



Research Article

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Improving Research Impact Through the Use of Media

<https://doi.org/10.1515/opis-2017-0004>

Received February 15, 2017; accepted August 15, 2017

Abstract: Increasingly researchers and academic research institutions are being asked to demonstrate the quality and impact of their research. Traditionally researchers have used text-based outputs to achieve these objectives. This paper discusses the introduction and subsequent review of a new service at a major Australian university, designed to encourage researchers to use media, particularly visual formats, in promoting their research. Findings from the review have highlighted the importance of researchers working in partnership with in-house media professionals to produce short, relatable, digestible, and engaging visual products. As a result of these findings, the authors have presented a four-phase media development model to assist researchers to tell their research story. The paper concludes with a discussion of the implications for the institution as a whole and, more specifically, libraries.

Keywords: research storytelling, research story, media development model, library services, researcher skills

1 Introduction

Much has been written both nationally and internationally about the fact that increasingly governments are seeking more visible economic and social returns from their investments in research (New Zealand 2015, United Kingdom 2015, United States 2015, Australia 2016). Along with the concept that publicly funded research should be made publicly available (Harmon 2016) is the idea that researchers and academic research institutions should be able to demonstrate the quality and impact of their research. While not a particularly new concept in higher education, the creation in Australia of the National Innovation and Science Agenda (<http://www.innovation.gov.au/>), for example, has focused attention on increased engagement between universities and industry to ensure that “research has a commercial and community impact” (Cahill, Bazzacco 2015).

Demonstrating impact implies the ability to encapsulate “the research story”. While the research story can be another term for literature review (Feak, Swales 2009), in this case it refers to encapsulating the key aspects of a research project in a way that non-academics, as well as academics, can fully appreciate the significance. The inherent difficulty is epitomised by Krueger’s (2015) comment that “Canada’s social scientists and humanists have traditionally struggled to communicate their world-class research beyond academic circles”. They do not know how to tell the story of their research. They are not alone.

As a result of governments increasingly seeking more visible economic and social returns from their investments in research (Donovan 2011, Hicks 2012), there are a number of audiences to whom researchers

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and academic research institutions should be able to demonstrate the quality and impact of their research. These include:

- research funding agencies
- potential collaborators and industry funders
- project stakeholders
- public

Traditionally this is achieved through methods such as reports, impact statements (e.g. Australian Research Council), articles, and metrics. It does not take advantage of the more contemporary methods and channels for publically telling the story of a research project or activity.

While governments are introducing impact frameworks and measurements for their investment in research, researchers need also to look at methods of telling the story to their other audiences as listed above. Researchers and research institutions need to rethink beyond the more traditional methods their approaches to telling the story of the impact of their research. This paper proposes a model which uses visual media as a method for helping to tell that story.

2 Related Research

In discussing storytelling as a strategy to enhance what Myers (2015) refers to as “knowledge mobilization”, he makes the point that while research represents a “meaningful unit of knowledge”, it can be difficult to translate the associated scientific evidence into messages which are readily understood by non-experts. Therefore, the challenge for researchers is to decide when and how to appropriately use storytelling to help communicate their research to that particular audience.

In the same vein, Davison (2016: 191) wants to “highlight the importance of storytelling in our research and to encourage all authors to write their papers in such a way that they tell compelling stories”. He goes on to make the point that:

Normally, I would expect stories to be qualitative, and so it may be easier to tell stories when the research data itself is qualitative, for instance, in a case study, ethnography, hermeneutic investigation or action research. But a good storyteller ought to be able to write a story about almost any kind of research because the underlying research motivation and the way it is justified and later transformed into a research design are fundamentally a creative process. This should be as true for a case study as for design science, surveys or experiments (191-192).

As a panel workshop at the University of Iowa (2011) reinforced, regardless of whether the objective is to inform, educate, or persuade, researchers should learn to “translat[e] technical and complex areas of research into accessible language and find a narrative for your work that is clear, compelling and effective.” In short, it is important to have the skills to discuss one’s research, using terminology that can be understood by non-specialists.

In addition to creating a compelling narrative / story, researchers need to consider whether a text-based communication is necessarily the most appropriate channel for delivering their message. Does this model match the evolution of the ways in which a target audience currently can and/or expects to access digital content?

