

Development of an Infographic Video Guide to Services at Masril Payan Library

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Abstract

Library users need accessible guidance to understand available services and procedures. At Masril Payan Library, Padang City Government, service information was largely communicated verbally, creating a need for reusable guidance. This study developed an infographic video and examined its content feasibility, media quality, and initial user responses. Research and development followed an adapted four-stage model comprising define, design, develop, and limited dissemination. Data were collected through observation, interviews, a needs questionnaire involving 55 respondents, assessment by one content expert and one media expert, and a limited trial involving 25 library users. Quantitative data were analysed descriptively using percentages, while qualitative feedback informed product revision. The resulting motion graphics video was a 90-second MP4 file with a resolution of 1920 × 1080 pixels. Content validation reached 86%, user assessment reached 83.13%, and media validation reached 54% based on the individual scores on the original assessment form. These findings indicate positive initial user acceptance alongside unresolved media quality concerns. Further revision and expert reassessment are needed, particularly regarding content relevance, audiovisual synchronisation, and pacing. The study provides preliminary evidence for developing audiovisual service guidance, without establishing a causal improvement in users' understanding.

Keywords: *Infographic video, library services, user guidance, motion graphics, research and development*



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Introduction

Library collections and facilities need to be accompanied by information that helps users understand how to access them. Service information connects available resources with users' needs, particularly when users are unfamiliar with library procedures or the range of services offered. Information repackaging provides one approach to making this connection clearer. Selecting appropriate sources, product formats, and presentation methods is part of a strategy for providing information that responds to library users' needs (Nashihuddin, 2021). Masril Payan Library, operated by the Padang City Government, faces a similar need. Preliminary observations and interviews indicated that service information was communicated mainly through verbal explanations, supplemented by noticeboards and simple information materials. New users still needed guidance on membership, borrowing and returning materials, locating books, and using library facilities. Direct assistance remained valuable, but users also needed guidance they could revisit when they forgot a procedure. For library staff, such guidance could support more consistent communication of basic service information.

A needs assessment involving 55 respondents found that 48 were aware of the library's services, while 15 had experienced difficulty understanding its procedures. These findings came from separate questions and do not establish a relationship at the individual level. Nevertheless, they suggest that awareness of available services does not necessarily ensure that guidance on using them is sufficiently clear. Thirty-five respondents selected video as the easiest medium to understand. All respondents also considered video development at least moderately necessary: 30 rated it necessary, 20 very necessary, and five moderately necessary. Infographics organise information through concise text, illustrations, icons, and a purposeful visual layout. Previous studies have examined their use in disseminating library information and promoting library services, providing a basis for visual approaches to information communication (Salsabila et al., 2023; Saputri & Jumino, 2023). A service guide, however, also needs to explain the sequence of actions users should take. Introducing the library and attracting attention are useful, but procedural guidance requires a clear connection between the information presented and the user's next step.

Audiovisual media development also requires structured planning and evaluation. Research on library documentation videos has used a research and development approach, incorporating expert assessment into

quality control (Haq & Ganggi, 2025). The 4D model has likewise been applied to the development of tutorial videos (Rafida et al., 2022). These studies support a staged development process, although their products differ in purpose and subject matter from a library service guide. The present study focuses on translating users' information needs into video guidance and examining its initial evaluation by experts and users. This study aimed to develop an infographic video guide to services at Masril Payan Library and describe its content assessment, media assessment, and user responses. Its contribution is contextual: it documents the development of a guidance medium informed by users' needs at one library. Expert and user assessments were analysed separately so that positive user acceptance would not obscure technical weaknesses requiring further attention. The study therefore concerns the feasibility and initial acceptance of the product within an early development evaluation.

Method

The study adopted a research and development approach using an adapted 4D model comprising define, design, develop, and disseminate. This model structures development from needs identification and design through product testing and dissemination (Thiagarajan et al., 1974). It was adapted to the development of a library service guide, with dissemination limited to initial use within Masril Payan Library, Padang City Government. The study took place from May to July 2026. Field data were collected in May and June, followed by validation, revision, and product finalisation in July 2026.

