

## Technological innovation and social construction of Makassar film industry's production and distribution

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### ABSTRACT

**Background:** Cinematography has evolved significantly with technological advancements. In Makassar, Indonesia, film distribution faced challenges due to limited cinemas and competition with imported films. The research explores how technology has transformed film production, distribution, and promotion in Makassar. It addresses gaps in understanding regional cinema's adaptation to technological changes. **Purpose:** This research aimed to examine the role of technology in transforming film production and distribution around Makassar. **Methods:** The study employed qualitative research methods with a case study approach. Data was collected through interviews and observation with key figures in Makassar's film industry, including producers, directors, and editors. The research applied the Social Construction of Technology (SCoT) theory to analyze how social factors shaped and influenced technology. **Results:** In pre-production, technology helps with audience research and visual concept design; In the production stage, digital cameras increase image quality and flexibility. In post-production, advanced software allows for better editing and visual effects despite limited local experts; In distribution, it expanded from theaters to streaming platforms, reaching a wider audience. All stages benefit from better collaboration through digital tools. **Conclusion:** This study found that technology has significantly impacted all stages of filmmaking in Makassar. At the pre-production stage, digital tools facilitate collaboration and audience research. During production, advanced cameras and equipment enhance visual quality and creative possibilities. Post-production benefits from sophisticated editing software, although some processes still require expertise outside the region. Film distribution does not rely on movie theatres; it is distributed through platforms like Netflix, Disney+, Hulu, and Prime Video. **Implications:** Specifically, findings suggest that regional filmmakers should invest in digital skills and explore diverse distribution channels. Theoretically, the study contributes to understanding how SCoT applies in regional film contexts. It highlights the importance of considering local social dynamics in technological adoption within creative industries.

**Keywords:** SCoT; technology innovation; film in Makassar; film production; film

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## INTRODUCTION

In recent decades, the existence of cinematography has transformed into increasingly sophisticated forms. It is undeniable that technology is closely related to the development of cinematography. The existence of cinematography is no longer about art, but a reframing of issues and reflection of essence from time to time (Palanimurugan et al., 2024). Moreover, according to Gibbons & Denton, (2024), cinematography has become a tool that wraps propaganda, then wrapped into all cinema that can be watched by all levels of society.

In the 19th century, cinematography was simply a movement created through the recording and rapid projection of multiple photographic lots (Science and Media Museum, 2020). Furthermore, it has become a medium of entertainment and mass communication with a very high economic value. However, movies at that time were only silent movements that the people interpreted, and even so, the existence of silent films had high economic value.

Despite its high economic value, the inventor of cinematography is still debated. However, the development of cinematography has always been associated with the demonstration of the Kinetoscope prototype by the Edison company in 1891, which is considered the forerunner of the history of film production systems. After the demonstration process, the Kinetoscope was sold commercially in 1894. After being sold freely, cinematography began to appear, creating a presentation of moving images made by Lumiere in December 1895 in France. Lumiere, known as the Lumiere broth, made cameras, projectors, and movie printers. The films were concise and were only presented in night markets and music halls.

Cinematography then continued to develop over time. The high demand for films encouraged several film industries in countries to develop short films into narrative films and stories. In 1906, Kinemacolor in England brought out colored films. This coloring was done on black and white films through hand coloring, toning, and stenciling. Even so, this process was considered expensive until the advent of the three-color process in 1932 in the

UK (Science and Media Museum, 2020).

The development of sound synchronization in films followed the process of colourization. Silent films were no longer attractive; the advent of phonographic discs with the Vitaphone system had helped films become more attractive. The development of colour and sound in cinema then pushed film in its heyday as an entertainment medium; until the advent of television, films were no longer only shown in exhibitions or at night markets but could be accessed. Today, movies can be shown on a variety of platforms.

Although films were already present in various countries as a medium of entertainment in the 1890s, the history of cinema in Indonesia only began on December 5, 1900, in Jakarta (Formerly known as Batavia) (Prambudi, 2010). Not only for entertainment, in regions such as Makassar, which was still unsafe back then due to rebellion, films became a medium for raising awareness of nationalism and a sense of regionalism (Puspitasari et al., 2024). These films were distributed in exhibitions such as theatres in Makassar City. These films were distributed in exhibitions such as theatres in Makassar as mass media.

