



From Social Media to Learning Media: Developing Valid and Practical TikTok-Based Educational Videos for Stage Makeup Education

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Abstract: This study aims to develop TikTok-based educational video content for stage makeup learning that is valid and practical for vocational high school students majoring in Beauty and Cosmetology. The study employed a Research and Development (R&D) approach using the Four-D (4D) model, which consists of the Define, Design, Develop, and Disseminate stages. The participants included two material experts, two media experts, one language expert, and 39 students who participated in the practicality evaluation. Data were collected using validity and practicality questionnaires based on a five-point Likert scale and were analyzed descriptively. The results indicated that the developed learning media demonstrated high validity, with validity coefficients of 0.955 and 0.833 from the material experts, 0.877 and 0.777 from the media experts, and 0.900 from the language expert, representing valid to highly valid categories. In addition, the practicality evaluation yielded a score of 0.892 (89.16%), indicating that the media was highly practical. These findings demonstrate that the TikTok-based educational video content is valid, practical, and suitable for supporting stage makeup instruction in vocational high schools. The study further suggests that TikTok-based educational videos have considerable potential as digital learning media in vocational education by providing flexible access to practical learning materials, promoting self-directed learning, and accommodating the learning preferences of Generation Z. Accordingly, integrating social media into vocational education can enhance the delivery of practical instruction in the digital learning environment.

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Introduction

The rapid advancement of digital technology has transformed various aspects of daily life, including educational practices. As digital natives, Generation Z students exhibit distinct learning preferences characterized by the need for flexible, visual, interactive, and technology-supported learning experiences (Zubaidi et al., 2021). Previous studies have reported that this generation demonstrates greater interest in short-form video-based learning than conventional lecture-centered instruction (Pahu, 2022). Furthermore, approximately 59% of Generation Z identify video-based platforms as their primary learning resources (Liberty Jemadu, 2021). These findings indicate that integrating digital technology into teaching and learning has become an educational necessity rather than an alternative (Syahril Chairani et al., 2023).

Among various digital platforms, TikTok has become one of the most widely used social media applications among Generation Z. TikTok has become one of the most widely used social media platforms among Generation Z and has increasingly been utilized as an



educational medium (Disastra et al., 2022, Fitri Fajriani et al., 2024). The integration of TikTok into educational settings is consistent with the development of digital learning media designed to improve teaching effectiveness. Learning media facilitate the delivery of instructional content, while educational videos integrate visual and auditory information that supports understanding and independent learning (Pagarra et al., 2022; Rochaendi Endi et al., 2024, Agustia et al., 2024).

This learning approach is supported by Mayer's Cognitive Theory of Multimedia Learning, which explains that students learn more effectively when information is presented through integrated visual and verbal channels because it reduces unnecessary cognitive load (Mayer, 2009). In addition, the concept of micro-learning suggests that short-form instructional videos facilitate focused learning by presenting information in manageable segments, enabling learners to process and retain knowledge more efficiently (Clark & Mayer, 2011). Therefore, TikTok's short-video format has the potential to support Generation Z students' learning preferences while promoting independent and flexible learning (Agustia et al., 2024).

In vocational beauty education, audiovisual media play an essential role because most learning activities involve practical demonstrations and procedural skills. One of the competencies required in the Beauty and Cosmetology Program is stage makeup, which refers to makeup techniques specifically designed to enhance facial expressions under stage lighting conditions (Dhana et al., 2019). Consequently, stage makeup instruction requires learning media capable of presenting practical procedures systematically and visually. However, unlike everyday beauty content, stage makeup involves complex techniques, including detailed color gradation, lighting adjustments, facial contour enhancement, and high-precision application. These characteristics require systematic demonstrations and comprehensive explanations, creating a pedagogical challenge when delivered through TikTok's short-form video format. Therefore, developing TikTok-based educational videos for stage makeup requires careful instructional design to balance the limitations of video duration with the complexity of practical learning content. Previous studies reported that instructional videos received highly positive responses from students, with an acceptance rate of 94.2% (Fitrah Budiarti et al., 2022), while also improving students' practical understanding and technical skills (Musrian Teuku, 2024).

Despite these advantages, the implementation of digital learning media in formal education remains limited. Teachers continue to encounter various challenges, including insufficient digital competencies, limited technological facilities, and the continued reliance on conventional teaching approaches (Rahma et al., 2023). Similarly, Salsabilla Salwa (2025) identified inadequate technological proficiency among teachers as a major obstacle to implementing digital-based instruction.