The define stage involved observing how service information was communicated, interviewing librarians and library users, and administering a needs questionnaire to 55 respondents. The questionnaire addressed service awareness, difficulties with procedures, information needs, preferred media, and the perceived need for an infographic video. Interviews helped clarify service conditions and identify information to include in the product. The needs assessment informed decisions about content and format rather than measuring video effectiveness.

During the design stage, the researcher developed the concept, script, storyboard, scene sequence, and visual design. The product was designed as a motion graphics infographic video combining text, icons, illustrations, animation, and audio. Adobe Illustrator was used to create vector assets and separate visual elements into layers. During development, these assets were processed in Adobe After Effects using keyframes, motion paths, parenting, and parallax effects. Editing involved arranging text, adding audio, managing transitions, and adjusting the pace of the video.

Product evaluation involved one content expert and one media expert on 7 July 2026. The content expert was an archivist in the Protocol and Leadership Communication Division of the Padang City Regional Secretariat. The media expert was a lecturer in the Information, Library and Archival Studies Programme at Universitas Negeri Padang. Each expert completed a ten-item instrument using a scale from 1 to 5. Content assessment addressed relevance, accuracy, completeness, language, and the sequence of information. Media assessment covered visuals, colour, typography, text, illustrations, narration, synchronisation, transitions, duration, and suitability for use. A limited trial involved 25 library users who completed a 12-item assessment questionnaire using the same scale. The trial questionnaire also included three questions about information presented in the video.

Quantitative data were analysed descriptively by expressing the scores obtained as percentages of the maximum possible scores. Each expert assessment had a maximum score of 50. The user assessment had a maximum score of 1,500, calculated as 25 respondents $\times$ 12 items $\times$ 5. Percentages for the comprehension questions used 25 respondents as the denominator. Needs assessment data were presented as frequencies and percentages. Expert and user comments were summarised descriptively to inform revision. The operational feasibility categories used in this study are presented in Table 1.

$$\text{Assessment percentage} = (\text{total score obtained} / \text{maximum possible score}) \times 100\%$$

Table 1. Operational categories for product assessment

Percentage range	Category
81–100%	Highly feasible
61–80%	Feasible
41–60%	Moderately feasible
21–40%	Less feasible
0–20%	Not feasible

Dissemination was limited to preparing the digital product for initial use within the library. The evaluation included neither a comparison group nor measurements taken before and after viewing. Responses to the comprehension questions were consequently treated as descriptions of users' answers during the trial, without attributing an improvement in knowledge to the video.

Results and Discussion

The needs assessment involved 55 respondents, comprising 37 women and 18 men. Most were aware of the library's services, although difficulties with procedures were still reported. Fifteen respondents, or 27.27%, had experienced difficulty understanding procedures. Video was the most frequently selected medium, chosen by 35 respondents, or 63.64%, followed by images with 12 selections, infographics with six, and text with two. These choices reflected respondents' perceptions of ease of understanding and should not be interpreted as a measured comparison of media performance.

Table 2. Summary of users' needs assessment

Aspect and response	Frequency	Percentage
Aware of library services	48	87.27%
Unaware of library services	7	12.73%
Had experienced procedural difficulties	15	27.27%
Had not experienced procedural difficulties	40	72.73%
Considered the video very necessary	20	36.36%
Considered the video necessary	30	54.55%
Considered the video moderately necessary	5	9.09%
Selected video as the easiest medium	35	63.64%
Selected images as the easiest medium	12	21.82%
Selected infographics as the easiest medium	6	10.91%
Selected text as the easiest medium	2	3.64%

Source: users' needs questionnaire, n = 55. Percentages were calculated within each question group; rounding may produce small differences in percentage totals.