Using film as a mass medium at that time significantly impacted shaping public opinion, conveying messages, and influencing emotions and the audience's view of a phenomenon. In the context of movie screenings in Makassar City, films at that time have provided a visual and narrative representation of cultural identity. The characters, settings, and stories told in the movie are deliberately made to tell the daily reality where the movie is produced. When watching the movie.

It is not only a tool to spread local cultural identity, but films can also communicate messages through titles, themes, dramatic events and messages implied in film dialogue. Usually, the titles and themes in movies already reflect the local cultural and historical background; not only that, the events depicted can describe situations or conflicts that occurred in society at a particular time. Dialogue is essential in the film's narrative to build audience identification. With the title, theme, and implied dialogue, the audience can interpret the message and find new meanings.

Using film as a medium to evoke a sense of regionalism in Makassar was interesting because *Pangdam (Panglima Komando Daerah Militer)* made the films presented. Some of the movies produced were a depiction of the reality of the time, such as the movie *Teror di Sulawesi Selatan* Which told the story of the massacre of 40,000 people by Westerling. The films were still related to politics and used for propaganda. The politically charged films then turned into films that focused on local culture with more depth, with the emergence of the films *Di Ujung Badik* (1971) and *La Tando di Toraja* (1971).

The existence of movies in theatres in Makassar City then gradually faded and even began to die out in the 1990s. Not only in Makassar but also in various regions in Indonesia. The world of cinema was sluggish. With the dominance of imported films, film production in Makassar went out of business. However, technological transformation brought movies back to life in Makassar with the advent of television. People no longer have to go to the movies to watch movies because there are many exciting film series on television that can be watched at home. As a result of technological changes, the distribution of films originally done in exhibitions has changed.

It is just that television is no longer significant for the world of movies that contain local culture. The emergence of exploitation films in the horror-porn genre has made people disappointed and bored. The public is no longer presented with quality films, so films are inferior to other entertainment provided on television. The existence of movie theatres in Makassar City is shrinking.

In 1995-1996, the movie theatres in Makassar City had to take a free fall. The advent of VCD (Video Compact Disc) gave movie lovers economic value. With a much lower price and flexibility to watch at home, theatres began to close and change functions into shops and cafes. From 20 cineas in Makassar City, only Studio 21 and Makassar Theatre remained. Not only did the number of theatres decrease, but the Indonesian Film Festival also (FFI) had to stop due to the lack of movies (Ramli, 2016).

Based on the above explanation, technological innovation for cinematography in Makassar poses positive and negative

impacts, which can be analyzed through social construction theory. Regarding social construction theory, technological innovation is present and changes the mindset and behavior of humans in constructing technology (García-Avilés, 2020). One of the theories that discusses social construction related to technology is the Social Construction Theory of Technology (ScoT) theory.

ScoT is a theory popularized by Bijker and Pinch that discusses how technology exists to fit human needs and provide choices to humans. In contrast to the mindset of technological determinism, ScoT considers that technology does not determine humans, but rather, humans shape the technology itself (Basu, 2023). According to Bijker (1993), the formation of technology is the formation of society; education, as a microcosm of any society, is no different, so it is impossible to dream of separating technical and social relations.

From the technological determinism point of view, technology causes or determines the structure and culture of society (Hallström, 2022). Of course, this view contradicts the concept of SCoT because technology is not considered linear, play a role in the development and determinattheme of the technology itself (Klein & Kleinman, 2002). In that case, technology does not change humans and humans mine structure and culture, but humans are determined to innovate to provide flexibility and have higher economic value.

