to do that." (para. 1).

The first step towards creating a documentary film is to find a subject or topic that is important to the filmmaker and is of interest to others. Since the documentary film journey is often formidable and arduous, the subject needs to invigorate and animate the filmmaker, while also being reinforcing for the extended work towards completion. The filmmaker needs to also feel resolutely determined to share the story with others through the medium of film (Adorama Learning Center, 2018; Desktop Documentaries, 2018).

Generally, the second step on the documentary film creation journey is to search out material, gather facts, follow leads and recommendations on sources, and conduct interviews. This is the important “research and data collection,” stage of the process (Studio Binder, 2018) which is essential to any documentary film because it drives the content of the film (Aufderheide, 2007; Bell, 2011; Frank 2013; Winston et al., 2017). Subject research and data collection include learning about the background, history and context of the subject using physical, digital and human sources, as well as the interesting, credible, emotional and inspiring material featuring the pivotal points that will connect and resonate with the audience (Adorama Learning Center, 2018).

Table 1 features steps 1 and 2 and the next five suggested steps in creating a documentary film from several sources. Please note that this is not a comprehensive list and does not include all the elements of the filmmaking process, including funding and budgets (Adorama Learning Center, 2018; Desktop Documentaries, 2018; IndieWire, 2014).

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- Step 1: Identify a “worthy” story.
  - Step 2: Conduct research and data collection.
  - Step 3: Create an outline of how the story will be told; its core points and characters.
  - Step 4: Design a detailed production plan to record interviews, supplemental footage, and reenactments if applicable.
  - Step 5: Write a script based on the most compelling elements of the story.
  - Step 6: Edit the footage according to the script to create a meaningful and dynamic story.
  - Step 7: Distribute the film using applicable approaches.
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Table 1: Steps to a Documentary

### **Documentary Film Application in Education**

Documentary film is widely recognized and utilized successfully in education in many ways, including increasing awareness and knowledge for learners through information and instruction, and educational research and scholarship (Aufderheide, 2007; Bell, 2011; Frank, 2013; Winston et al., 2017). Completed, existing products are usually used as educational resources and material, and the act of documentary filmmaking production is often utilized as a research instrument. The increasing use of both methods in educational environments timely coincides with technological advances in film and video production today (Loustaunau & Shaw; 2018; Winston et al., 2017). With Internet accessibility, digital technologies, and lower production costs, documentary film production has escalated and their use in research and instruction across the disciplines has correspondingly increased (Leavy, 2015; Winston, et al., 2017).

Social science research (Frank, 2013; Goldman et al., 2007) including anthropology, often utilizes documentary film using terms such as ethnographic film and ethnocinema (Leavy, 2015). *Video Research in the Learning Sciences* provides a comprehensive exploration of key theoretical and methodological use of documentary film in studies (Goldman et al., 2007). *New Documentary Ecologies: emerging platforms, practices and discourses* reports on the research applications of the powerful and relevant medium and its recent surge in digital platforms (Nash, Hight,

& Summerhayes, 2014). Bell (2011) emphasized the importance of the genre in historiographical research and scholarship.

Frank (2013) sought to expand awareness of the vast and significant instructional opportunities that documentary films provide to students, and Whiteman (2004) examined their political impact upon learners and audiences. Fonda (2014) discussed the benefits of art therapy and filmmaking in a maximum security forensic psychiatric facility. Documentary film is now used in many different research and instructional contexts using a wide range of styles and approaches. They can range from loosely planned, informal short projects to fully storyboarded, scripted and rehearsed professional productions that require hiring a cinematographer, crew and staff, as well as a cast for reenactments. Some may also feature the researcher(s), participants, and other sources (Leavy, 2015; Leavy & Chilton, 2014).

Documentary film has proven to be a popular medium for researchers and educators hoping to inspire and promote knowledge and awareness of diverse, global issues (Aufderheide, 2007; Frank, 2013; Rashid, 2014). For example, social justice and climate change to various audiences (Friend & Caruthers, 2016; Hanley, Noblit, Sheppard, & Barone, 2013); migration and immigration from Central and South America (Loustaunau & Shaw, 2018); to the environmental and worldwide health concerns of agricultural chemicals (The Monsanto Papers, 2018).

