

Digital Da'wah Communication: The Effectiveness of Crowdfunding Visual Stimuli on Cash Waqf Intention Among Generation Z In Tulungagung

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ABSTRAKSI

Abstrak: Komunikasi digital wakaf uang memerlukan pesan yang sesuai dengan khalayak muda. Penelitian ini membandingkan perubahan skor niat wakaf uang setelah paparan infografis transaksional dan video emosional-naratif, dengan ELM dan S-O-R sebagai kerangka interpretasi. Desain kuasi-eksperimen pretest-posttest melibatkan dua kelompok pembanding non-ekuivalen, tanpa kelompok tanpa perlakuan. Sebanyak 80 mahasiswa KPI UIN Sayyid Ali Rahmatullah Tulungagung dipilih secara purposif dan dibagi ke dalam kelompok infografis (n=40) dan video (n=40). Data dianalisis menggunakan Wilcoxon Signed-Rank Test dan Mann-Whitney U Test. Kedua kelompok menunjukkan perbedaan skor pretest-posttest yang signifikan ($p < 0,001$), dengan peningkatan lebih dominan. Video menunjukkan rerata kenaikan skor 5,52, dibandingkan 2,90 pada infografis (Mean Rank 47,81 vs 33,19; $p = 0,005$; $r \approx 0,32$). Dalam kondisi penelitian ini, paket video berkaitan dengan peningkatan skor yang lebih tinggi. Perbedaan format dan isi pesan, cakupan konstruk, serta pengukuran segera setelah paparan membatasi interpretasi. Kombinasi video dan infografis merupakan usulan untuk diuji lebih lanjut.

Abstract: Digital cash waqf communication requires messages suited to young audiences. This study compares changes in cash waqf intention scores following a transactional infographic and an emotional-narrative video, using ELM and S-O-R as interpretive frameworks. A quasi-experimental pretest-posttest design involved two non-equivalent comparison groups without an untreated control. Eighty KPI students at Sayyid Ali Rahmatullah State Islamic University of Tulungagung were selected purposively and divided into infographic (n=40) and video (n=40) groups. Data were analyzed using Wilcoxon signed-rank and Mann-Whitney U tests. Both groups showed significant pretest-posttest differences ($p < .001$), with increases predominating. Mean gains were 5.52 for video and 2.90 for infographic (mean ranks 47.81 vs. 33.19; $p = .005$; $r \approx .32$). Under the study conditions, the video package was associated with a larger score increase. Differences in both format and content, the broad outcome construct, and immediate measurement limit interpretation. Combining video and infographic is proposed for further testing.

Keywords:

Visual Stimulus

Crowdfunding

Da'wah Communication

Generation Z

Quasi-Experiment

I. Introduction

Digital media provide additional channels for da'wah and Islamic philanthropy (Akbar et al., 2023; Purwatiningsih et al., 2024). Studies of young audiences have examined social media in relation to cash waqf literacy and digital participation (Duwiyanti, 2022; Barus & ZA, 2026). These developments make the presentation of philanthropic messages relevant to waqf institutions

seeking to communicate with Generation Z. Digitalization also requires attention to institutional capacity, transparency, and public understanding (Adinugraha et al., 2024).

Cash waqf provides an alternative to waqf of fixed assets and can support social and economic activities (Haerunniza & Muhammad, 2024). A report published by the Indonesian Waqf Board (BWI) on 25 February 2024 identifies annual potential of IDR 180 trillion and accumulated cash waqf of approximately IDR 2.23 trillion as of February 2024 (Badan Wakaf Indonesia, 2024). The reported comparison of less than 2% is not a same-period annual realization rate: the collection figure is cumulative, whereas the potential is annual. Literacy and outreach remain relevant challenges (Lubis et al., 2023; Rusydiana et al., 2020).

Table 1. Potential and Realization of Cash Waqf in Indonesia

Indicator	Data	Reference
National cash waqf potential	± IDR 180 T/year	Badan Wakaf Indonesia (2024)
Accumulated cash waqf reported	± IDR 2.23 T (February 2024)	Badan Wakaf Indonesia (2024)
Reported comparison, not an annual realization rate	< 2% of potential	Badan Wakaf Indonesia (2024); periods are not equivalent
Main barriers	Literacy, outreach, communication	Rusydiana et al. (2020); Badan Wakaf Indonesia (2024)

^a. Source: Badan Wakaf Indonesia (2024); Rusydiana et al. (2020). Note: The IDR 2.23 trillion figure is accumulated collection reported in February 2024. The <2% comparison must not be interpreted as the proportion of annual potential realized during 2024.