Preliminary observations and interviews conducted in the Beauty and Cosmetology Program at SMK Negeri 3 Payakumbuh revealed that video-based instructional media have not yet been optimally utilized. Classroom instruction primarily relies on lectures and printed learning materials, while teachers have not developed educational video content that can support practical learning activities. Teachers also indicated that students show greater interest in learning activities involving direct visual demonstrations than theoretical explanations.

The observations further revealed that students frequently seek additional learning resources independently through social media, particularly TikTok. Students perceived short-form videos as more engaging and easier to understand than text-based instructional



materials. These findings are consistent with previous studies indicating that Generation Z prefers visual learning resources (Fitri Qatrunnada et al., 2025) and processes visual information more effectively than lengthy textual content (Nuryadin et al., 2024). This situation reflects a mismatch between students' learning preferences and the instructional practices currently implemented in schools.

The challenge has become increasingly significant following the implementation of an integrated vocational curriculum, where multiple beauty competencies must be completed within limited instructional time. This condition is further complicated by students participating in industrial internships, resulting in reduced opportunities for classroom practice. Therefore, accessible audiovisual learning media that support independent and repeated learning are required. Developing TikTok-based educational video content represents a relevant solution because it aligns with the learning characteristics of Generation Z while providing flexible access through students' personal digital devices.

Several previous studies have demonstrated that educational videos improve students' understanding and practical competencies. Likewise, (Berlian Puteri Maharani et al., 2024) reported that TikTok-based learning media are highly feasible and capable of enhancing student learning outcomes and classroom engagement. Nevertheless, studies specifically focusing on the development of TikTok-based educational video content for stage makeup instruction in vocational beauty education remain limited. This study addresses that gap by developing TikTok-based educational video content for stage makeup instruction and evaluating its validity and practicality as a learning medium for students in the Beauty and Cosmetology Program at SMK Negeri 3 Payakumbuh.

Research Method

This study employed a Research and Development (R&D) approach to produce TikTok-based educational video content for stage makeup instruction as a learning medium for students in the Beauty and Cosmetology Program at SMK Negeri 3 Payakumbuh. The development procedure followed the Four-D (4D) model proposed by Thiagarajan et al (1974), which consists of four sequential stages: define, design, develop, and disseminate.

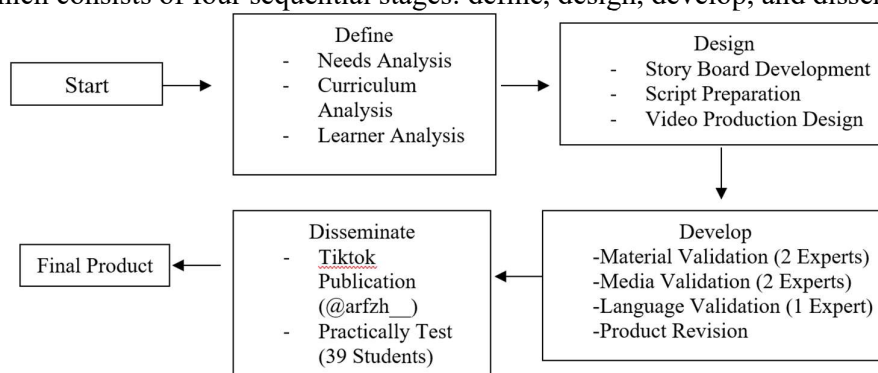


Figure 1. Research Procedure Using the Four-D (4D) Development Model

During the define stage, instructional needs were identified through curriculum analysis, learning material analysis, and an examination of students' learning characteristics. The design stage focused on preparing the instructional framework, including storyboard development, video production planning, and the organization of learning content. In the develop stage, the prototype was evaluated by experts, revised according to the feedback received, and refined to improve its instructional quality. Finally, the disseminate stage



involved publishing the completed instructional videos on the TikTok platform and implementing a practicality evaluation with the target users.

The research was conducted in the Beauty and Cosmetology Program at SMK Negeri 3 Payakumbuh. The validation process involved two material experts, two media experts, and one language expert, while the practicality assessment was carried out with 39 eleventh-grade students. Data were collected using expert validation questionnaires and a student practicality questionnaire based on a five-point Likert scale.

The validation instruments assessed the quality of the instructional content, media design, and language used in the developed videos. Meanwhile, the practicality instrument measured three aspects: presentation, video attractiveness, and instructional usefulness. The validity data were analyzed using the validity coefficient formula proposed by Azwar (2014), as cited in Putri and Saputra (2025). The practicality data were analyzed using the mean percentage score. The validity coefficients and practicality scores were interpreted based on the assessment criteria adapted from Riduwan (2015). These criteria were used to determine the feasibility of the developed learning media for classroom implementation.