In looking at the history of YouTube, for example, one notes how it evolved at a time (2005) when the capture of video content was growing exponentially but the ability to share such content was quite restricted. Nowadays YouTube is the largest online video destination in the world and the second most visited website overall (Alexa 2016). The point is that we live in a visually rich world, in which we expect to receive information in a variety of content forms, which frequently include multimedia. Text is but one content form among many.

The following is an example of an attempt within a university to tell the story about some of its students’ research projects by introducing a visual rather than text-based “hook”. In 2012 the Office of Research at St. Catherine’s University (Minnesota) approached the Library about finding a venue to showcase the faculty/

student collaborative research that happens at the University. Using some lateral thinking, the Library decided to use an institutional image repository (Digital Commons Galleries) to provide a snapshot for each of the various research projects (Asch 2012). The end result was a graphical representation, with images as the primary point of information (http://sophia.stkate.edu/orsp_studentresexp/). That said, the overall content is still heavily text-centric.

What, then, if the primary medium for conveying technical / research information were visual rather than text, depending on the target audience? And what if we took another step and moved away from the “talking head” concept, i.e. someone presenting information in a long/ short, dry and visually boring manner, to something more dynamic and engaging? And possibly without sound? Some interesting examples of this from industry and social media, using video as the principal vehicle for communication, provide an incentive to rethink the way in which we present information more generally and research more specifically.

CuriousWorks, an Australian-based company, promotes the idea that “the ability to express ideas visually is at the core of good film making. The video scavenger hunt challenges participants to get ideas across to an audience using only expressive videography (2009).” This underpins the belief that communities should be able to tell their own stories in a powerful and sustainable way. The effectiveness of the silent or no-dialogue approach with modern audiences, according to Hemmerich (2015), is that “Sometimes, purely visual storytelling draws people away from all the other noise and closer into your content.” Harley (2001) has reported on research at 3M Corporation which concluded that humans process visual data 60,000 times faster than text.

In the advertising industry, says Rowntree (2016), “Advertisers are facing a big challenge in the mobile video industry – how to get users’ attention fast enough before they move on, and how to do so without sound.” Social media faces a similar scenario: “Something big is happening with online video. Not only are we consuming it more and more (Mark Zuckerberg says 80% of our Facebook feed will be video by next year), but we are consuming it in different ways than we used to. Often it’s vertically – and more often the [sic] not, without sound (Moen 2016).”

In the research domain, the use of video abstracts has emerged recently as a means of enhancing the communication of research in scholarly outlets, such as journals. Spicer (2014: 3) defines a video abstract as “a video presentation corresponding to a specific science research article, which typically communicates the background of a study, methods used, study results and potential implications through the use of images, audio, video clips, and text”. In his case study of the *New Journal of Physics*, he found that the top 25 most viewed articles, for example, had a significantly higher inclusion of video abstracts than the remaining articles in the total data set.

Spicer is quick to point out that having a video abstract does not necessarily guarantee that an article will have a high rate of usage. However, it does highlight the potential to reach an audience in new ways. From a researcher’s perspective, an added benefit is that the process of producing a video can prompt them to think about their research differently (Spicer, 2014: 4). As a corollary, Reupert (2017: 2) underlines the potential for video abstracts “first, to help researchers communicate their findings more effectively and simply, and second, to make research more accessible and convenient for end users”.

One can also find discrete examples of efforts to use visual impact to engage the audience, without relying on either text or sound to convey meaning. Schuttler (2015) has created what she calls a “story arc for scientists”, in which she describes the various steps by which a scientist (researcher) can create hooks that help tell the “story” of their research endeavours –not the “facts”. Other efforts are centred on how to tell a meaningful story with data. Walsberg (2014) makes the important point that good data visualisation “stands on its own; if taken out of context, the reader should still be able to understand what a chart is saying because the visualization tells the story”. Storytelling helps the reader gain insights from the data (Stikeleather 2013).

It is not surprising that “data storytelling” is now considered to be an essential skill in some disciplines. Perhaps because as Dykes (2016) suggests, “many of the heavily-recruited individuals with advanced degrees in economics, mathematics, or statistics struggle with communicating their insights to others effectively—essentially, telling the story of their numbers”. This is not to suggest, however, that telling the

research story is only about explaining one's data, if appropriate. There are more dimensions to the skill of extracting those insights which will ultimately be compelling to one's audience.