Communicating cash waqf requires clear explanations of its mechanisms and uses. BWI identifies limited understanding beyond land and building waqf as an obstacle to wider participation (Badan Wakaf Indonesia, 2024). Crowdfunding provides a setting in which philanthropic information can be presented through visual narratives and other digital materials (Haq & Rodiah, 2023; Febriani et al., 2025). Research on online waqf acceptance also highlights the relevance of the digital platform context (Faturohman et al., 2020). This study focuses on how two message packages are associated with immediate changes in the measured intention score.

The study uses Stimulus-Organism-Response (S-O-R) and the Elaboration Likelihood Model (ELM) as interpretive frameworks. S-O-R relates environmental stimuli, internal responses, and subsequent responses (Mehrabian & Russell, 1974). ELM explains variation in persuasion through the extent of message elaboration, which depends on motivation and ability (Petty & Cacioppo, 1986). A video's emotional content does not by itself establish peripheral processing, just as an infographic does not necessarily produce central processing. Because the study does not separately measure these processes, the frameworks guide interpretation rather than constitute tested mechanisms.

The local context provides a reason to examine cash waqf communication among students in Tulungagung. Aswad (2019) identified challenges in nazhir human-resource management in Tulungagung and Blitar and emphasized capacity development. That study did not establish how Generation Z responds to the two communication packages examined here. Previous research has investigated cash waqf literacy and interest (Aulia & Gultom, 2025), digital participation (Husna et al., 2025), and institutional development (Adinugraha et al., 2024; Rusydiana et al., 2020). The present study extends this discussion through a pretest–posttest comparison of two packages among students at one university.

This study examines changes in cash waqf intention scores after exposure to digital crowdfunding messages among Generation Z students in the Islamic Communication and Broadcasting (KPI) Study Program in Tulungagung. It compares a transactional infographic with an emotional-narrative video. Because format and message emphasis differ together, the comparison concerns the two packages as presented, rather than the isolated effect of visual format.

II. Research Methods

A. Research Design and Approach

This quantitative study used a quasi-experimental pretest–posttest design with two non-equivalent comparison groups. Experimental Group A received a transactional infographic and served as an active comparator to Experimental Group B, which received an emotional-narrative video. Both groups received an intervention; there was no untreated control group. Accordingly, within-group changes describe changes following exposure, while the between-group analysis compares the gain-score distributions of the two packages. The design is shown in Table 2.

Table 2. Experimental Design

Group	Pretest	Treatment	Posttest
Experimental A	O1	X1 (informative visual stimulus: transactional infographic)	O2
Experimental B	O3	X2 (emotional visual stimulus: testimonial-narrative video)	O4

^b Note: O1 and O3 = pretest of cash waqf intention; O2 and O4 = posttest; X1 = infographic crowdfunding stimulus; X2 = testimonial-narrative video crowdfunding stimulus.

B. Population and sample.

The target population comprised active students of the Islamic Communication and Broadcasting (KPI) Study Program at Sayyid Ali Rahmatullah State Islamic University of Tulungagung, born between 1997 and 2012 (about 600 students). Using *purposive sampling*, 80 respondents were selected and divided evenly into Experimental Group A (n=40, infographic) and Experimental Group B (n=40, video). The inclusion criteria were belonging to Generation Z, being an active student in Tulungagung, being an active social media user, and having never made a cash waqf transaction through the platform used in the experiment.

C. Variables.

The independent variable (X) was the crowdfunding message package. The transactional infographic (X1) emphasized mechanisms, nominal amounts, transparency, and benefits. The testimonial-narrative video (X2) emphasized beneficiaries' experiences, empathy, and social impact. These packages varied in both presentation format and message emphasis, so their separate contributions cannot be identified from this comparison. The dependent variable (Y), termed cash waqf intention in this study, was operationalized as a composite of cognitive (understanding), affective (attitude and emotional involvement), and conative (tendency to act) dimensions. The composite therefore includes constructs broader than behavioral intention alone and should be interpreted within that operational definition.

D. Instrument.

The 15-item questionnaire was piloted with 32 respondents before administration to the research sample. The reported item–total correlations ranged from 0.784 to 0.984 ($p < 0.001$), against a reported reference value of 0.349. Cronbach's alpha was 0.975. These statistics describe item association and internal consistency; they do not by themselves establish that the composite measures behavioral intention as a distinct construct. The very high alpha also warrants examination of item overlap. The reported coefficient range alone does not establish which item–total calculation was used. Reliability and validity are distinct measurement considerations (Sekaran & Bougie, 2016).

E. Data analysis.

Data were analyzed using IBM SPSS. Shapiro–Wilk tests assessed the score distributions in each group. Gain scores, calculated as posttest minus pretest, departed from normality in both groups. The reported analyses therefore used Wilcoxon signed-rank tests for paired pretest–posttest scores and a Mann–Whitney U test for between-group gain-score distributions, with $p < 0.05$ as the significance criterion. The magnitude of the between-group association was summarized as $r = |Z| / \sqrt{N}$, where N is the total number of respondents: $2.826 / \sqrt{80} \approx 0.32$. This comparison was not adjusted for baseline scores or participant characteristics.