In contrast to technological determinism, humans are considered to be shaped by technology. The SCoT concept states that technological development is not linear; social conditions are the beginning of artifact development, and humans ultimately determine the final design (Klein & Kleinman, 2002). Pinch & Bijker (1984) explains three studies of technology: 1) innovation studies, 2) history of technology, and 3) sociology of technology. Studies 1 and 2 believe that technological development runs linearly with existing technology. In Makassar's film concept, technology has changed how films are produced, distributed, and consumed. In the context of film distribution in Makassar, technologies, such as digital cameras and online distribution, have created and disseminated films effectively.

Concept cinema in Makassar, the need for technological innovation changes the pre-production, production, post-production, distribution, and promotion processes. In the production process of films in Makassar, we can see the use of sophisticated cameras, increasingly detailed editing, and research in determining the target audience; in the distribution process, filmmakers do not distribute in exhibitions such as theatres but on platforms as a form of distribution expansion and to be better known outside Indonesia.

SCoT and the theory of structuration developed by Anthony Giddens discuss the complex interaction between structure and agency in social systems (Chatterjee et al., 2021). Giddens also mentions that actors and structures are two things that cannot be separated; both are referred to as structuration, and structuration is also often referred to as the process of forming a structure.

In the context of human behaviour with technology, Giddens explained that social structure is not an external force that determines individual behaviour but is created and maintained through action. It is then reproduced and changed through individual practices and interactions and becomes a social structure. Through the following explanation, it can be understood that structure and agency are inseparable and interact with each other.

In this theory, individuals are not only subject to structures but actively contribute to shaping those structures through their actions (agency). The agency is the ability of individuals to act and make decisions that they use to change social norms and rules and form new dynamics in society.

The above explanation shows that structure and agency are not different entities, but they influence each other and have a close relationship. The structure provides a sustainable social foundation and agency as an individual's ability, impacting social reality. Therefore, human interaction with society is an ongoing dynamic that will ultimately develop or change social reality.

Structuration theory then develops into structural dualism, which states that structures and actors interact in the production and reproduction of institutions and social relations.

In structural dualism, the existence of various elements is very interdependent, so it does not build a relationship that is influenced or affected but is interconnected.

The concept of structural dualism implies a reciprocal relationship between structure and agency. Although structures influence individual actions, individuals, as actors, also play an essential role in shaping and reshaping those structures. This dynamic interdependence challenges the simplistic view of social determinism, recognising that individuals actively contribute to constructing their social reality.

Through innovation studies, researchers can track and analyze innovations in film technology over time. Through the Study, tracking innovations have contexts such as the production, distribution, and consumption of films in the region and understanding how these innovations affect the development of the film industry. Through this approach, the researchers can identify innovation trends, the factors that drive innovation, and their impact on the world practices of the film industry.

The history of technology, on the other hand, allows researchers to examine the development of film technology from the past to the present. Using this approach, researchers can explore how film technology has changed and evolved and the factors that have influenced these changes.

Through the sociology of technology theory, researchers can see the importance of social factors such as forms of acceptance and use, and the implications of such changes such as the success or failure of a technology. In the context of research on regional cinema, applying this theory can help researchers understand the interactions between social groups within local film communities that influence and are influenced by the adoption, adaptation, and rejection of particular film technologies.

## RESEARCH METHOD

This research uses qualitative methods to describe the role of technology in film in Makassar. This study not only discusses the phenomenon, but also the nature, context and



manifestation where the phenomenon will appear (Ugwu & Ze, 2023). Their perspective on issues is also an element that can be analyzed. Therefore, to analyze using qualitative methods, the data used are words not numbers. To understand the insights, experiences, and ideas of individuals involves the process of collecting non-numerical data.

Qualitative research is concerned with feelings, ideas, or experiences. Finding insights that can result in testable hypotheses is the main goal of the data collection, which is frequently done in narrative form. During the exploratory phases of a study, educators use qualitative research to find patterns or fresh perspectives. A methodology called qualitative research is created to gather non-numerical data to produce insights. It is not statistical and is either semi-structured or unstructured. It is predicated on data gathered using a research methodology that provides an answer to the why. This article discussed the approaches to qualitative research, qualitative data collection methods, advantages and disadvantages of qualitative research and tools for analyzing qualitative data. Keywords: Qualitative, research, data analysis (Creswell, 2013).