Moreover, this is not to suggest that there is any one superior media format, but rather that the traditional text-centric approach fails to utilise the full range of available communication channels. Ultimately, one should select the most appropriate format—be that text or non-text—based on desired outcomes.

In this paper, the authors focus on digital storytelling, in which the primary source of multi-media format is visual content. This includes real life video footage, motion graphic, animation, infographic and photographs, i.e., any visual element that has been created or captured using a multi-media digital tool. However, the final product may also have an audio component. In this paper, the authors refer to such outputs as “media products”.

In the following sections, the authors will discuss the introduction and subsequent review of a new service at a major Australian university, designed to encourage researchers to tell the story of their research through media products.

3 Methodology

Since the authors were interested in obtaining qualitative—rather than quantitative—data, they utilised case study methodology. Social scientists in particular have used this methodology for many years to examine contemporary real-life situations and provide the basis for the application of ideas and extension of methods (Yin 1984). According to Meyer (2001), it is ideally suited for exploring new processes or behaviours.

The service commenced in July 2015 in a start-up capacity. In 2016 it was delivered as a full service with a twelve month work plan, which accounted for 26 video products. In three instances, the lead researcher was responsible for more than just one video product as they managed a centre or a research program. In 2016 three lead researchers accounted for 22 video products which involved researchers from within their respective centres/programs. As part of their initial review of the service described below, the authors developed a short questionnaire, which they emailed to the lead researcher for each of the video products which had been published. (Refer Appendix A). These emails were sent at least six months after the videos were published to allow researchers time to assess the impact of the video. At time of writing, some researchers had not yet been requested to provide feedback as the six month waiting period had not yet been reached.

The “Four Phase Media Development Model to Tell Your Research Story”, as proposed in this paper, was formulated on the basis of emailed feedback from researchers responsible for 2015 and 2016 projects, along with observations made by the Media Production team members through ongoing discussions and interactions between the team and researchers.

4 The introduction of a media production service at Griffith University

Key research project outputs no longer need to be confined to written reports. They can include videos, motion graphics, infographics, data visualisation, digi-posters, and other types of visual media. With all the information and literature available to us about the value and impact of visual media, it is surprising how many researchers consider visual materials as an afterthought. Recognising and acknowledging, early on, the visual potential of the research that is being undertaken is the first step in ensuring a meaningful, engaging, and authentic visual output.

Griffith University is a comprehensive, research-intensive university, ranking 37th in the 2015/16 QS University Rankings Top 50 Under 50 (Quacquarelli Symonds 2016). Located in the rapidly growing corridor between Brisbane and the Gold Coast in Southeast Queensland, the University offers more than 200 degrees across five campuses to 50,000 students from 130 countries studying at undergraduate through to doctoral level in one of four broad academic groups: arts, education and law; business; science; and health. Griffith's

strategic research investment strategy has positioned it to be a world leader in the fields of Asian politics, trade and development, climate change adaptation, criminology, drug discovery and infectious disease, health, sustainable tourism, water science, music and the creative arts.

The Division of Information Services (INS), with which the authors are affiliated, has a long and proud tradition of providing quality service to Griffith students and staff. It also has an international reputation for being innovative and cutting-edge in the deployment of emerging technologies (Stanford University Libraries 2013). In 2015 a new service, Media Production, was offered to researchers through the eResearch Services unit to co-develop media products with researchers, so as to help them tell the story of their research projects. The primary objective was not intended to produce marketing materials but rather for specific purposes, such as explaining a research activity/concept for a conference/project website or more broadly raising awareness of the research with the general public.

The Media Production team consists of two full-time staff: a team leader/educational media producer, who also fills the roles of director, video editor, and contributor to script writing and editing; and a motion graphics designer, with skills in colour grading and animation. They are supported by a small number of casual employees with specialised skills in camera operation/lighting and audio post-production. Because of limited capacity, a rolling twelve-month work plan has been established, with input from the Office of Research and the respective Deans (Research), to identify key researchers to approach to offer this service.

The work undertaken has followed four phases: scoping, development, release, and review. The activities undertaken in each of these four phases are discussed in the following sections.

4.1 Scoping

Scoping potential projects starts with an initial face-to-face meeting between the media producer and the researcher. This is more of a brainstorming session to help the researcher find the most beneficial story for their media product and to raise awareness of the investment of time and contribution required by the project from both the researcher and the production team. By the end of this meeting, the researcher is armed with a range of ideas and information, which they then can take time to consider and discuss with fellow colleagues. This period of reflection and exploration gives the researcher the opportunity to consider the information from the meeting and to clarify their need. Using this period well can save substantial time and resources once the project is in production.