### **The Current Study**

The purpose of this study was to address the lack of information and inadequate educational resources about the methods and procedures of subject research and data collection for documentary film in either popular or scholarly sources. Veteran documentary filmmakers might know how to address the central question: where does one begin to tell a meaningful story after deciding upon the subject? However, beginners and students exploring documentary film production may not know where to start and there are no easy-to-use resources for them. With documentary filmmaking becoming an increasingly democratized industry due to inexpensive equipment and software applications (Loustaunau & Shaw, 2018; Winston et al., 2017) with unlimited informational and educational possibilities, there should be a comparable amount of resources about this important step.

The researcher sought to address this problem by generating an original educational resource about documentary film subject research and data collection. The researcher felt the best way to accomplish this was to conduct in-depth interviews with professional documentary filmmakers to find out how they go about conducting research and data collection once they have established their subject or topic of a documentary film. The actual real-world experiences and knowledge of a group of professional documentary filmmakers would be extremely valuable and useful because it is a compilation of experience, wisdom, and insight. This expert guidance about this important step in the documentary film production process would benefit beginner and student filmmakers by providing a head start in the long and complex filmmaking process. It would also be advantageous for a global society as audiences would gain broadened learning opportunities with an increased availability to timely documentaries from filmmakers.

The exploration and discovery of professional filmmakers' experiences in documentary film subject research and data collection, and the analysis and interpretation of that data would create a significant output: a highly relevant and useful educational resource for beginner and student filmmakers learning about and exploring documentary film production. Thus, this study answers the following research questions:

RQ 1: What are documentary filmmakers' experiences with documentary film subject research and data collection?

RQ 2: How can these experiences be analyzed, interpreted and categorized?

## **Methodology**

A qualitative interpretive inductive research approach (Creswell, 2007, 2009, 2018; Maykut & Morehouse, 1994; Yin, 2016) was used in this study to answer the first research question to seek greater understanding and perspectives of the participants. The researcher will also use the ARCS motivational model concepts (Keller, 1983, 2010, 2017) as the framework to develop and design the data collection instrument for RQ 1 as well as for the analysis, interpretation and categorization of the data to answer RQ 2. In addition to the qualitative instrument, journaling, field notes and observations were recorded during all phases of this study and will be used to apply triangulation to strengthen and increase credibility and validity (Glesne & Peshkin, 1992; Yin, 2016).

## **Participants**

A purposive sampling (Bryman, 2012; Yin, 2016) of 11 professional documentary filmmakers out of a pool of 14 in the Asia-Pacific region participated in this study. Two experienced, respected professionals in the field of documentary film, with many accomplished products, provided suggestions on filmmakers, and reviewed and approved the completed list. An exempt status IRB approval was secured for the study and consent protocol was followed for the voluntary interviews. To improve the instrument and determine if the questions would appropriately collect the information needed to answer RQ 1, a pilot face-to-face, semi-structured interview was conducted with a professional filmmaker actively producing documentary films in the Asia-Pacific region for many years. She is also the executive director of a nonprofit organization committed to achieving intersectional gender equity in filmmaking and is a filmmaking instructor. The pilot data was used to make minor adjustments to refine the interview questions. The researcher then proceeded with semi-structured interviews with 11 professional filmmakers with the requirements:

- Minimum of three years actively working in the field of documentary film production.
- Completed a minimum of one to two films (minimum of 30 minutes) with public distribution.
- Primary purpose of the completed documentary films and falls under the definition and interpretation of the genre.
- Asia-Pacific connection - completed a minimum of one documentary film with a topic that is relevant or related to the Asia-Pacific region.

Along with the requirements, a list of assumptions was identified to establish guidelines regarding the documentary filmmakers' experiences with documentary film subject research and data collection:

- Subject/topic of documentary film established.
- Educational purpose established.
- Themes relating to subject established.
- Budget limits and considerations established.
- Project time boundaries established.