In addition, researchers also used a case study approach. A case study is the study of real-life case in a contemporary setting (Morgan et al., 2017). This research has several characteristics that make it a case study, in line with what Creswell and Stake said (Miles, 2014). This research begins by identifying a case regarding technological developments in regional cinema in Makassar. Through this identification, the researcher has limited the time and place. This restriction needs to be implemented so that researcher gets a more comprehensive understanding of the phenomenon to be raised, which will bring up diverse perspectives (Pathiranage et al., 2020). This is consistent with Stakes' explanation, which states that a case study is a study that studies the complexity of something special, so it is often referred to as an intensive study (Boblin et al., 2013).

Researchers used interviews and observations to collect data in this study. Interviews were conducted to obtain sources of information related to the process of film production and distribution in Makassar.

**Table 1 Participants' Roles and Production Houses**

No	Name	Role	Production House
1	AN	Producer, Screenwriter	Finisia Production
2	AB	Producer, Director, Researcher	Screenplay Timur Picture
3	ZG	Producer	AIM Production
4	AAE	Editor	Finisia Production
5	QM	Producer	Rumah 7 Langit
6	SS	Producer	786 Production

Source: Research Results,

Through interviews, researchers will get an overview of the issues to be researched as well as check the truth of the previous data (Yin, 2018). Observation, on the other hand, is a crucial tool to collect data because it allows the researcher to collect data that matches the natural situation of the individual. One of the things that can be felt by researchers in observation is the irregularity between what is conveyed by the interviewee with facial expressions, voice and so on. There were six interviewees in this study (Table 1). The selected interviewees have varied positions ranging from producer, director, to screenwriter.

## RESULTS AND DISCUSSION

Technology brings about significant changes in every stage of film production, from pre-production, during production, to post-production (Alforova et al., 2021). Technology is not only a tool or means in the film production process but also shapes and is influenced by social factors in the film production environment in Makassar. The filmmaking process has several stages: the preproduction stage, production stage, postproduction stage, and film distribution stage.

The filmmaking process has several stages:

the pre-production stage, production stage, post-production stage, and film distribution stage. Pre-production is the initial stage where film ideas are developed and prepared. Technology can facilitate collaboration between the production team and the visual team. For example, graphic design software and 3D visualization allow the team to create storyboards and scene visualizations with more detail and accuracy before the filming process begins. In this context, technology facilitates communication and collaboration among team members, an essential aspect of social construction in film production.

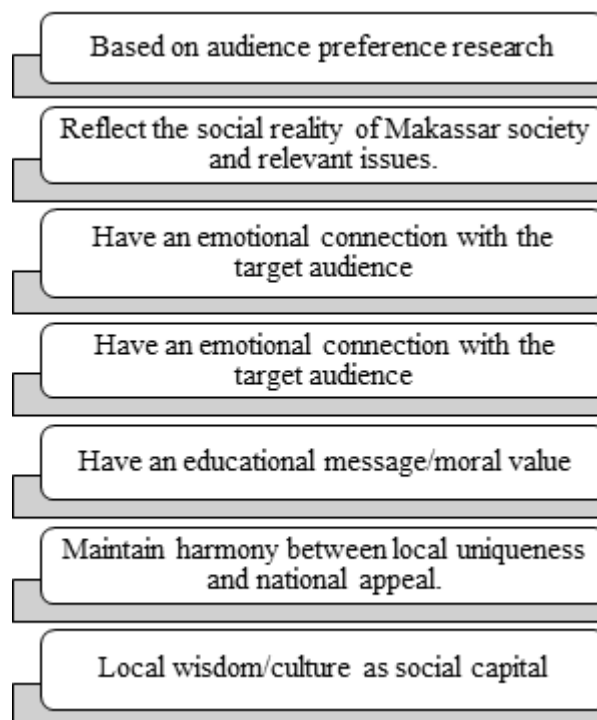
The target audience, which is related to demographic restrictions, is also determined in the pre-production stage. From the beginning, filmmakers must understand the target audience's profile, including age, gender, background, culture, and education. Determining the target audience relates to script writing, casting, and crew selection (Moon et al., 2022). Profiling the target audience is crucial in the pre-production, as conveyed by AN, the producer, and screenwriter in the movie *Uang Panai*, *Halo Makassar* and *Anak Muda Palsu*.