The second meeting, which is still best held face-to-face, is about clarifying the need and the target audience, finalising the story idea, making a decision about the production type, and identifying the “to-do” items of the development phase. This is also the time to flag to researchers that they need to start thinking about a release plan for the product, which will need to be in place by the time the product is complete. Following this meeting, most projects are moved into the development phase. However, for the small number of projects in which the decision is not to proceed, this meeting is used to discuss future opportunities and to arm the researcher with information to support their future media production plans. Pending the outcomes from the second meeting, much of the interaction from here on, in many cases, can take place online or via tele or videoconferencing.

4.2 Development

The first step in the development phase is content writing. Depending on the production type, the content writing activity may deliver an outline for an interview-driven product, a narrative script for an animation, or a list of visuals for a product without any audio. The critical point about this activity is that the researcher, or other content experts, must write the spoken content. The role of the media producer is to assist the researcher to shape that content into the appropriate format and to highlight the content’s visual potential. This approach best ensures that the media product remains authentic to the researcher’s work and voice. In addition, this is the appropriate time to start collating any existing visual content, e.g., photographs, video

footage or graphs, that have been captured and/or collected by the researcher and which are relevant to the story that is being written. Only once the content and/or script has been written and signed off on by the appropriate individual/s should the project move into the second step in this phase, which is production.

Having gone through a series of meetings and having been involved in the content development, the media producer is in a good position to drive and deliver the logistical, technical, and creative aspects of the project, with support from the production team. During this step, the researcher may assume the role of on-camera talent and provide sign-off at critical production milestones, e.g., first cut, final cut and screener approval. Each media product or a series including several media products is treated as a project; it is common to run several projects in parallel, while progressing them through the relevant activities. The production stage ends with a handover of the media product, which is the best quality video file, as well as its supplementary components, such as additional encoded video files, audio file, transcript, and image thumbnail. These items make up the handover media package. A media package can be a standard package, featuring common and up-to-date media formats, or it can be tailored to suit the researcher's release needs.

4.3 Release

By this phase the researcher should already have put some thought into possible avenues to show, share, and publish the proposed media product. Developing a release plan is the researcher's responsibility. Any tasks that needed to be done to prepare the release environments should have been completed prior to this phase, e.g., websites, social media channels. This minimises delays in starting to use the media product and ensures its timely release. The media team discusses the release plan with the researcher as early as possible, enabling the producer to consider how to finish and format the product to best support its planned release channels.

4.4 Review

Eight months post-handover the media producer re-visits the researchers to obtain feedback on a number of factors such as: a) how they have used the product, b) their views on the impact of the product and example measures, and c) what they would change or do differently if they had the opportunity to make the media product again. This activity has potential benefits for both the researcher and the media team. With each product review, the researcher is in a progressively better position to understand how to best use visual media for their area of research in the future. The media team, for its part, gains valuable information that helps it to continuously improve service delivery.

A review of the past twelve months of developing media products with researchers has highlighted a number of issues, which are discussed below.

4.5 Findings from a twelve month review

At a recent planning session, which reviewed activities for the previous twelve months, the authors identified several issues impacting the service offered.

4.5.1 Researchers not in the habit of collecting visual content

Researchers need to get into the habit of considering possible visual outputs in the early stages of their research to enable them to start collecting relevant and engaging visual materials as their research progresses. Collecting material on an on-going basis, i.e. capturing them, saving, and storing them in the highest possible resolution, creates a wealth of irreplaceable visual content to use in future media products.

Typically, these are visual materials, which are the easiest and most economical to be captured by the researcher, for example, photographs or video footage from an overseas event, a sensitive interview, or a behavioural study activity. A photograph captures a moment in time. If that moment reveals something relevant about the research, then there is no better time to capture it than then and there. Once that time has passed, in most cases, so has the opportunity to capture it.

4.5.2 Lack of basic technical skills among researchers

There are numerous affordable and easy-to-use devices that can capture and output raw content which is suitable to use in most research-focused media outputs. Digital cameras, camcorders, smartphones, tablets, dash cams, and drones are all possible options to record audio-visual content. The quality of the capture depends not only on the device but also on the experience of the operator. Knowing a few simple techniques can greatly improve the result of even the most inexperienced operator. For example, avoid recording in front of windows with strong daylight because it makes the object that is being recorded appear dark.