## **Research Design**

**ARCS Model of Motivational Design.** This study sought to address the problem of a lack of information and inadequate educational resources about how to conduct subject research and data collection for documentary film. To increase the likelihood that the final summary of data, the educational resource, will resonate with the target audience, beginner and student filmmakers, Keller's well-established ARCS motivational model for instructional design (Keller, 1983, 2010, 2017; Pappas, 2015) served as the framework to inform and guide the study. The ARCS motivational factors of attention, relevance, confidence and satisfaction (Gagne, Wager, Golas, & Keller, 2005) are strongly applicable to the field of documentary film with similar motivational goals for documentary filmmakers, whether they are veterans or students (educators/instructional designers), and their audience (learners/students) (Astleitner & Hufnagl, 2003; Bugis, 2018; Hodges & Kim, 2013; Keller & Suzuki, 2004; West et al., 2017). While the goals for documentary filmmakers, both experienced veterans and beginners, may not be referred to as "instructional design," their educational goals are very similar, and they are using relevant, motivational methods of film and video production (Frank, 2013; Nash et al., 2014; Winston et al., 2017).

The researcher was able to leverage the ARCS model in the design and development of the instrument, the professional filmmakers' interview questions, as well as with the analysis and interpretation of the collected data. With the end goal of creating an educational resource for beginners and students exploring documentary film, the ARCS model helped the researcher align the interview questions with the ARCS motivational factors (Gagne, et al., 2005; Keller & Suzuki, 2014; Kim & Keller, 2008) as the educational categories.

## **Instrumentation**

Instruments for the study's data collection were derived from relevant literature and designed and developed by the researcher. Triangulation, application of different valid data collection methods, was applied to strengthen the study and increase credibility and validity (Glesne & Peshkin, 1992; Yin, 2016):

- 1) Semi-structured interview questions, 20 in total.
- 2) Journaling, field notes and observations.
- 3) Audio-recorded semi-structured interviews with the professional filmmakers, followed by transcripts of participants.

The ARCS model (Keller, 1983, 2010, 2017; Pappas, 2015) guided the design and development of the interview questions to ensure they addressed the topic of subject research and data collection from the four ARCS perspectives: attention, relevance,

confidence and satisfaction (Gagne, et al., 2005). To ensure the interview questions obtained useful data necessary to answer the research question, including drawing out the rich and thick descriptions of qualitative data, three researchers familiar with the topic reviewed the questions and they were revised before implementation. This provided an inter-rater reliability check, contributing to pilot data. A pilot test of the interview questions was also conducted with one filmmaker in a face-to-face interview to evaluate the usability of the questions. The pilot data was used to make minor adjustments to refine the interview questions. Examples of the interview questions and their relationship to the ARCS concepts are shown in Table 2 in the Results section. There were a total of 20 questions.

Qualitative research often includes journaling, field notes and observation – part of the triangulation method of data collection (Bryman, 2012; Yin, 2016). The journaling, field notes and observations for this study were conducted and documented by the researcher during all phases of the study. As the data collection researcher of the study, the researcher also assumed the role of “participant observer” when conducting observations and taking field notes during field work (Bryman, 2012; Yin, 2016).

### **Procedure**

In addition to the pilot test interview, 14 professional filmmakers were selected through purposive sampling (Bryman, 2012; Yin, 2016) and were invited to voluntarily participate in the research via a recruitment email that explained the purpose of the study. Eleven participants responded with interest and availability. They were emailed a consent form following the UH Mānoa Institutional Review Board (IRB) research protocol that provided a basic outline of the study, its objectives, and included an agreement to an audio recording of the interview. It also covered participants’ rights, risks, benefits, confidentiality and privacy concerns. Participants were asked to read, sign and return the form by email. Interviews (phone, online and face-to-face) were scheduled and the researcher was able to complete 11 in-depth, semi-structured interviews. The study was designed to have minimal impact on the participants.

### **Rigor**

The data, observations, interpretations and findings of this study were trustworthy, reliable, authentic and, as much as possible, documented and validated (Maykut & Morehouse, 1994; Yin, 2016). The following four research assessments were applied to the study: 1) triangulation of data: audio-recorded interviews, transcripts, observations, journaling and field notes, 2) inter-rater reliability, 3) respondent validation and member check, and 4) trustworthiness and authenticity of data sources.

Two experienced, respected professionals in the field of documentary film provided suggestions on filmmakers to minimize bias. They also reviewed and verified the completed list of filmmakers (Ifenthaler & Schumacher, 2016), providing inter-rater reliability checks (Bryman, 2012).