III. Result and Discussion

A. Sample Characteristics and Homogeneity

The analysis included 80 respondents selected through screening and purposive sampling, with 40 in each group. The eligibility criteria are presented in the Population and sample subsection. Mean pretest scores were 54.28 in the Infographic group and 55.68 in the Video group, a difference of 1.4 points. This descriptive similarity does not establish equivalence in baseline scores or other characteristics. In particular, non-random allocation leaves possible baseline confounding that cannot be excluded from the reported summary statistics.

B. Descriptive Statistics

Table 3. Descriptive Statistics of Pretest, Posttest, and Gain Score

Group	Variable	N	Min	Max	Mean	Std. Dev
Infographic	Pretest	40	36	70	54.28	8.165
Infographic	Posttest	40	34	74	57.18	9.128
Infographic	Gain Score	40	-3	17	2.90	4.803
Video	Pretest	40	19	70	55.68	9.205
Video	Posttest	40	24	73	61.20	9.235
Video	Gain Score	40	-1	22	5.52	5.129

Both groups showed higher mean cash waqf intention scores at posttest. The Emotional-Narrative Video group had a mean gain of 5.52, compared with 2.90 in the Transactional Infographic group. These descriptive results indicate a larger immediate increase in the video group under the study conditions; they do not isolate visual format from message content or demonstrate changes in actual waqf behavior.

Normality Test

Table 4. Shapiro-Wilk Normality Test Results

Group	Variable	Statistic	df	Sig.	Distribution
Infographic	Pretest	0.978	40	0.599	Normal
Infographic	Posttest	0.964	40	0.235	Normal
Infographic	Gain Score	0.843	40	<0.001	Not normal
Video	Pretest	0.888	40	<0.001	Not normal
Video	Posttest	0.868	40	<0.001	Not normal
Video	Gain Score	0.906	40	0.003	Not normal

Gain scores in both groups departed from normality. The study therefore reports the nonparametric comparisons specified in the Data analysis subsection.

Hypothesis Testing

Hypothesis 1 (Wilcoxon Signed-Rank Test).

Table 5. Wilcoxon Signed-Rank Test Results

Group	Ranks	N	Mean Rank	Sum of Ranks	Z	Asymp. Sig. (2-tailed)
Infographic	Negative	7	10.14	71.00	-3.480	<0.001
	Positive	24	17.71	425.00		
	Ties	9	—	—		
Video	Negative	3	5.00	15.00	-5.244	<0.001
	Positive	36	21.25	765.00		
	Ties	1	—	—		

In the Infographic group, 24 respondents increased their scores, 7 decreased, and 9 were unchanged. In the Video group, 36 increased, 3 decreased, and 1 was unchanged. The Wilcoxon tests indicated significant pretest–posttest differences in both groups ($p < 0.001$), with increases predominating. These results support H1 as a hypothesis of within-group change following

exposure. Without an untreated group, they do not establish that the stimuli alone caused these changes.

Hypothesis 2 (Mann-Whitney U Test).

Table 6. Mann-Whitney U Test Results

Group	N	Mean Rank	Sum of Ranks
Infographic	40	33.19	1,327.50
Video	40	47.81	1,912.50
Total	80	–	–

Statistic	Value
Mann-Whitney U	507.500
Wilcoxon W	1,327.500
Z	-2.826
Asymp. Sig. (2-tailed)	0.005

The Video group had a higher mean rank for gain scores (47.81) than the Infographic group (33.19). The Mann–Whitney U test indicated a significant difference between the gain-score distributions ($U = 507.500$, $Z = -2.826$, $p = 0.005$), supporting H2. The effect-size magnitude was approximately $r = 0.32$. This finding concerns the two message packages and does not identify the independent contribution of format or emotional content.

IV. Discussion

The two groups differed in their immediate changes in cash waqf intention scores (Mann–Whitney U, $p = 0.005$). Mean gains were 5.52 for the Emotional-Narrative Video group and 2.90 for the Transactional Infographic group. Increases occurred in 36 of 40 video respondents (90%) and 24 of 40 infographic respondents (60%); decreases occurred in 3 (7.5%) and 7 (17.5%), respectively. The Z-based effect-size magnitude was approximately $r = 0.32$. These findings favor the video package in this sample, but differences in format, message emphasis, and unmeasured baseline characteristics limit causal interpretation.

S-O-R offers a framework for interpreting the observed differences (Mehrabian & Russell, 1974). The infographic and video were different stimuli, while the questionnaire captured the study's composite response. The proposed internal processes, including empathy, understanding, and trust, were not separately tested as mediators. The results therefore cannot establish a stimulus-to-organism-to-response mechanism, although such a mechanism provides a hypothesis for future research.