4.5.3 Legal clearance rarely obtained

A photograph, a video interview, or even an original graphic is not useful or usable without permission from the on-camera talent or the creator of the work. Obtaining releases and collecting metadata that summarises basic information about the material goes hand-in-hand with the capturing process. This type of information can be difficult to obtain at a later stage.

4.5.4 Storytelling is a foreign concept in research

Researchers have spent years writing and talking about complex matters with multi-layers and at length, using academic language and tone; so it is unsurprising that they find telling the story of their research challenging. From the authors' experience, one of researchers' biggest hurdles is to move from explaining aspects of their research to demonstrating change or a solution as a result of the research, and to find accessible, succinct, and creative ways to demonstrate, rather than talk about, these outcomes. Some of these challenges could possibly be the result of researchers having had some experience in producing media for learning and teaching purposes. Such products are mostly about presenting content and demonstrating skills and techniques to students in the context of a lesson. The primary objective for such products is to contribute to learning outcomes. In the case of research outcomes, the primary objective of media products is to demonstrate the potential impact of the research and to provoke a positive reaction, and, in some cases, a call to action from the targeted audience.

4.5.5 Lack of plan to collect digital content

Digital data--whether video or audio files, photographs, scans, graphics, or the like--need a robust environment for storage. Keeping all the visual materials together with the releases and the metadata, in a well-structured folder hierarchy, is critical for keeping the data safe and to ensure quick and easy retrieval, and, in the case of long-term projects, to enable a format refresh if a file format is no longer supported. To protect the data, regular backups onto not only one but possibly also onto two devices or cloud storage is a must. It is also important to keep the data on media that will be readable in the future. For example, writable CDs and DVDs are no longer an acceptable long-term storage solution as more sustainable solutions are becoming available.

4.5.6 Lack of media product release plan

No matter how engaging, how informative, and well-made a media product is, it is unable to deliver impact without an audience. Uploading a media product to a project website does not guarantee an audience. Nowadays there are many opportunities for showing and sharing media content, such as public screenings, organisational websites, video sharing websites (e.g. YouTube), and social media platforms (e.g. Facebook). A carefully developed release plan is essential to maximise the reach and impact of the product.

4.5.7 The important role of media professionals

Obtaining advice from media professionals about possible visual outputs and production approaches in the early stages of the research can set the researcher up for a good start. This is the best time to discuss what they should capture, what devices to use, how to store the data, and when to expect to spring into production. Then later on, during the content writing step, a media professional can once again play a significant role by offering ideas to researchers about possible digital visual interpretations and approaches. In the authors' experience, an emerging role is to use this engagement opportunity to challenge researchers to make images their primary source of content and words their secondary source. Researchers need to be encouraged to say less and show more, and to keep the content concise by removing layers of complexity in order to meet the increasing need for to-the-point and easily digestible information. Finally, when it comes to production, there are a lot of digital media tools and apps available. Many of them are online, free, and designed for users with little or no technical background, for example, iMovie, Toontastic, and Capzle. These tools help record, edit and animate content. However, researchers who are time poor or have more complex ideas should outsource the production to media professionals.

4.5.8 The need for a media archive

Central to all of the above is a media archive. Its function is not only to store but also to make available and preserve important data for future generations to use. It is critical that organisations offer a robust environment to enable the media collection to grow and to remain usable despite rapid and continual technical changes. Some of the raw materials collected in relation to a research activity have a (re-)use factor far beyond the original research, whether for future research or for contributing to the story of telling the impact of the research many years after the event. Raw materials should be regarded as potential institutional assets and should be retained alongside other archived materials.

5 A Proposed Model to Improve Research Impact through Media Products

From the previous 12 months' activities, the media production team has further developed the four phase approach to increase the probability for a media product to successfully deliver the desired impact. As shown in Figure 1, the model has a strong emphasis on the scoping phase, with its five critical steps. The model is discussed in further detail in the following sections. The steps in the scoping phase do not necessarily follow a linear, sequential process. In the authors' experience, there will generally be a need to go back and forth among the steps to refine and reconfirm any decisions.