To ensure the interview questions obtained useful data necessary to answer the research question, three researchers familiar with the topic reviewed the questions and



provided constructive feedback. The questions were revised before implementation. This provided another inter-rater reliability check that contributed to the pilot data. A pilot test of the interview questions was also conducted with one filmmaker in a face-to-face semi-structured interview to evaluate feasibility of the questions. The pilot data was used to make minor adjustments to refine the interview questions.

Completed transcripts were emailed to the participants, who approved and validated their accuracy and intent of answers, providing respondent validation, or member checks, adding to the credibility of the study.

## Results

This study focused on collecting the knowledge, experiences and insight on research and data collection for documentary film, and related information, from professional filmmakers through in-depth interviews. The researcher conducted 45 to 60-minute semi-structured interviews with each of the participants. This enabled the researcher and participants the freedom to pursue other related ideas and points that were relevant to the interview and the data collection process. (Maykut & Morehouse, 1994; Yin, 2016). The researcher audio-recorded the interviews with a digital recorder and also used an iPhone as a backup. Many of the interview questions were purposely designed to be open-ended to allow for expansion, emergent or additional information from participants and to collect information the researcher might not have anticipated.

The researcher conducted the interviews to encourage thick and rich narrative responses, along with the specific questions necessary for the study, while using probes and follow-up questions. During the interview, the researcher was cognizant of any signs from the participants of stress or uncomfortableness, and was prepared to stop. (Maykut & Morehouse, 1994; Yin, 2016). The researcher observed that all the filmmakers were comfortable with the interview, openly and freely sharing and discussing their work and knowledge. It is clear that they are familiar and accustomed to this type of dialogue, likely participating at screenings, discussion panels and presentations.

### Interviews with Participants

The researcher transcribed the interviews and then analyzed and interpreted the data, including the journaling, field notes and observations, by applying the Five Phases of Analysis and their Interactions framework (Yin, 2016). An inductive approach was implemented and emergent categories and themes were grouped according to their relationship with the concepts of the ARCS model: attention, relevance, confidence and satisfaction (Keller, 1983, 2010, 2017; Pappas, 2015). This data answered the first research question: What are documentary filmmakers’ experiences with documentary film subject research and data collection? Table 2 features examples of the interview questions and participant answers and their alignment with the ARCS “Attention and Relevance” concepts.

ARCS Concepts and Definitions	Interview Question	Participant Answers
● <b>Attention</b> Capturing interest	How do you approach research and data	“I try to find stories and data that may be eye-opening to

<ul style="list-style-type: none"> <li>● and curiosity</li> <li>● Perception and by inquiry</li> <li>● Connection and participation</li> <li>● Specific, relatable examples; conflict and variety</li> </ul>	<p>collection to try and capture the attention or curiosity of your audience and maintain interest?</p>	<p>audiences and will capture their attention through emotion and human interest.” – Participant #8</p> <p>“Casting is critical. I consider casting as research and development. We try to find a charismatic key character. It’s more about how our key characters will resonate with the audience through their stories.” – Participant #9</p>
<p><b>Relevance</b></p> <ul style="list-style-type: none"> <li>● Immediate application</li> <li>● Set example through experience</li> <li>● Set example through role models</li> <li>● Future usefulness</li> </ul>	<p>How do you incorporate research and data collection so that the film will be a valuable learning experience, or provide a benefit, for the audience?</p>	<p>“The key characters are passionate about the issue and we knew they would resonate with our audience. But they don’t have PhDs or other credentials that some audiences might judge them on, so we did research to find the top scientists and medical doctors in the field and we interviewed them to bolster the credibility of our activist key characters. We incorporated many peer reviewed academic articles into the film to bolster credibility even more. Then we had everything fact checked by our researchers and vetted by our attorneys. When the audiences see that our key characters are credible, it has a greater impact and the audience benefits from the story.” – Participant #4</p>

Table 2: Examples of the interview questions and participant answers and their alignment with the ARCS “Attention and Relevance” concepts.

Using Table 2 as an example, the ARCS model of motivation concepts were used to code the filmmakers’ data on how they approached research and data collection for documentary film. Analysis and interpretation were completed in phases using Yin’s Five Phases of Analysis and their Interactions Framework (2016) and the developing results were categorized into dominant themes. Subsequently, five major themes emerged from the analysis (See Table 3). This iterative approach and process

consequently answered the second research question: How can these experiences be analyzed, interpreted and categorized?