The infographic presented information about cash waqf mechanisms, amounts, transparency, and benefits. Its group showed a significant pretest–posttest change ($p < 0.001$), indicating that the smaller mean gain should not be interpreted as an absence of observed change. Research linking literacy with interest in cash waqf provides relevant context (Aulia & Gultom, 2025). However, the present comparison did not directly test whether greater understanding or trust explained the change.

The emotional-narrative video presented beneficiaries' experiences and social impact. Research on storytelling and Generation Z's purchase decisions offers a related communication context (Saputro et al., 2026) but purchasing and cash waqf are different outcomes. The higher gain in the present video group should therefore be interpreted as evidence about this philanthropic message package. It does not demonstrate that empathy increased or that storytelling alone accounted for the difference.

ELM provides a second interpretive perspective. The theory relates persuasion to the extent of elaboration and the recipient's motivation and ability to process a message (Petty & Cacioppo,

1986). Either package could involve elaboration depending on the audience and presentation. Because the study did not measure elaboration, motivation, ability, or route-specific responses, the observed difference cannot be attributed to central versus peripheral processing.

The immediate posttest also limits conclusions about persistence. ELM distinguishes the consequences of persuasion under different levels of elaboration (Petty & Cacioppo, 1986), but the current study did not measure delayed attitudes or subsequent behavior. The video's higher gain therefore indicates a stronger immediate observed response in this sample, rather than evidence of a more durable attitude or a universally superior processing route.

The results complement work on digital cash waqf participation. Annisa et al. (2024) examined Generation Z's interest in a Cash Waqf Linked Sukuk platform, while Faturohman et al. (2020) examined acceptance of online waqf applications. The present study adds a comparison of two communication packages within one pretest–posttest framework. Its contribution lies in this specific comparison rather than a general claim about all Generation Z audiences or digital philanthropic platforms.

For digital da'wah, the study suggests that message presentation deserves further examination alongside informational content. Research on digital da'wah discusses its relationship with understanding Islamic values and social welfare (Purwatiningsih et al., 2024). The present findings are narrower: they concern immediate questionnaire-score changes among KPI students after cash waqf messages. They do not directly demonstrate wider da'wah effectiveness or social impact.

The findings do not establish that emotional storytelling should replace substantive information. Institutional accounts of digital waqf management emphasize the importance of transparency and organizational capacity (Adinugraha et al., 2024). Combining narrative material with explanations of cash waqf mechanisms is therefore a plausible practical option, but this study has not measured the effectiveness of that combination.

A two-stage communication approach is proposed for future testing: an initial emotional-narrative video to introduce the issue, followed by an infographic explaining mechanisms, transparency, and accountability. This is an untested proposal, not an intervention evaluated in the present study. A subsequent comparison of video-only, infographic-only, and sequential video–infographic conditions would be needed to assess whether the combination adds value. Follow-up measurement should examine both persistence and actual waqf behavior.

Several limitations qualify the findings. Purposive sampling from one study program at one university restricts generalization. Non-random allocation and the absence of an untreated group leave alternative explanations for score changes. Format and message emphasis varied together, preventing their effects from being separated. The outcome composite included understanding and affect as well as action tendency, limiting interpretation as behavioral intention alone. Measurement immediately after exposure does not establish persistence or actual behavior. The reported analysis also did not adjust for baseline scores or demographics. Future research should address these issues using clearly documented allocation, equivalent message content, direct measures of psychological processes, and follow-up behavioral outcomes.

V. Conclusion

Among the 80 KPI students studied in Tulungagung, both groups showed significant pretest–posttest differences in cash waqf intention scores (Wilcoxon, $p < 0.001$), with increases predominating. The Video group had a higher mean gain (5.52) than the Infographic group (2.90). The between-group gain-score comparison was significant (Mann–Whitney U, $p = 0.005$), with an effect-size magnitude of approximately $r = 0.32$.

Within this sample, the emotional-narrative video package was associated with a larger immediate increase in the measured composite than the transactional infographic package. The study does not separate visual format from message emphasis or establish a causal psychological

mechanism. S-O-R and ELM serve as interpretive perspectives rather than theories directly confirmed by the analyses.

For practice, the findings motivate testing narrative content alongside clear information about cash waqf mechanisms and institutional accountability. A video followed by an infographic is a proposed strategy for further evaluation. Its combined effectiveness cannot be inferred from the two separate conditions examined here.

The conclusions are limited by purposive sampling, non-equivalent groups, the absence of an untreated comparator, the broad outcome composite, and immediate posttest measurement. Future studies should document baseline characteristics, distinguish format from content, assess changes over time, and examine whether score changes correspond to actual cash waqf behavior..

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