Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

Visual Form, Video Duration, and Communication Behavior of TikTok Content on Increasing Generation Z's Knowledge of Urban Farming

Komang Tri Asta Pradnya Sulaksana
Udayana University, Bali, Indonesia

Corresponding Author : Komang Tri Asta Pradnya Sulaksana
E-mail : triastasulaksana037@gmail.com
Submitted June 9, 2025 ; Approved July 1, 2025

ABSTRACT

BACKGROUND AND OBJECTIVES:
Much knowledge can be easily obtained online, one of which is TikTok. Urban farming has become one of the interesting topics thanks to the support of TikTok. However, the topic of urban farming is currently not included in the category of the most favorite TikTok content watched by TikTok users. Since the entry of TikTok, the ecosystem of the content world, especially video content, has changed. In producing TikTok content, it also pays attention to visual form, video duration, and language style. Even content with a short duration is considered much more varied and adaptive. Therefore, this study aims to form a prototype of TikTok content about urban farming that is effective for increasing Generation Z's knowledge about urban farming, examine the effect of visual form, video duration, and language style of TikTok content on increasing Generation Z's knowledge about urban farming, and analyze the relationship between personal characteristics and communication behavior with increasing generation Z's knowledge about urban farming.
METHODS:
This research was conducted in Denpasar City. The population of this study consisted of students of State Junior High School and State Senior High School 3 Denpasar, active students of the Agribusiness Study Program, Faculty of Agriculture, Udayana University class of 2022, and members of ST. Werdhi Yowana. The sample amounted to 96 and was determined using the Slovin formula. The samples were randomly distributed into eight experimental groups and one control group. The method in this study used a true experiment with a pretest posttest control group design approach. Data analysis used paired sample t-test, chi-square, and Spearman rank using SPSS software.
FINDINGS:
The results of this study show that all content prototypes produced from a combination of visual forms, video duration, and language style significantly increase Generation Z's knowledge. The highest increase was obtained by combining a long-duration graphic visual form with a conversational language style. The personal characteristics of respondents did not correlate with the increase in knowledge, but communication behavior, namely exposure to communication media, correlated with the increase in respondents' knowledge.
CONCLUSION:
This study concludes that all combinations of visual form, video duration, and language style increase Generation Z's knowledge. Personal characteristics do not correlate with increasing knowledge, while communication behavior, namely exposure to communication media, has a

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

significant correlation. Thus, the results of this study can be used as a reference strategy for content creators, extension workers, and the government to reach Generation Z.

Keywords: Communication; Duration; TikTok; Urban Farming; Visuals

INTRODUCTION

TikTok application is an audio-visual media founded by Zhang Yiming, a graduate software engineer from Nankai University, China. In March 2012, Zhang Yiming founded a technology company called ByteDance (1). The average time users spend consuming TikTok content is more than 1.5 hours per day. The 10 countries with the most significant number of TikTok users in the world are the United States (143.4 million), Indonesia (106.52 million), Brazil (94.96 million), Mexico (68.89 million), Vietnam (62.61 million), Russia (59.12 million), Pakistan (48.12 million), Philippines (39.48 million), and Thailand (38.08 million) (2). The data shows that Indonesia ranks second as the country with the most significant number of TikTok users in the world. According to (3), it is not surprising that TikTok is highly favored by Indonesians, especially the younger generation, given the increasing use of the internet and people who cannot be separated from social media. This is also due to the platform's varied forms of content.

The forms of content contained in TikTok include business content, personal branding, entertainment, and information. The form of content is, of course, adjusted based on the goals, abilities, and hobbies of the content creator concerned. TikTok provides features that can give it a unique impression in content creation, such as music, filters, stickers, reactions, and voice effects. In addition, there are also TikTok Shop and live streaming features for more advanced content creators who want to earn money through TikTok (4). With these varied forms and features, there are also many interesting topics on TikTok, including urban farming.

Urban farming has become one of the most interesting topics thanks to the support of TikTok. Generation Z increasingly favors urban farming because they care about environmental issues and get healthier food because they grow and care for it themselves (5). Some examples of content creators who discuss urban farming topics are @mewalik, @infarm.id, @gardeningwither, @tanduria, @mahobitm, @bertaniagrofarm, @rumahhijaudaun, @hanifagro, @eva'sgarden, and @pandafarmindonesia. The number of followers in these accounts is also quite large. This shows that urban farming is of interest to Indonesian TikTok users. The popularity of these accounts also reflects how TikTok has become a source of digital knowledge.

In today's digital era, much knowledge can be easily obtained online, including TikTok (6). Using the TikTok application as a learning medium and increasing knowledge is also helpful for increasing creativity in its viewers (7). Content that is significant in increasing the knowledge of its audience is influenced by the visual form and duration of the video (8). In addition, the language style in educational content also significantly influences increasing the knowledge of its audience (9). Therefore, it is important to pay attention to these three things in creating educational content, especially on TikTok.