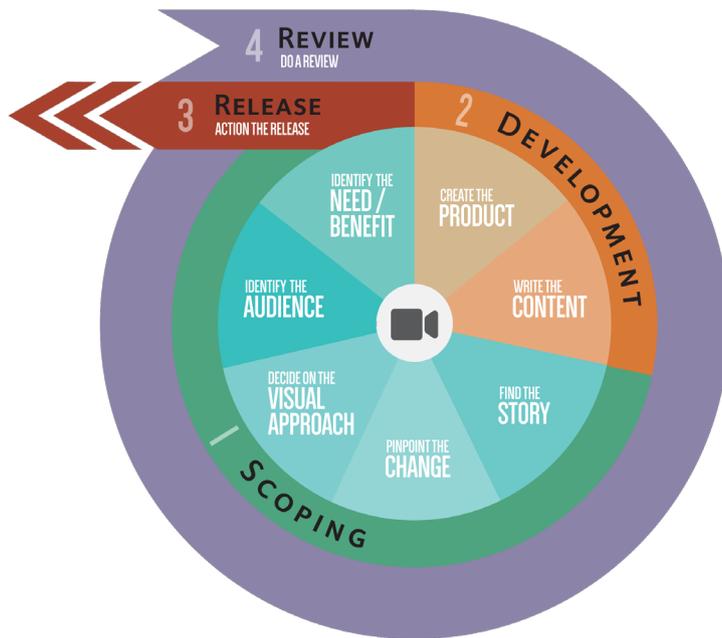


Figure 1. The Four Phase Media Development Model to Tell Your Research Story

5.1 Scoping Phase

Identify the Need / Benefit – Identifying and committing to the key need, e.g., calling for public participation or obtaining more funding, is critical for limiting the media product to a single message. The days of producing a media product to address multiple needs are over. One media product should be addressing one need only. This is primarily because media products nowadays are expected to be short and sharp. There is no time to take a detour; it will only dilute the media product’s potential to make the right impact. If it is challenging to decide on the key need, start by looking at the potential benefits. The researcher needs to answer the question: “what outcome could your project/work benefit from the most and what would that achieve?” If there are multiple needs, it is recommended to produce a product for each need. This is also the most appropriate time to start thinking about a release plan and when and where would be the most appropriate time to release the media product.

Identify the Audience – Having identified the key need should help pinpoint the primary audience. Understanding the intellectual and creative positioning of one’s audience is critical for achieving the engagement that is required for the media product to meet the need. The choice of primary audience significantly influences the decisions about media type, style and content. This, in turn, will have impacts on the release plan being developed.

Decide on the Visual Approach – Media products are essentially about images: moving or still, animated or real-life. Media professionals would argue that there is visual potential in all research; however, the potential in some cases may not be as obvious as in others. If stuck for ideas, brainstorming with colleagues and media professionals can fuel creativity. The purpose behind this activity is not to come up with a visual approach that delivers an artistic product but to create an engaging one. While products which rely heavily on “talking heads” feel familiar and require little effort to visually conceptualise, they are not taking advantage of the power of images and sounds, which can make even the most complex matters easier to understand and can evoke strong emotional connections to the content quickly and effortlessly.

Exploring the visual possibilities should start by looking at what has been captured by the researcher during the life of the project, for example, photographs or video clips from a behavioural study activity, an overseas musical performance, or an environmental scan at a remote location. The media team and researcher then discuss and decide whether any of these resources could make good content for the story, with consideration given to the need/benefit identified in step 1. The media team and researcher then examine what else could be captured or created during production. Understanding what is already available and what can be captured has an important bearing on which direction to take the project visually, e.g., to produce a real-life video or to choose animation.

Pinpoint the Change – To demonstrate the impact of the research project, the researcher needs to show change or a solution which is the outcome of the research being discussed. This type of information is the hook to keeping the audience involved in the research long after they have watched the media product. For example, showing a dementia patient positively engaging with a social robot for the first time can replace a thousand words. As a result of watching a short engagement between the robot and the patient, the audience's chances of getting behind the research increases exponentially because what they have just witnessed is easy to digest and memorable. This type of information can sometimes be sensitive; however, media professionals can provide solutions to protect the on-camera participants' privacy, while enabling the inclusion of such critical material in the media product.