Content needs centred on practical procedures. In response to the question about information needed, borrowing procedures received 24 selections, library rules 23, and book searching 21. A separate question about suggested video content yielded 34 selections for borrowing procedures, while membership registration and library rules each received 29. The two question groups should be read separately because they addressed information needs and suggestions for the product, respectively, as summarised in Table 3.

Table 3. Information priorities and suggested video content

Information needed	Count	Suggested video content	Count
Book borrowing procedures	24	Borrowing procedures	34
Library rules	23	Membership registration	29
How to locate books	21	Library rules	29
Opening hours	18	Return procedures	25
Book return procedures	12	Library facilities	25
Service locations	8	Service hours	21
Overdue fines	5		

Source: users' needs questionnaire, n = 55. Values represent selection frequencies for two separate questions and do not necessarily sum to 55.

These findings helped establish the direction of the video: user orientation requires guidance on what to do when accessing services. The library's name, identity, and location provide a useful introduction, but they need to be connected to practical procedures. The needs data suggest that borrowing, membership, and library rules should receive sufficient attention in the video sequence. Selecting content around these needs is consistent with information repackaging that considers both users and an appropriate product format (Nashihuddin, 2021).

The define stage established the need for reusable media containing basic service information. During design, these needs were translated into a script, storyboard, and visual assets. The planned sequence moved from an introduction to the library towards information about its services. Maps and city illustrations introduced the location, while icons, characters, and concise text conveyed information. Vector assets were separated into layers so that individual elements could be animated as required for each scene. During development, visual assets, animation, text, and audio were combined into a motion graphics video. Keyframing controlled changes in position, size, and transparency; motion paths defined movement trajectories; parenting linked elements that moved together; and parallax created an impression of depth. These techniques supported production, while their communicative value still depended on the relationship between the visuals, the message, and users' needs.

The final product was an MP4 video with a resolution of 1920 × 1080 pixels, a 16:9 aspect ratio, and a duration of 1 minute and 30 seconds. Its content covered an introduction to the library, service hours, membership registration, collection searching, borrowing, returns, reference services, facilities, library rules, and a closing section. Product documentation also showed institutional identity, location, digital services, and special collections. The video was stored digitally and accompanied by a QR code to support access. Dissemination remained limited, and the study did not establish its reach or routine use after development.

The content expert awarded 43 out of 50 points, or 86%, placing the content in the highly feasible category. Consistency with actual library services, clarity of language, and usefulness each received five points. The remaining seven indicators received four points each. This result reflects a positive assessment of the information content by one expert within the scope of the instrument used. The media assessment produced a lower result. On the original assessment form, seven indicators received three points and three indicators received two points, giving 27 out of 50 points, or 54%. This placed the media in the moderately feasible category. The indicators receiving two points concerned synchronisation between audio, text, and visuals; appropriateness of duration; and overall suitability for use. The evaluator also questioned the alignment between the title and the video content, as well as the usefulness of the information for users. These comments indicate that content relevance needs to be considered alongside presentation quality.

Table 4. Product evaluation results by assessment source

Assessment source	Score obtained	Maximum score	Percentage	Category
Content expert	43	50	86.00%	Highly feasible
Media expert	27	50	54.00%	Moderately feasible
Library users	1,247	1,500	83.13%	Highly feasible

The limited trial involved 25 library users: 17 school or university students, seven members of the general public, and one government employee or civil servant. The 12-item assessment yielded 1,247 out of a maximum of 1,500 points, or 83.13%, which fell within the highly feasible category. This finding suggests positive initial acceptance among the trial participants, although it does not establish that all technical aspects met the media expert's expectations.

For the question about the library automation system, 16 respondents, or 64%, selected INLISLite, five selected SLiMS, and four selected Microsoft Excel. When asked what to do when they needed information assistance, 23 respondents, or 92%, selected communicating their needs to a librarian. The other two selected completing a paper form. For the question about service types, digital services were recognised by 22 respondents, or 88%; information searching by 19, or 76%; reference services by 16, or 64%; and special collections by 12, or 48%. The distribution of answers suggests that some information was recognised more frequently than other information. The action of approaching a librarian received a high proportion of responses, whereas special collections were recognised by fewer than half of the participants. These differences cannot be explained solely by the video's characteristics because users' prior knowledge was not measured. The findings are more appropriately used to identify content requiring review, further explanation, or additional testing.