The first thing to note is the visual form. The visual form of content is a visualization presentation that supports the presentation of messages. The visual form is divided into two categories: realistic and graphic. Realistic visuals are content visualizations that display authentic or real images. Meanwhile, graphic visuals are a form of visualization of content using writing, letters, images, and symbols (10). Visual forms in TikTok content are important because they help attract attention, convey messages effectively, and increase viewer engagement.

The second thing to consider is the duration of the video. In creating video content, paying attention to its duration is necessary. In general, duration is described through a particular unit of

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

time, which indicates the length of time-based on minutes and hours (11). The creation of a whole video content starts with the integration of several visual pieces (clips). The duration of each clip determines the duration of the entire show. Therefore, it is important to determine the ideal duration of video content to ensure that viewers can enjoy and understand the content of the show's story.

The third thing to consider is language style. In order to support the effectiveness of communication, communication activities cannot be separated from the use of language used to convey messages (12). When the narrator tells a storyline, there is a language style used. Based on the selection of words, language styles can be divided into official, unofficial, and conversational language styles (13). Language style is important to consider to maximize the message to the target audience. By paying attention to these three things in making agricultural content, it is hoped that the popularity of agricultural content on TikTok will increase.

Agricultural topics are currently not included in the category of favorite TikTok content watched by TikTok users (14). Whereas agricultural content, especially urban farming, is important in stimulating the community to realize urban household food security (15). Since the entry of TikTok, the ecosystem of the content world, especially video content, has changed. Short-duration content is considered to be much more varied and adaptive (16). The duration of video content that effectively attracts Generation Z is short (15-30 seconds). This is followed by medium-duration (30-60 seconds) and long-duration (>60 seconds) video content (17). Educational short-form videos should ideally have a duration of 60-90 seconds (18). Of course, this makes it a challenge for urban farming content creators to create video content that can increase Generation Z's knowledge about urban farming, but only briefly.

So, based on the problems described, this research was compiled to simultaneously test the effect of visual form, video duration, and communication behavior in TikTok content on urban farming. In addition, it also uses the approach of developing TikTok educational content prototypes to see the effectiveness of social media in increasing Generation Z's knowledge. The objectives of this research are (1) to form an effective TikTok content prototype about urban farming to increase generation Z's knowledge about urban farming, (2) to test the effect of visual form, video duration, and language style of TikTok content on increasing generation Z's knowledge about urban farming, and (3) to analyze the relationship between personal characteristics and communication behavior with increasing generation Z's knowledge about urban farming.

RESEARCH METHOD

This study was conducted in Denpasar City, Bali Province. The research location was deliberately chosen because Denpasar City is the capital of Bali Province, has a bustling urban environment, and has minimal agricultural land, making it ideal for implementing urban farming techniques.

The population was determined based on several criteria, given Generation Z's large and widespread population in Denpasar City. The criteria were established to facilitate the identification of population members and ensure the research was conducted systematically. The criteria are as follows:

1. The population is part of a structured institution or group.
2. The population is Generation Z (born between 1997 and 2012), who use the TikTok app.
3. The population's environment supports urban farming education.
4. Ease of access to identify population members.
5. Availability of members from institutions or groups as the population for this study.

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

Based on these criteria, the population members were determined as follows.

1. All students of SMPN 3 Denpasar and SMAN 3 Denpasar
   The students from SMPN 3 Denpasar and SMAN 3 Denpasar were selected because all students in both institutions belong to Generation Z. Both schools are adaptive to the TikTok platform because they each have their own official TikTok accounts. Both institutional members are willing and easily accessible as respondents.
2. All active students of the Agribusiness Study Program at Udayana University, class of 2022
   Active students of the Agribusiness Study Program at Udayana University, class of 2022, belong to Generation Z and have a high level of exposure to agricultural topics and issues. Members of this population are also willing and easily accessible as respondents. The specification of the 2022 cohort is due to the research being conducted in Denpasar City. At the time of data collection, the 2022 cohort was studying at the Unud Sudirman Campus in Denpasar.
3. All members of ST. Werdhi Yowana, Banjar Tampak Gangsul, Denpasar City
   Some members of ST. Werdhi Yowana falls within the Generation Z age range. Most members of ST. Werdhi Yowana are active users of TikTok. Additionally, this organization is well-structured, enabling the research to be conducted systematically and orderly. This youth organization is one of the youth organizations located in the center of Denpasar City and is willing to serve as research respondents.

The total population size for this study was determined based on the determination of the institution or population group and presented in Table 1.