In determining demographics, filmmakers often determine that the Bugis community is the target audience. That the Bugis community migrates most of the time is a high selling point because watching movies can cure their homesickness, which can be cured by watching movies related to them culturally.

ZG, a producer in the movies *Paotere* and *Jalangkote Rasa Keju* web series, uses the movies on YouTube that have been aired to conduct research.

“From children to 40 years old, we can see their profiles from the audience on YouTube. Analyzing the audiences in terms of age and gender is my small research, finally making a universal story for children, teenagers, all ages”. (Informant 3, November 23, 2022)

YouTube and other filmmakers also use online news, surveys, or online questionnaires through Google Forms. This online questionnaire is expected to get a broader picture of the movie to produce because not all



Source: Research Results, 2023

**Figure 1 Important Aspects of the Pre-Production Process**

films that raise Makassar's culture successfully bring in the audience.

It is not only about making a movie that contains a moral message; often, the audience feels comfortable because of the closeness of the story to their lives (Figure 1). To make a movie attractive to the audience, they must become part of the story. A movie of a region may not be successful if it does not consider the variations in taste among the audience. For this reason, audience research is a critical step in determining the type of movie to produce. Thorough research on the preferences and number of potential audiences is necessary before deciding on the movie genre to produce (Aletras, 2021). Movies are considered not only entertainment but also a medium for delivering messages. Viewers have a desire to see events they know or experience in movies.

After passing through stages in pre-production, the filmmaker establishes the production stage. In the production stage, digital cameras, lighting, and audio-visual equipment are crucial for recording and producing visual and audio content. The use of these technologies affects not only the visual and audio quality of the

resulting movie but also the creative process and interaction between production team members. For example, the capabilities of cameras with the latest technology enable more flexible and dynamic shooting, allowing filmmakers to experiment with different shooting angles and create interesting visual effects.

The things that need to consider in the production process are cameras (Wadmare, 2022). Innovations in cameras have streamlined the film production process. It is not only a clear image; the more sophisticated the camera, the more time- and cost-efficient it becomes. In recent years, cameras have evolved into DSLR (Digital et al.). DSLRs are the evolution of SLR (Single-Lens Reflex) cameras that still use film, while DSLRs already produce digital pictures.

Through DSLRs, movie production is often less affected by the weather. Bad weather often affects lighting and camera quality. One example is a shot that requires bright lighting; smart cameras have now given filmmakers the option to focus on the camera so that they can add additional light (such as spotlights, target lights, standard lights, etc.) to fill the lack of light in the shot (Alzayani & Shah, 2016). Also, shooting using a DSLR strengthens the image results, which are sharper and smoother, and has helped the production team's workflow to be more flexible (Nuska, 2018).

In the post-production stage, technology plays a role in editing, visual effects, and other post-production processes. Video editing and visual effects software allows editors to edit and polish the pre-recorded material to achieve the desired result. According to AB, post-production is an essential process, as is editing.

“Post-production usually goes to the editing and mixing table. Although the editor and sound mixer handle the work, the director and producer usually sit together and often decide all the editing stages with the editor. Some leave it entirely to the editor.” (Informant 2, November 02, 2022)

This process also requires applications or software; often, the boundaries of software and the internet in post-production are inseparable. Not only is this process necessary, but it is also considered complicated, as filmmakers must

ensure that the videos match the script. It is common for them to reshoot if they feel the shoot is incomplete enough to fill the script.