Since the overall goal of this study was to generate an original educational resource that would help beginner and student filmmakers with subject research and data collection for documentary film, the information was then organized and arranged into five sections of beneficial suggestions intended to guide and assist beginner and student filmmakers.

## **Review**

In order to assure the information was presented using instructional best practices, the researcher conducted a review of the text with four experienced, qualified researcher/educators familiar with the topic and a student filmmaker. Overall, the feedback from the reviewers were positive and they felt the content was very informative and useful for student filmmakers; however, they also provided helpful, constructive feedback on the text. For example, they felt the main ideas for each of the five suggestions were overwhelming because they were too dense and text heavy and needed to be edited and revised for clarity and conciseness, adding that bullet points could be added to break up the text and highlight information. They noted parallel phrasing should be applied, and that each of the five suggestions should begin with a verb. The constructive feedback and comments from the reviewers were applied and resulted in the content and information featured in Table 3 below that presents the five major themes in short, concise, bullet point information that would be relevant and useful to beginner and student filmmakers.

<p style="text-align: center;"><b>Tell the Story Visually (Attention)</b></p> <ul style="list-style-type: none"><li>● Collect interesting interviews, historical documents, material, photos, videos and supplemental footage.</li><li>● Answer why this story needs to be presented visually.</li><li>● Determine if the sources and materials are accessible.</li><li>● Establish an organized system for all of the data.</li><li>● “Show” the audience, not just tell the audience.</li></ul>
<p style="text-align: center;"><b>Find Strong “Characters” (Attention)</b></p> <ul style="list-style-type: none"><li>● Focus on the strength of your interview sources.</li><li>● Feature genuine interview characters who are engaging, fascinating, vulnerable, revealing, and who feel true.</li><li>● Create an emotional and impactful audience connection.</li><li>● Generate affinity and empathy with the audience.</li><li>● Guide the audience on a storytelling journey.</li></ul>
<p style="text-align: center;"><b>Support Universal Themes (Relevance)</b></p> <ul style="list-style-type: none"><li>● Focus on all-embracing topics such as love, joy, peace, family, survival, pain, suffering, equity, or the striving and struggling one takes to reach a goal.</li><li>● Unravel the universal human stories and relationships.</li><li>● Shed light on the shared and collective human experience.</li><li>● Select topics that entertain and move audiences.</li></ul>

<b>Do the Research (Confidence)</b>
<ul style="list-style-type: none"> <li>● Complete an exhaustive resource search.</li> <li>● Collect existing material about your subject.</li> <li>● Identify key characters who can tell the story.</li> <li>● Determine experts who can add legitimacy.</li> <li>● Pinpoint a gap in the story, or a lack of the story.</li> <li>● Fill that void with your documentary film</li> </ul>
<b>Relate to your audience (Relevance and Satisfaction)</b>
<ul style="list-style-type: none"> <li>● Create a meaningful, relevant story that resonates, informs, educates, inspires and empowers audiences to action.</li> <li>● Help the audience apply the story to the real world, current issues, and to their own lives and circumstances.</li> <li>● Encourage viewers to insert their own stories, experiences and struggles into what they're seeing.</li> </ul>

Table 3: Five major recommendations/categories from the data collected from the professional filmmakers and their relationship to the ARCS model concepts.

## Discussion

While subject research and data collection is an essential part of the production of documentary films, a literature review revealed that information and educational resources about *how* to conduct this important step in the documentary film process were lacking. The overall goal of this study was to address this problem by collecting, analyzing, interpreting and presenting relevant information about the methods and procedures of subject research and data collection for documentary film. This information is intended to assist and guide beginner and student filmmakers learning about and exploring documentary film production.

This study accomplished this objective by using a qualitative interpretive approach to gather information, knowledge and experiences from professional documentary filmmakers on how they go about conducting research and gathering information once they have established the subject or topic of a documentary film. Keller's ARCS motivational model (1983, 2010, 2017; Pappas, 2015) was used to inform and guide the development of the data collection instrument and interviews were successfully completed with 11 professional filmmakers. Thus, RQ 1 was successfully answered in this study: What are documentary filmmakers' experiences with documentary film subject research and data collection?