Find the Story in the Research – The key reasons for choosing to produce a media product should be because it presents the opportunity to share a lot of information within a small span of time, and because it has a potential global reach. But for this to have the desired effect, the researcher and media team need to look for the “story” in the research and tell it, instead of talking about it. This is achieved by allowing images to replace or compliment some or all of what would traditionally be delivered in words. Effort is required to make content relatable and easily digestible by the targeted audience. The aim should be for the audience to feel a strong emotional connection to the content, leading them to actions such as taking an interest, signing up for support, contributing to the research, and/or even collaborating in the research. By the end of this step, there should be a fully developed release plan of action.

5.2 Development Phase

Write the Content - As explained earlier, the researcher, or other content experts, must write the spoken content. The role of the media producer is to assist the researcher to shape that content into the appropriate format and to highlight the content's visual potential. Doing a thorough job during the scoping phase can save considerable time when it is time to write the content, and more importantly, it can help keep the story on topic and help generate spoken content that suits the agreed visual style.

Create the Product – During this step the production team creates the product in three stages: first cut, final cut, and screener approval. This stage ends with a formal handover of the media product in the form of the media package explained previously.

5.3 Release Phase

The timely release of the product is critical to its success. During this phase, the release plan developed during the Scoping Phase is put into action.

5.4 Review Phase

Eight months post-handover, the media producer contacts the researcher to reflect on the impact and benefits of the product and consider any lessons learned. Creating media products requires significant cost and time commitments. The review enables the media team and researchers to refine their approach,

review their methods of collecting and creating content, and discuss potential creative approaches for future media projects. For maximum impact, it is recommended that the researcher and the media producer complete this activity in partnership.

While all the phases in the model are important, the authors have found that researchers do not spend enough time in the scoping phase, or, in many cases, skip this phase completely. As a result, they are producing products that may not fit the purpose and do not create the anticipated impact. Many inexperienced researchers put too much emphasis on the technical aspects of the project and move into production (i.e. creating the media product) too quickly, without the necessary, preparatory, scoping work.

The objective of this model is to develop a media product that achieves the desired outcomes. This is essential if:

- a) researchers are going to allocate valuable time away from research to develop these products;
- b) the institution is going to allocate resources to this activity; and
- c) the products are going to compete for attention, for example, in the YouTube/ social media environment.

6 Implications for Institutions

The above discussion raises a range of issues for the institution to consider. An institution-wide planned approach is needed to raise awareness about the potential for media products to increase research impact, scale up media production services, and build self-sufficiency among researchers. Clarity is needed about which units will provide which services or elements of a service, because units within the institution generally already deliver elements of the services needed, e.g. libraries, marketing, and units may develop learning and teaching products. Developing feedback mechanisms to measure impact of the media products at the group or institutional level is also a worthy goal, so as to continuously improve the service and capability of all concerned and raise the quality of the digital assets retained for the long term.

There is a need for institutions to provide systems and repositories for created content, especially an archive for project outputs, to either enable researchers to preserve media content with their research data for future reference or provide the information infrastructure that allows researchers and administrators to link media products and raw footage with research outputs.

The mindset for researchers and administrative units needs to be changed to understand how to develop media products for new social media platforms, such as YouTube. This change in thinking needs to start at the beginning of the research cycle, so that relevant digital products (audio and visual) are inherently collected and managed during the whole research cycle.

To achieve this objective the skills and competency of both researchers and support staff need to be uplifted from basic skills, e.g., how to take a good photo, through to more complex digital storytelling skills. Technical skills may be easier to find than the key roles requiring people with the creativity to develop the final products, i.e. the production and direction role.

Developing media products for researchers requires that the producer/director fully understands the research activity, the researcher's and stakeholder's goals, and the benefits of the activity, not only to the researcher but to the institution as well. For example, some of the raw footage from research activities can be an institutional resource for other activities and purposes over time, especially when explaining the impact of research years later. To tell the research story effectively, the researchers need to trust the individual or team to create the right product. This requires the researcher to trust the team enough to take their advice and accept the creative skills as to how the story should be told. Telling the story of research is a partnership between the researchers and the media team developing the product. While some tasks, such as filming, can be outsourced, some skills, such as producing and directing, need to be retained in-house.