“So, post-production is extremely complicated. Because from the camera, there is something called DIT, Digital Imaging Technician, which converts to proxy. That is a small proxy file from the film, so it can be edited easily. There is something called online editing and offline editing. During production, there is a DIT that converts to offline. For example, from the script continuity, there is someone who says okay, this is the file, then the DIT converts it to mp4, so everything that is okay when shooting is converted to mp4 which is a smaller file so it can be edited easily on the computer” (Informant 2, November 02, 2022)

At the Audio Mastering and music stage, the audio editor receives the field audio files and performs audio balancing and mastering for cinema purposes (5.1 audio). After getting the music material, the audio editor makes adjustments (arrangements) again to match the offline cut. After this stage, an audio preview is conducted with the director and producer. If the audio has met expectations, the audio editor prepares the master file.

After being cut into pieces according to the script, the file is called Rough Cut. The rough cut of the story is revised until the Final. The Final draft is called online editing. This process is already in the sound design, and the color grading process has been completed. After all the processes are completed, a DCP (digital cinema package) process is required. DCP refers to the sound incorporation so that the film can be played on a projector.

The editing process in Makassar films is divided into two: offline and online editing. Unlike offline editing, which is done together between the editor and producer, online editing must be done in Jakarta due to limited tools and the lack of experts in this field among Makassar filmmakers. Online editing is the arrangement of scenes locked or arranged according to the script during offline editing. AAE describes the online editing process in Makassar Film as the

editor.

“For Online Editing (Grading), the Colorist receives XML files and RAW shooting data; then the Colorist starts to color correct the footage and get creative according to the director’s wishes. Once finished, preview grading with the director, DOP, and producer (usually 1-3 drafts). After being accredited, the next step is to touch up the footage.”

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After the editing process, the final stage is the mixing file, where the film grading, audio, music, and subtitles are combined. After combine file process is complete, a master movie is produced. Next, the film goes through the DCP (Digital 384 Cinema Package) process to be tested in theaters. Once the DCP is complete, the movie is ready to be marketed to theaters. In addition, technology also facilitates the distribution and marketing of films through digital platforms and social media. In this case, technology allows films to be accessed by a wider audience and increases the reach of film promotion.

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It is undeniable that technology plays an important role in the distribution and promotion

process. At the beginning of the rise of films in Makassar, films were distributed through exhibitions such as cinemas. The audience’s presence motivated the choice of theaters as the main distribution channel. Filmmakers in Makassar targeted not only Sulawesi but also the Bugis community outside Sulawesi, such as in big cities like Jakarta, Jogja, and Bali, and in areas like Jayapura, Balikpapan, and Samarinda.

However, the number of movie theaters still needs to grow, considering that movie theaters are often integrated with malls. On the one hand, malls are found only in big cities. Even so, movie theaters are still the most profitable distribution channel, as conveyed by QM, the producer,

“If we talk about the industry, cinema is still the most profitable distribution channel, but other platforms have started to exist. Although the value is still small, the profit is still small and not promising. The cinema channel is the most able to turn around capital, even though it is queuing, but the calculation is easy. The calculation is a 10 percent tax comes out, pin pph. PH usually gets 15 thousand -17 thousand per ticket.” (Informant 5, Oktober 12, 2022)

Although theaters are the main distribution channel, there are many challenges for Makassar producers in getting theaters willing to show Makassar filmmakers’ films. These include the lack of clarity on when films will be screened, the loss of prestige of local films to imported films, and the system of exhibitors that makes it difficult for producers.

The existing system in theaters requires new films on Thursday, and their performance is evaluated until Friday. If the movie does not reach a certain threshold (often 50% of the audience capacity), it risks being pulled from circulation on Saturday. This creates immense pressure on movie producers to ensure their movies are well-received on the first screening days. Producers often rely on community support to encourage theaters to show local films.

This challenge encourages filmmakers to expand their distribution reach in Makassar. With limited access to national cinema channels, Makassar film producers began to expand their distribution reach with alternative platforms



such as OTT (Over-The-Top). Currently, Makassar film producers have started exploring distribution channels through digital platforms, such as Viu, Hooq, and Netflix. This is based on awareness of the trend of content consumption increasingly shifting towards online content. In addition, other channels such as TV and DVD are also alternatives for movie distribution, including through flights (such as Garuda). This expansion is done to expand the international markets such as Malaysia, Brunei, and Thailand. This was explained by SS as the producer.