Product revision focused on audiovisual synchronisation, shortening sections that felt slow, and reorganising graphic elements to make the message more direct. Further improvement also needs to address the alignment between the title and content by ensuring that scenes explain how to use services. Expert reassessment results following revision were not available. The study therefore cannot determine whether revision improved the media feasibility category.

A central finding is the difference between user acceptance and the assessment of media quality. Users gave a high overall rating, while the media expert identified weaknesses in synchronisation, duration, and message relevance. The evaluations reflected different perspectives and instruments. Users may respond positively to the language and appearance of a video, while an expert examines the coherence of its presentation and suitability as a guide. Both perspectives are needed to inform further development. Infographics offer a means of summarising service information visually. Prior research supports their relevance to library information dissemination and promotion (Salsabila et al., 2023; Saputri & Jumino, 2023). This study applied that approach to service orientation through moving images and narration. Its validation results nevertheless indicate that procedural guidance needs a clear connection between visual messages and user actions. Illustrations introducing the location, for example, need to be accompanied by guidance that addresses users' practical needs.

Synchronisation can be interpreted through multimedia learning principles. Limited information-processing capacity makes the timing of verbal explanations and images, together with the reduction of irrelevant material, relevant design considerations (Mayer & Moreno, 2003). In this product, synchronisation and duration were among the lowest-rated aspects. On this basis, revision should focus each scene on the service step being explained and allow sufficient time to read the information. This is a theoretical interpretation, as viewers' cognitive load was not directly measured in the study. The 4D model helped connect users' needs with design, production, and evaluation. Comparable stages have been used in tutorial video development, while expert evaluation has also informed the development of library videos (Haq & Ganggi, 2025; Rafida et al., 2022). In the present study, evaluation generated different feedback on content and media. Revision followed by reassessment should be strengthened before wider implementation, particularly because the media assessment remained in the moderately feasible category.

The product has practical potential as an introductory orientation resource and an aid for librarians. A digital file allows the same information to be viewed repeatedly, while a QR code provides an additional access route. Use in service areas or through library digital channels should be accompanied by responsibility for updating the content when procedures change. Attention to content planning and distribution channels is also consistent with research on library digital content development (Mabruri & Triyanto, 2022). Although the product could support service communication, this study did not measure reductions in repeated questions or savings in staff time. The study was limited to one library, one expert in each assessment area, and 25 trial participants, most of whom were school or university students. Its findings cannot be generalised to all users or other libraries. Baseline measurements, a comparison group, long-term retention testing, and expert reassessment after revision were also unavailable. Further development should test the revised video with users from more varied backgrounds and assess their ability to complete service procedures directly. Such evaluation is needed to distinguish positive reactions to the video from practical benefits in accessing library services.

Conclusion

This study developed an infographic video guide to services at Masril Payan Library through an adapted 4D model with limited dissemination. The needs assessment found that 15 of 55 respondents had experienced difficulty understanding procedures, while 35 selected video as the easiest medium to understand. The resulting product was a 90-second motion graphics video in MP4 format with a resolution of 1920 × 1080 pixels. Its content introduced the library and provided basic information on accessing its services.

Content assessment reached 86% and user assessment reached 83.13%, both falling within the highly feasible category adopted in this study. Media assessment reached 54%, placing it in the moderately feasible category and indicating a need to improve content relevance, audiovisual synchronisation, and pacing. The video received positive initial acceptance, but an overall judgement of feasibility requires expert reassessment after revision. Further testing should examine changes in users' understanding and their ability to use services to establish the practical benefits of the video more clearly.

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