Table 1
Total Population

No.	Institution/Group	Population (people)
1	SMPN 3 Denpasar	1.055
2	SMAN 3 Denpasar	907
3	Agribusiness Program Class of 2022	174
4	ST. Werdhi Yowana	116
Total		**2.252**

The sample size in this study was measured using the Slovin formula. According to (19), the Slovin formula calculates the minimum sample size when the behavior of a population is not known with certainty. The formula for calculating it is as follows.

$$n = \frac{N}{N.d^2 + 1}$$

(20)

Explanation:

n = Number of Samples
N = Number of Population
d = Precision/deviation level 10%

A sample size of 96 people was obtained. The sample was proportioned to determine the number of samples per group. The method used was proportional sampling. According to (21), proportional sampling is the selection of samples from population members proportionally, and

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

this sampling is done if the population members are heterogeneous. The results of determining the proportion of the sample size are presented in Table 2.

Table 2
Proportion of Sample Size for Each Institution/Group

No.	Institution/Group	Population (people)	Proportion (%)	Sample (people)
1	SMPN 3 Denpasar	1.055	46.85	44
2	SMAN 3 Denpasar	907	40.28	39
3	Agribusiness Program Class of 2022	174	7.73	8
4	ST. Werdhi Yowana	116	5.15	5
	Total	**2.252**	**100**	**96**

Sampling for respondents in each group was conducted purposively (purposive sampling). Subsequently, respondents were assigned to either the experimental or control group randomly (simple random sampling). The researcher prepared 96 rolls of paper containing the words "Experimental Group (1-8)" and "Control Group," with 11 rolls for Experimental Groups 1-6 and 10 rolls for Experimental Groups 7, 8, and the Control Group. Each sample randomly selected a roll and was then assigned to that group.

The data collection methods used by the author in this study are as follows:

1. Literature Review
   A literature review is a data collection method that involves gathering information and data from various sources, such as books in libraries or online references, that are relevant to the research problem (22). This literature review serves as the initial step for researchers in collecting data that includes information and references relevant to this study, such as written documents, photos, images, or electronic documents related to the research. The data obtained from this literature review also enhances the credibility of the study's findings, so this research must be supported by previous studies and references that already exist.
2. Structured Interviews
   A structured interview is a type of interview conducted based on a series of pre-designed questions (23). The structured interviews conducted in this study were based on a questionnaire aimed at ensuring consistency of information and more in-depth data from respondents. The data obtained by the researcher through structured interviews with this research questionnaire were the characteristics of the respondents and their communication behavior.
3. True Experiment
   A true experiment using a pretest-posttest control group design is a method that compares changes between an experimental group that receives treatment and a control group that does not, through pretest and posttest to assess the effectiveness of the treatment (24). In this study, the researcher will provide a treatment in the form of a TikTok content prototype prepared by the researcher. Before and after the treatment, respondents will be given pretest and posttest in sequence. The researcher will then analyze the data obtained from both scores.
4. Documentation
   Documentation comes from the word "document," which means written materials. In applying this method, the researcher investigates written materials such as books, magazines, documents, regulations, meeting minutes, and so on (25). In this study, the documentation

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

used consists of photographs aimed at supporting the primary data. The photographs documented by the researcher include photos taken during structured interviews and experiments with the research subjects, namely Generation Z in Denpasar City, and photos of the research location.

The data analysis used in this study is presented based on each research objective as follows:

1. To test the influence of visual form, video duration, and language style of TikTok content on increasing Generation Z's knowledge of urban farming

   To test the influence of visual form, video duration, and language style of TikTok content on increasing Generation Z's knowledge of urban farming, a paired sample t-test was used with SPSS software. The steps in analyzing the data are as follows:

   1. Prerequisite Analysis Test
      a. Normality Test

         The normality test was conducted to ensure that the data from the sample was normally distributed (26). This test was performed on the pretest and posttest results. Data normality was tested using the Shapiro-Wilk test at a significance level of 5% (0.05). This test was used because the sample size in each group was 11–12 samples. According to (27), the Shapiro-Wilk test is used to determine the distribution of random data in a small sample (n<50). The decision criterion is that if the sig. (p-value) ≥ α (0.05), then the data is normally distributed. However, if the sig. (p-value) < α (0.05), then the data is not normally distributed.

      b. Homogeneity Test

         This study used the F test to test data homogeneity. The significance level used was 5% (0.05). According to (26), the homogeneity test is a statistical test procedure intended to show that two or more sample data groups have homogeneous variances. According to (28), the equation for the F test is:

$$F = \frac{Largest\ Variance}{Smallest\ Variance}$$

         Decision criteria
         1) If the sig. Value (p-value) ≥ α (0.05), then the data variance is homogeneous.
         2) If the sig. Value (p-value) < α (0.05), then the data variance is not homogeneous.