“Technological developments and changes in consumer behavior are leading the film industry to direct distribution to audiences through streaming platforms. This platform allows Makassar films to reach a wider audience globally. Now it is a transition period when people have started to leave the stores, the distribution is direct to the audience, such as the Netflix platform, Hooq Viu, and others.” (Informant 6, November 7, 2022)

Considering the changes in movie distribution around Makassar, technology has provided many spaces for distributing movies. Television is the distribution of films sold on TV after a year of airing in theaters; DVD is an option, especially for audiences who prefer physical media. Some films have also been offered through airlines such as Garuda Indonesia, and international distribution is through international agents or distributors; Makassar films can be sold to other countries such as Malaysia, Brunei, and Thailand.

By considering the social construction theory approach to technology, we can see how the use of technology not only directly affects the film production process but also shapes the social dynamics and interactions between production team members. Technology has become an integral part of the film production environment, constantly evolving and adapting according to the film community's values, norms, and practices.

The standards imposed by cinemas have reflected the social construction of technology as they are not only determined by technical factors but also influenced by norms within the film industry. For example, DCP production

and image quality must meet the expectations and standards of the cinema so that the audience has a quality viewing experience. These norms evolve from interactions and negotiations between various parties in the industry, including filmmakers, distributors, and cinema owners.

Secondly, an adoption like DCP also poses new challenges in technical skills and knowledge for filmmakers. For the most part, making regional films requires more skilled human resources. This is why it is difficult for filmmakers to meet the standards of cinemas. This has implications for the imbalance between the need for technological innovation and the shortage of skilled human resources to meet the standards.

Through digital distribution, Makassar regional films have the opportunity to reach audiences not only in certain areas but also across geographical areas. Through digital technology, regional films can be accessed throughout Indonesia as well as globally. Digital platforms and social media have become important facilities for disseminating regional films to a more diverse audience.

The transformation in film distribution has reflected the social construction of technology in terms of how technology changes consumer behavior and preferences. With the development of internet technology and digital devices, individuals tend to consume content online. This has encouraged filmmakers to cater to consumer needs and come up with new distribution models to stay relevant. In this context, filmmakers in Makassar are encouraged to embark on digital distribution channels as an alternative that corresponds to the current trends.

These shifting trends also reflect the filmmaker's interaction with technology and social structures. The emergence of streaming platforms such as Netflix encourages the film industry to prepare itself in the production, promotion, and distribution processes. Film producers in Makassar must also adapt to the changes to remain competitive in an increasingly fragmented market. Through this phenomenon, social construction and film industry practices influence each other and ultimately generate new business models. This phenomenon has created a new dynamic in

the relationship between the three elements, producers, distributors, and consumers. Through streaming platforms, distribution is immediate, and film producers have direct access without passing through intermediaries at the distributor stage (e.g. cinemas). This dynamic has opened up opportunities for the film industry to better manage its distribution and promotion. However, the opportunity is also a challenge as filmmakers must understand the visibility and monetization of tight content.

Through the social construction of technology, the interaction between society and industry structure ultimately shapes the new distribution model. Film producers only need to adapt and keep up with technological developments while understanding social dynamics to capitalize on the opportunities and overcome the challenges in the digital distribution era.

Although film producers only need to adapt, they should ensure that Makassar's regional films get enough visibility because competition with other films is not easy. With the ease of distributing these films online, films in the Makassar region must also compete with other films such as Indonesian films and international (Hollywood) films. Therefore, it is necessary to consider effective and well-thought-out promotion strategies and distribution planning to ensure local films remain visible and get the attention they deserve from the audience.

The use of technology in film promotion in Makassar has undergone a significant transformation, especially with an emphasis on online media. Film producers and marketers in Makassar then use social media such as Facebook, Instagram, and TikTok to become promotional media to reach a wider audience. Filmmakers use the power of online platforms to gain easy access and allow direct interaction with audiences to be more personalized through various content.