7 Opportunities for the Library

As discussed, a key requirement in producing quality products is the relationship between the researcher and the media team. It requires a high level of trust between the parties as well as the producer/director having a good understanding of the research activity and the domain. The authors would suggest that this relationship already exists within the library, that is, with the faculty librarian role ideally already able to work closely with researchers. The trust and relationship should already be in place. Libraries also provide research impact services. For example, libraries already provide services and expertise regarding altmetrics and how to use social media in new communication models. Assisting with the development of visual content could be an extension of those existing services. Awareness raising activities as outlined in the scoping phase of the proposed model, for example, could easily be undertaken by librarians. There are also opportunities for libraries to incorporate visual media production into existing digital literacy training programs for higher degree research students.

One known requirement with capturing content is the need to obtain legal clearance. Libraries could also be addressing this issue in the context of current discussions about copyright and intellectual property rights.

In addition, libraries can play a role in advisory services and guidance to assist researchers to develop products that are fit for purpose. Different types of products are needed for different projects, with consideration given to factors such as the cost/benefit, the purpose of the media product, and the level of quality needed. These services could range from self-help services to providing more specialised advisory services to developing more complex products. For example, telling the story for physical research outputs can be quite different from telling the story for knowledge products, such as those in the social sciences.

Finally, there are opportunities in regard to research data management. Many institutional libraries provide repository solutions for research data; retaining media content could be an extension of those solutions. Librarians also are involved in delivering research data management services. As part of those services, the collection and retention of digital content needs to be addressed in order to enable researchers to build a rich resource of materials to tell their research story at the end of the project.

8 Conclusion

Traditionally researchers have used text-based outputs as a way of demonstrating the quality and impact of their research. This current paradigm needs to change in order to incorporate more contemporary methods and channels of engaging a target audience. Researchers generally do not possess the skills to translate complex areas of research into content that is relatable and easily digestible. In addition, many researchers lack the required skills to take advantage of the current generation of technologies to tell their research story.

In this paper the authors have discussed the introduction and subsequent review of a new service at Griffith University, designed to encourage researchers to use media, particularly audio-visual, in promoting their research. Several key findings have emerged from implementing such a service. First, the institution has an important role in raising awareness about the potential of media products to increase research impact, scaling up media production services, and building self-sufficiency among researchers. At the same time, there is a need for institutions to provide systems and repositories to collect and preserve created media content.

Second, there is a key role for libraries in two main areas: digital literacy and research impact. Librarians could extend existing digital literacy training programs to include media production. Given their current provision of research impact services, libraries could incorporate building an awareness of the potential of storytelling to enhance outcomes.

Third, given the general lack of awareness among researchers about the use of non-text-based media for telling the story of their research, a partnership between the researcher and institutional staff with the requisite creative and technical skills is essential for translating research outcomes into engaging, media products.

As a result of these findings, the authors have presented a four-phase media development model to tell the research story. Because of the emphasis on the scoping phase, the key roles underpinning this model are those of the director/producer and the researcher. The model relies heavily on the trust and relationship between the researcher and the person responsible for the production and direction, and the quality of the resulting video product relies on the successful partnership between the researcher and director/producer to tell the story well.

Further investigation would be useful in analysing the current production of short media products by university research centres across the sector and how those products complement self-created content published through social media channels, such as YouTube. From the authors' experience, in Australia at least, there has been a noticeable increase on university websites of this type of research output. Given the increasing need to demonstrate return on investment to a range of stakeholders, researchers will need to fully embrace these new channels for telling their research story.

Acknowledgement: This paper is a substantially revised and expanded version of a paper presented by two of the authors at *THETA 2017*, 8-10 May, Auckland, New Zealand.

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Appendix A: Interview questions

1. How have you used the video? (Where have you published it and screened it, etc.?)
2. What impact or benefit (tangible and intangible) has the video brought to your work or to the work of your <institute/centre/research group>?
3. What feedback have you received about the video from people who viewed it?
4. In terms of the video content, when you started you had an intended purpose. What was the purpose and did the video achieve that purpose?
5. What would you change or do differently if you had the opportunity to make the video again?
6. Have you produced any other media products since this video was made?
7. Have you made any plans to produce more media products as a result of this work? What are these plans?
8. Do you have any statistics on usage, e.g., number of views on YouTube? Do you have any feedback on these statistics, e.g., did they meet your expectations; why have they or haven't they met your expectations?
9. We are always on the lookout for research stories with strong visual narratives. Have you got an idea that you like to discuss further? Tell us about it.