   2. Hypothesis testing

      To test the hypothesis in objective two, a paired sample t-test is used. According to (29), a paired sample t-test aims to test the difference in means between two paired data groups. The steps are as follows:

      1) Determine the hypothesis
         a) $H_0 : \mu_1 = \mu_2$ (there is no effect of visual form, video duration, and TikTok content language style on increasing Generation Z's knowledge of urban farming)
         b) $H_1 : \mu_1 \neq \mu_2$ (there is an effect of visual form, video duration, and language style of TikTok content on the increase in Generation Z's knowledge of urban farming)
      2) Calculating the t-test value

$$t = \frac{d}{\frac{S_d}{\sqrt{n}}}$$

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

Where $S_d = \sqrt{\frac{\sum d^2 - \frac{(\sum d)^2}{n}}{n-1}}$

(29)

Explanation:

d = difference between x1 and x2

n = number of samples

Sd = Standard deviation

3) Decision Criteria

a) If the sig. value (p value) < α (0.05), then H_0 is rejected and H_1 is accepted.

b) If the sig. value (p-value) ≥ α (0.05), then H_0 is accepted, and H_1 is rejected.

The results of this decision are also used to answer the first objective, which is to determine which prototype is effective in increasing Generation Z's knowledge about urban farming. A significance value (p-value) smaller than the 5% significance level (0.05) can be considered effective in increasing Generation Z's knowledge about urban farming.

2. Analyzing the relationship between personal characteristics and communication behavior with the increase in Generation Z's knowledge about urban farming

In the third objective, there are two things to be analyzed, namely the relationship between personal characteristics and the increase in Generation Z's knowledge about urban farming and the relationship between communication behavior and the increase in Generation Z's knowledge about urban farming. The following is an explanation of each analysis tool used:

1. Analyzing the relationship between personal characteristics and the increase in Generation Z's knowledge about urban farming.

To analyze the relationship between personal characteristics and the increase in Generation Z's knowledge about urban farming, the Chi-Square analysis tool is used. According to (30), the Chi-Square test is an association test to determine whether there is a difference between two nominal and ordinal or interval variables. The steps are as follows:

1) Formulating Hypotheses

a. H_0 : $\mu_1 = \mu_2$ (there is no relationship between personal characteristics and the increase in Generation Z's knowledge about urban farming)

b. H_1 : $\mu_1 \neq \mu_2$ (there is a relationship between personal characteristics and the increase in Generation Z's knowledge about urban farming)

2) Calculating the X^2 value

$$X^2 = \Sigma \frac{(f_o - f_h)^2}{f_h}$$

(30)

Explanation:

X^2 = *Chi-Square*

F_o = observed frequency

F_h = expected frequency

3) Decision Criteria

a) If the sig. value (p value) ≥ α (0.05), then H0 is rejected and H1 is accepted.

b) If the sig. value (p value) < α (0.05), then H0 is accepted and H1 is rejected.

2. Analyzing the relationship between communication behavior and the increase in Generation Z's knowledge about urban farming

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

To analyze the relationship between communication behavior and the increase in Generation Z's knowledge about urban farming, Spearman's Rank Correlation was used. According to (31), Spearman's Rank Correlation is an analytical tool used to measure the relationship between two ordinal or interval variables that are not normally distributed. The steps used are as follows:

1) Formulating Hypotheses
   a) $H_0 : \mu_1 = \mu_2$ (there is no relationship between communication behavior and the increase in Generation Z's knowledge about urban farming)
   b) $H_1 : \mu_1 \neq \mu_2$ (there is a relationship between communication behavior and the increase in Generation Z's knowledge about urban farming)
2) Calculating the ρ Value

$$\rho = 1 - \frac{6D^2}{N(N^2 - 1)}$$

(31)

Explanation:
ρ = Spearman's correlation coefficient
D = difference in ranks between the two paired groups
N = number of cases

3) Decision Criteria
   a) If the sig. value (p-value) < α (0.05), then H0 is rejected and H1 is accepted.
   b) If the sig. value (p-value) ≥ α (0.05), then H0 is accepted and H1 is rejected.

RESULTS AND DISCUSSION

Prototype Tiktok Content about Effective Urban Farming to Increase Generation Z's Knowledge of Urban Farming

There are eight content prototypes produced in this study, which are presented in Table 3.