The most prominent aspect of the promotion strategy is collaboration and mutual assistance in film promotion. The data found that every member of the production team up to the actors voluntarily used their social media for promotion. This phenomenon reflects that the social construction in the Makassar film community has solidarity and cooperation

values in promotional strategies.

Not only is a promotional strategy based on solidarity, but other promotional strategies are also carried out by creating several creative elements such as e-posters, trailers, and videos that effectively attract audiences. Through online media, the audience reach will be wider, and the content disseminated can be more interesting and more creative. Therefore, social media has become an important tool in the distribution and promotion of films in Makassar. By collaborating with local influencers and communities, the visibility of the film will increase. Even so, the promotion strategy must still be ensured that it is still relevant.

With the explanation above, the social construction of technology in film promotion raises the values of collaboration, cooperation strategies, creative use of technology, and integration of online and offline promotion strategies. It shows that the film industry in Makassar continues to adapt and build promotional activities according to technological developments and audience preferences.

## CONCLUSION

Technology has reshaped the process of filmmaking stages in Makassar, from pre-production to distribution. It has also changed the social dynamics of the film industry. In the pre-production stage, technology has provided innovations to encourage collaboration and visual concept design that will allow the creation of storyboards as a visualization of scenes to be more detailed and accurate before the shooting process begins. Technology also contributes to understanding audience demographics and preferences through online surveys and social media analysis to help tailor film stories and marketing strategies. This is especially important given that the target group of the film in Makassar is a specific group such as Bugis.

During the production process, filming tools such as digital cameras and audio-visual equipment have revolutionized the filmmaking process. Digital cameras such as SLRs allow producers to be more flexible in shooting, better image quality, and lighting under extreme

circumstances. The capabilities of these modern cameras provide a more creative experience for film producers.

In the post-production process, the editing process and the use of software also help the film editing process offline and online. In the offline editing process, the films that have been shot are then rough cut and revised on the story. This process involved editors and producers in Makassar. Online editing is a more specialized process such as color grading. This process often requires specialized skills and equipment unavailable locally and requires the producer to send it to Jakarta. This phenomenon brings up the fact that there is a gap in the regional film industry.

In the mastering process, the audio and music settings must also be cinema-quality. The editing must be digitized so that the sound produced is more precise (Audio 5.1). This stage also involves combining visuals, audio, music, and subtitles and converting them into DCP format to be applicable in cinemas. Besides the great opportunity, filmmakers are also facing new challenges such as the lack of expertise, for example, DCP creation and online editing.

In the distribution process, technology has opened up new opportunities for filmmakers to distribute without going through traditional cinemas. Even so, theatres remain the most profitable channel. However, it poses a big challenge for filmmakers as they should compete with screen limitations. Changes in consumer behavior have also led to the emergence of digital platforms such as OTT, which raises alternative distribution channels with a wider reach. On the one hand, the emergence of OTT has also changed consumer behavior towards content consumption.

The advent of new digital distribution has also created new dynamics in each element, such as producers, distributors, and audiences. This phenomenon gives freedom to regional filmmakers, but they also have to face challenges in visibility and monetization of content to remain competitive in the film market.

Technology has also transformed film promotion strategies. Social media platforms such as Facebook, Instagram, and TikTok are the most important promotional tools because they are assisted by collaboration and cooperation

values by the crew and actors by promoting the film through their social media. Through this collaboration, audience engagement can be directly felt. Even during film promotion, promotional strategies can be more creative such as creating e-posters, trailers, videos, and music that can attract audiences to watch. The integration of online and offline promotion is equally important as both aim to reach the audience. Even so, producers must also continue to improve and develop new promotional strategies to remain effective and the visibility of the film is also getting better and not inferior to the competition of national and international films.

It can be concluded that all aspects of filmmaking are heavily influenced by technology. Starting from pre-production to promotion. New opportunities will continue to arise, but new challenges should follow as anyone in any region can produce films. The adaptation of filmmakers to the current film industry is also a form of dynamic interaction between the social structure, technology, and cultural values of the Makassar film community.

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