The researcher found the interviews with the professional filmmakers to be extremely insightful and valuable because it documented their expertise and wisdom about subject research and data collection for their documentary film projects. The interviews also helped explain why information on this step of the documentary film process is lacking in existing literature. Since producing documentary films can be such a subjective, creative and intuitive process, it can be difficult to document a methodical, direct process; and each filmmaker seems to develop their own method and procedure that works well for them. Often, it is a more iterative and fluid practice that is quite challenging to specify and label. The findings from the study generally agreed with the ambiguous and indefinite nature of the existing literature.

However, after interviews with the professional filmmakers were completed, the researcher analyzed and interpreted the data through an inductive process, using Keller's ARCS (1983, 2010, 2017) concepts as a framework and was able to successfully extract themes and categories. Thus, the academic research, approach, and findings in this original study in the field of documentary film research and collection were significant. The researcher was able to effectively answer RQ 2: How can these experiences be analyzed, interpreted and categorized?

Five dominant themes emerged from the professional filmmakers' data on how they approached research and data collection for documentary film after analysis and interpretation were completed in phases: 1) do the research, 2) tell the story visually, 3) find strong characters, 4) support universal themes, and 5) relate to your audience. This research uniquely summarized the knowledge and experiences of professional filmmakers with research and data collection for documentary film by featuring their wisdom, experience, and insights acquired from the actual filmmaking process.

Since the overall goal of this study was to provide an educational resource that would help guide and assist beginner and student filmmakers learning about and exploring documentary film production, the results were presented in the form of beneficial recommendations and suggestions. The findings of this study adds valuable information and an important educational resource to the limited body of knowledge on the subject which was the overall goal of this research study.

This beneficial information is intended to help beginner and student filmmakers share their valuable stories with the world using the increasingly accessible and effective medium of documentary film (Loustanaou & Shaw, 2018). This study makes a major contribution to the field and literature of documentary film research, data collection and studies, as well as film studies and education.

## **Conclusion and Future Research**

This study used a qualitative interpretive approach to address the problem issue: a lack of information and educational resources on subject research and data collection, an important step in the documentary film process. The research explored and collected data about professional documentary filmmakers' experiences with subject research and data collection through in-depth interviews. Keller's ARCS motivational model served as the framework to develop and design the instrument, the interview questions to the filmmakers (Keller, 1983, 2010, 2017; Pappas, 2015). Eleven professional documentary filmmakers in the Asia-Pacific region were interviewed, including a pilot test interview, and data was analyzed. Journaling, field notes, and observations were used in addition to the interviews for triangulation of data (Bryman, 2012; Yin, 2016).

After analysis of the data was completed, the researcher agreed with the existing literature that since producing documentary films can be a subjective, creative and intuitive process, it can be challenging to document a methodical, specific process. However, the researcher analyzed and interpreted the data through an inductive process, using Keller's ARCS concepts as a guide and framework, and was successfully able to extract themes and categories and organize them in the form of constructive suggestions and recommendations.

The results summarized professional filmmakers' valuable experiences, knowledge and insight acquired from the actual process of filmmaking and was presented in a helpful, practical, usable, easy-to-understand format. The information from this original study provides important and useful information about *how* to conduct subject research and data collection for documentary film, an essential step to any documentary film because it determines the content of the film. These results are noteworthy as they provide relevant information that may guide and assist beginner and student filmmakers learning about and exploring documentary film production. The findings of this study are significant as it adds valuable information and an important, original and new educational resource to the limited knowledge on the subject. This study makes a major contribution to the practice and literature of documentary film research and studies, data collection and education.

The overall goal of this study was to address the lack of information and inadequate educational resources about the methods and procedures of documentary film research and data collection by contributing information and an educational resource that would help beginner and student filmmakers. Thus, it would be a natural next step to investigate how this beneficial information could be presented to that target audience. Future research could develop these findings into an informative, easy-to-use, helpful educational resource that could be utilized by beginner and student filmmakers.

This future research might lead to the design and development of an educational resource or module for documentary film subject research and data collection. After this module is completed, further studies could investigate the impact of this educational module upon the target audience. Looking forward, future research could prove quite beneficial to the informational and educational resources in the field of documentary film research and data collection, film studies and education.

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