Table 3
Content Prototypes Based on Combinations of Visual Form, Video Duration, and Language Style

No.	Prototype	Visual Form	Video Duration	Languange Style
1	Prototype 1	Realistic	01.18 minutes (short)	Formal
2	Prototype 2	Realistic	01.22 minutes (short)	Conversational
3	Prototype 3	Realistic	02.45 minutes (long)	Formal
4	Prototype 4	Realistic	02.20 minutes (long)	Conversational
5	Prototype 5	Graphic	01.23 minutes (short)	Formal
6	Prototype 6	Graphic	01.26 minutes (short)	Conversational
7	Prototype 7	Graphic	02.52 minutes (long)	Formal
8	Prototype 8	Graphic	02.20 minutes (long)	Conversational

Table 3 shows eight content prototypes produced from a combination of visual forms (realistic visuals and graphic visuals), video duration (short duration and long duration), and language style (formal language style and conversational language style). All TikTok content prototypes produced in this study convey the same information or message, including the concept

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

and urgency of urban farming, a brief history of urban farming, and the application of urban farming patterns. The use of audio-visual TikTok content can be considered effective in enhancing viewers' knowledge. Research findings by (32) indicate that TikTok can be utilized as an informal educational medium or for activism. Additionally, according to (33), integrating video technology into social media as a learning tool can improve the quality and outcomes of learning. Therefore, it can be concluded that the use of TikTok as an audio-visual learning medium has proven effective in enhancing Generation Z's knowledge about urban farming.

The Influence of Visual Form, Video Duration, and Language Style of TikTok Content on Increasing Generation Z's Knowledge of Urban Farming

The influence of TikTok content's visual form, video duration, and language style on increasing respondents' knowledge was analyzed by testing the average difference between pretest and posttest scores. The experimental group was given video viewing treatment, while the control group was not. The average pretest and posttest scores can be seen in Table 4.

Table 4
Average Scores for Respondents' Initial and Final Knowledge Based on Observation Groups

No.	Observation Group	Score	
		Pretest	Posttest
1	Realistic – Short – Formal	58.79	77.58
2	Realistic – Short – Conversational	53.03	67.88
3	Realistic – Long – Formal	72.73	86.87
4	Realistic – Long – Conversational	64.85	84.85
5	Graphic – Short – Formal	63.03	81.82
6	Graphic – Short – Conversational	60.61	75.34
7	Graphic – Long – Formal	65.45	82.42
8	Graphic – Long – Conversation	60.00	85.33
9	Control	72.00	70.67

The pretest and posttest scores were then tested for normality and homogeneity. The results of the normality test for the pretest and posttest data groups are shown in Table 5.

Table 5
Results of Normality Tests for Pretest and Posttest Scores of the Experimental Group and Control Group

No.	Group	p-value
1	Experimental pretest 1	0.140*

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

2	Experimental posttest 1	0.549*
3	Experimental pretest 2	0.677*
4	Experimental posttest 2	0.094*
5	Experimental pretest 3	0.747*
6	Experimental posttest 3	0.056*
7	Experimental pretest 4	0.080*
8	Experimental posttest 4	0.212*
9	Experimental pretest 5	0.302*
10	Experiment 5 posttest	0.087*
11	Experiment 6 pretest	0.535*
12	Experiment 6 posttest	0.226*
13	Experiment 7 pretest	0.762*
14	Experiment 7 posttest	0.146*
15	Experiment 8 pretest	0.963*
16	Experiment 8 posttest	0.472*
17	Control pretest	0.530*
18	Control posttest	0.321*

Note: *significantly different with p-value > 0.05

The results of the normality test of the pretest and posttest scores showed a significance greater than 0.05, indicating that the data groups were normally distributed, 0.05 (0.555 > 0.05). This indicates that the observation score groups were homogeneous in terms of variance. Next, the effect was tested using a paired sample t-test, the results of which are presented in Table 6.

Table 6
Difference in Pretest and Post-Test Scores of Respondents Based on Observation Groups

No.	Observation Group	p-value
1	Realistic – Short – Formal	0.000*
2	Realistic – Short – Conversational	0.003*
3	Realistic – Long – Formal	0.000*
4	Realistic – Long – Conversational	0.000*
5	Graphic – Short – Formal	0.000*
6	Graphic – Short – Conversational	0.000*
7	Graphic – Long – Formal	0.001*
8	Graphic – Long – Conversation	0.000*
9	Control	0.168

Note: *significantly different with p-value < 0.05

Table 6 shows that all eight experimental groups had a significant effect on increasing respondents' knowledge (>0.05), with the highest average score difference obtained by long-duration graphic visuals with conversational language style at 25.33 and the lowest score obtained by long-duration realistic visuals with formal language style at 14.14. Meanwhile, the control group scored -1.33. This indicates that there was no increase in knowledge in the control group and even a decline in knowledge. It is concluded that presenting information about urban

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

farming through videos with realistic and graphic visuals, short and long durations, and formal and conversational language styles influences the increase in knowledge among Generation Z. This aligns with the findings of the study (9), which states that all combinations of visual presentation and language style influence the increase in knowledge. (8) also argues that the presentation of educational videos combining visual formats and video duration can influence the increase in viewers' knowledge.

The Relationship between Personal Characteristics and Communication Behavior with the Increase in Generation Z's Knowledge about Urban Farming

Personal characteristics include various aspects such as age, nationality, gender, and other factors that reflect specific demographic characteristics (34). In this study, personal characteristics consist of indicators of age, education level, social media ownership, duration of social media use, and sources of information. The relationship between respondents' personal characteristics and knowledge improvement was tested using a chi-square correlation test, which can be seen in Table 7.

Table 7
Correlation Values of Personal Characteristics with Knowledge Improvement

No.	Personal Characteristics	p-value
1	Age	0.560
2	Level of Education	0.169
3	Social Media Ownership	0.676
4	Duration of Social Media Use	0.757
5	Information Sources	0.726

Table 7 shows that the five indicators do not have a significant relationship with the increase in respondents' knowledge ($p > 0.05$). Therefore, it is concluded that there is no significant relationship between personal characteristics and the increase in Generation Z's knowledge about urban farming. This aligns with the research by (35), which states that age, education, and media ownership characteristics do not have a strong relationship with the increase in knowledge. (36) also adds that there is no significant relationship between the duration of social media use and the knowledge of its audience. Wise and careful use of social media can have positive benefits for the knowledge of its audience.

Communication behavior is an action that can be verbal or nonverbal, demonstrated in a person's behavior (37). Communication behavior in this study consists of information needs, exposure to communication media, and contact with actors in the agricultural sector. The test uses Spearman's rank correlation. The correlation values can be seen in Table 8.

Table 8
Correlation Values Between Communication Behavior and Knowledge Improvement

No.	Communication Behavior	p-value
1	Information Needs	0.282
2	Exposure to Communication Media	0.031*
3	Contact with Actors in the Agricultural Sector	0.218

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

Note: *significantly different, with p < 0.05

Based on Table 8, only one indicator has a significant relationship with knowledge improvement, namely exposure to communication media, with a significance value of 0.031 (0.031 < 0.05). It is concluded that there is a relationship between communication behavior and increased knowledge of Generation Z about urban farming. The results of this study are consistent with the findings of (38), who stated that there is a strong relationship between the frequency of media exposure and the cognitive and conative aspects of respondents. Additionally, research by (10) also stated that exposure to communication media is correlated with increased knowledge among viewers.

CONCLUSION

Based on the results of this study on the relationship between visual form, video duration, and TikTok content communication behavior on the increase in knowledge of Generation Z in Denpasar City about urban farming, it can be concluded that the eight video prototypes produced in this study are effective in increasing the knowledge of Generation Z. All videos combined from various visual forms (graphic and realistic), durations (short and long), and language styles (formal and conversational) had a significant impact on knowledge enhancement. The combination of long-duration graphic visuals with conversational language style showed the highest significance. The results of this study also indicate that personal characteristics do not correlate with knowledge improvement, while communication behavior, particularly exposure to communication media, has a significant relationship.

RECOMMENDATIONS

The results of this study can be utilized by content creators, particularly in the field of urban farming, as a guideline for creating more engaging and educational content for Generation Z as the target audience. This audiovisual approach also serves as an alternative educational method that is more relevant for agricultural extension workers and government agencies in reaching Generation Z, particularly in increasing their interest in agriculture, both in urban and rural areas. This study has limitations, particularly in terms of the variety of visual forms used. For future researchers, it is recommended to explore the combination of graphic and realistic visuals in a single presentation to optimize the potential for conveying information more comprehensively and engagingly. Researchers also suggest conducting tests in a broader context with a larger sample size and more diverse regions so that the research findings can be generalized more broadly and deeply.

REFERENCES

1. Hayati DR. Pemanfaatan Media Tiktok Sebagai Media Dakwah Oleh Ikhwan Mukhlis [Internet]. Skripsi. 2021. Available from: http://repository.iainpurwokerto.ac.id/id/eprint/11907%0Ahttp://repository.iainpurwokerto.ac.id/11907/1/Skripsi_Dinda Rizky Hayati_1717102009.pdf
2. GilPress. Tiktok Statistics For 2024: Users, Demographics, Trends [Internet]. 2023. Available from: https://whatsthebigdata.com/tiktok-statistics/
3. Eraspace. Negara Pengguna TikTok Terbanyak Sedunia, Indonesia Nomor Satu? [Internet].

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

2024 [cited 2025 Jan 7]. Available from: https://eraspace.com/artikel/post/negara-pengguna-tiktok-terbanyak-sedunia-indonesia-nomor-satu
4. Nurhidayah W. Tinjauan Maqasid Shari'ah Terhadap Fitur Live Streaming Aplikasi Tik Tok [Internet]. 2022. Available from: www.aging-us.com
5. Kompasiana. Pengembangan Sumber Daya Manusia (SDM) Pertanian Indonesia; Peluang dan Tantangan Saat Ini [Internet]. 2023 [cited 2024 Nov 18]. Available from: https://www.kompasiana.com/solihinrusydi/64e4357608a8b568283b9aa2/pengembangan-sumber-daya-manusia-sdm-pertanian-indoensia-peluang-dan-tantangan-saat-ini?page=1&page_images=1
6. Mahardhika SV, Ma'una II, Islamiyah Z, Nurjannah I. Faktor-Faktor Penyebab Tingginya Minat Generasi Post-Millenial Di Indonesia Terhadap Penggunaan Aplikasi Tik-Tok. Sosearch Soc Sci Educ Res. 2021;2(1):40–53.
7. Luisandrith DR, Yanuartuti S. Interdisiplin: pembelajaran seni tari melalui aplikasi tik tok untuk meningkatkan kreativitas anak. J Seni Tari [Internet]. 2020;9(2):175–80. Available from: https://journal.unnes.ac.id/sju/index.php/jst/article/view/42085
8. Dharmawan H, Saleh A, Seminar KB. Pengaruh Bentuk Visual dan Durasi Video Youtube Kawasan Rumah Pangan Lestari terhadap Pengetahuan Petani. J Pengkaj dan Pengemb Teknol Pertan. 2021;24(1):37–46.
9. Nirwana TP, Saleh A, Matindas K. Pengaruh Penyajian Visual Dan Gaya Bahasa Pada Video Tentang Pariwisata Di Kabupaten Garut Terhadap Peningkatan Pengetahuan. J Komun Pembang. 2016;14(2):153–65.
10. Dharmawan H. Pengaruh Bentuk Visual Dan Durasi Video Youtube Kawasan Rumah Pangan Lestari Terhadap Peningkatan Pengetahuan Petani. 2020.
11. Andarwati SR, Sankarto BS. Pemenuhan Kepuasan Penggunaan Internet Oleh Peneliti Badan Litbang Pertanian Di Bogor. J Perpust Pertan. 2005;14(1):10–7.
12. Alif M. Pengaruh Jenis Bahasa Narasi dan Bentuk Pesan Visual Video Terhadap Peningkatan Pengetahuan Tentang Penyakit Chikungunya Pada Siswa SMAN 1 Ciampea [Internet]. Institut Pertanian Bogor; 2008. Available from: https://www.neliti.com/publications/245983/
13. Keraf G. Diksi dan Gaya Bahasa. Jakarta: PT Gramedia Pustaka Utama; 2007.
14. Databoks. Databoks. 2023 [cited 2024 Feb 21]. 10 Kategori Video yang Paling Dicari Pengguna TikTok Indonesia, Ada Favoritmu? Available from: https://databoks.katadata.co.id/datapublish/2023/10/05/10-kategori-video-yang-paling-dicari-pengguna-tiktok-indonesia-ada-favoritmu
15. Churiyah M, Dharma BA, Sholikhan. Optimalisasi Pemberdayaan Kelompok Urban Farming Untuk Meningkatkan Ketahanan Pangan Pasca Pandemi Covid 19. 2022;2(1):79–89.
16. Yusuf RR. Froyonion.com. 2023 [cited 2024 Feb 21]. Mengapa Konten Berdurasi Pendek Jauh Lebih Diminati Dibandingkan Konten Berdurasi Panjang? Available from: https://www.froyonion.com/news/esensi/mengapa-konten-berdurasi-pendek-jauh-lebih-diminati-dibandingkan-konten-berdurasi-panjang
17. Populix.co. Populix.co. 2023 [cited 2024 Feb 21]. Hasil survei terbaru Populix membuktikan kalau Gen Z sukanya nonton video-video singkat dengan durasi 15-30 detik. Available from: https://www.instagram.com/p/CtyhdQ0SmaS/?utm_source=ig_web_copy_link
18. Sahni H. Piktochart. 2023 [cited 2024 Feb 21]. Durasi Video Ideal untuk Setiap Platform: Sebuah Panduan Singkat. Available from: https://piktochart.com/id/blog/durasi-video-ideal/#types
19. Nalendra ARA, Rosalinah Y, Priadi A, Subroto I, Rahayuningsih R, Lestari R, et al. Stastitika Seri Dasar Dengan SPSS [Internet]. Media Sains Indonesia : Bandung. Bandung: Media

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

Sains Indonesia; 2021. 54 p. Available from: http://www.penerbit.medsan.co.id/
20. Machali I. Metode Penelitian Kuantitatif. Yogyakarta: Universitas Islam Negeri (UIN); 2021.
21. Setiawan A. Statistik Untuk Penelitian. Tangerang Selatan: STIE Ganesha; 2024.
22. Sari M, Asmendri. Penelitian Kepustakaan (Library Research) dalam Penelitian Pendidikan IPA. 2020;6(1):41–53.
23. Alijoyo A, Wijaya B, Jacob I. Semi-Structured Interview. Bandung: CRMS Indonesia; 2022.
24. Rukminingsih, Adnan G, Latief MA. Metode Penelitian Pendidikan: Penelitian Kuantitatif, Penelitian Kualitatif, Penelitian Tindakan Kelas. Journal of Chemical Information and Modeling. Yogyakarta: Erhaka Utama; 2020.
25. Setyawan DA. Data dan Metode Pengumpulan Data Penelitian. Metodol Penelit. 2013;9–17.
26. Nuryadi, Astuti TD, Utami ES, Budiantara M. Dasar-dasar Statistik Penelitian. Sibuku Media. Yogyakarta: Sibuku Media; 2017.
27. Sudirman, Lembang ST, Vonnisye MLKYA, Kartini NLPMMKS, Nursa'adah FP, Purwanti IPPMEJRSP, et al. Statistika Pendidikan. Bandung: Media Sains Indonesia; 2023.
28. Sugiyono. Statistik untuk Penelitian. Jakarta: Alfabeta; 2000.
29. Nurmalasari M. Modul Statistik Inferens (MIK 411) [Internet]. Universitas Esa Unggul. 2018. 1–16 p. Available from: https://lms-paralel.esaunggul.ac.id/pluginfile.php?file=/44909/mod_resource/content/2/Modul2+MIK411+Uji+T-Dependen.pdf
30. Kurniasih D, Rusfiana Y, Subagyo A, Nuradhawati R. Teknik Analisa. Bandung: Alfabeta; 2021.
31. Fitri A, Rahim R, Nurhayati, Pagiling ASL, Natsir I, Munfarikhatin A, et al. Dasar-Dasar Statistika untuk Penelitian. Medan: Yayasan Kita Menulis; 2023.
32. Firamadhina FIR, Krisnani H. Perilaku Generasi Z Terhadap Penggunaan Media Sosial Tiktok: TikTok Sebagai Media Edukasi dan Aktivisme. Soc Work J. 2020;10(2):199–208.
33. Situmorang DY. Penggunaan Media Sosial Sebagai Alat Bantu Pembelajaran Dan Pengaruhnya Terhadap Interaksi Siswa. Teknol Pendidik. 2023;2(2):110–9.
34. Ekayanti W, Widjajani S, Budiyanto. Pengaruh Karakteristik Personal dan Karakteristik Pekerjaan terhadap Komitmen Organisasional Perawat. J Maksipreneur. 2019;8(2):181–90.
35. Sasmita HO. Pengaruh Bentuk Visualisasi dan Format Narasi Video terhadap Peningkatan Pengetahuan tentang Pengolahan Yogurt Rumahan. Institut Pertanian Bogor; 2015.
36. Firdausi A, Khomsan A, Rahman PH. Hubungan Penggunaan Instagram dengan Pengetahuan Gizi, Perilaku Makan, Aktivitas Fisik, dan Status Gizi Mahasiswa IPB. J Ilmu Gizi dan Diet. 2022;1(1):16–24.
37. Notoadmodjo. Kesehatan Masyarakat Ilmu dan Seni. Jakarta: Rineka Cipta; 2007.
38. Sagala RB, Kusumastuti YI. Efektivitas Strategi Komunikasi Pemasaran Sosial Kampanye Sustainable Seafood, WWF-Indonesia. J Sains Komun dan Pengemb Masy [JSKPM]. 2017;1(1):55–64.

AUTHOR CONTRIBUTIONS

1	Komang Tri Asta Pradnya Sulaksana	
	Institutions	Student of the Bachelor Program in Agribusiness, Faculty of Agriculture, Udayana University, Jl. PB Sudirman, Dangin Puri Klod, West Denpasar District, Denpasar City, Bali, Indonesia.
	Contributions	The author was actively involved in every stage of the research process, starting from designing the research instruments, organizing and

Indonesian Journal Of Small Scale Farming
Volume 1(1), 13 - 27, 2025
https://doi.org/10.24843/ijoss.2025.v01.i01.p02
ISSN : 3109-6484 (Online - Elektronik)

		conducting the data collection, processing and analyzing the data, interpreting the findings, and finally writing and revising the manuscript for publication purposes.
	Homepage	https://pddikti.kemdiktisaintek.go.id/detail-mahasiswa/jQnBUOaqs5rQyoUXQT_JmBop96IMFF4VOW21OXBy7pRNwzttzGYwrZFocq9hKTQO47QkcA==

GRAPHICAL ABSTRACT