Table 1. Interpretation Criteria for Validity and Practicality Assessment

Coefficient	Category
0.80-1.00	Highly Valid/ Highly Practical
0.60-0.799	Valid/ Practical
0.40-0.599	Fairly Valid/ Fairly Practical
0.20-0.399	Less Valid/ Less Practical
0.00-0.199	Invalid/ Impractical

Results and Discussion

This study developed TikTok-based educational video content as a learning medium for stage makeup instruction for students of the Cosmetology Program at SMK Negeri 3 Payakumbuh. The development process produced a set of TikTok-based educational videos designed to support stage makeup instruction for vocational high school students. The findings obtained throughout each stage of the Four-D (4D) model are presented in the following sections.

Define Phase

The define phase aimed to identify instructional needs through classroom observations, interviews with teachers, curriculum analysis, and learner analysis. The findings indicated that classroom instruction still relied primarily on lectures and teacher demonstrations. Although practical activities were conducted, instructional videos had not been integrated optimally into the learning process. Teachers had not yet developed digital learning resources for independent learning. Classroom observations further showed that students frequently searched for additional learning resources through social media, particularly TikTok. They considered short-form instructional videos easier to follow because each practical step was presented visually and sequentially. This learning preference reflects the characteristics of Generation Z, who tend to engage more effectively with concise and interactive audiovisual materials (Fitri Qatrunnada et al., 2025). Consequently, a gap was identified between students' learning preferences and the instructional media currently implemented in the classroom (Rahma et al., 2023).



Design Phase

Based on the identified needs, TikTok-based educational video content was designed as an audiovisual learning medium. The product consisted of three instructional videos covering different competencies in stage makeup:

- 1) Super Glam Stage Makeup: Complexion for Fashion Show Performers.
- 2) Super Glam Stage Makeup: Eye, Eyebrow, and Lip Makeup.
- 3) Simple Hair Styling for Stage Makeup.

The videos were designed using a short-video format compatible with the TikTok platform while maintaining systematic instructional sequences. Each video incorporated step-by-step demonstrations, explanatory captions, and visual emphasis to facilitate students' understanding of practical procedures.

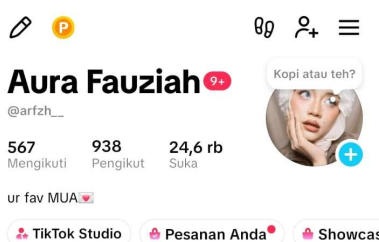


Figure 2. Developed TikTok-Based Educational Videos

The design process emphasized visual clarity, concise explanations, and instructional effectiveness to accommodate Generation Z learning characteristics. These design principles are consistent with Agustia et al. (2024), who reported that instructional videos improve students' independent learning because they can be replayed repeatedly according to individual learning needs.

Develop Phase

During the develop stage, the prototype underwent an expert validation process before being implemented in the classroom. The evaluation involved two material experts, two media experts, and one language expert, who assessed the instructional content, media presentation, and language quality of the developed TikTok-based educational videos. The overall validation results indicated that the developed learning media satisfied the established feasibility criteria across all assessment aspects. These findings confirm that the TikTok-based educational videos are appropriate for instructional use in vocational education. The detailed results from each group of validators are presented in the following sections.

The material expert validation was conducted to evaluate the appropriateness of the instructional content, including content accuracy, relevance to learning objectives, and the educational value of the developed TikTok-based instructional videos. The assessment involved two material experts. The detailed validation results are presented in the following tables.

Table 2. Material Expert Validation Result (Validator I)

Assessment Aspect	Total Score	Maximum Score	Validity Index	Category
Content Quality	24	25	0,96	Highly Valid
Content Usefulness	33	35	0,94	Highly Valid
Overall	57	60	0,95	Highly Valid

As shown in Table 2, the first material expert evaluated the developed learning media as highly valid across all assessment aspects. This finding indicates that the instructional content was considered accurate, systematically organized, and aligned with the learning

objectives of stage makeup instruction. This finding is consistent with Mayer's Cognitive Theory of Multimedia Learning, which suggests that integrating visual and verbal information enhances students' understanding and reduces cognitive load during learning (Mayer, 2009). The strong content validity also reflects that the learning materials effectively support procedural learning, which is consistent with Mayer's Cognitive Theory of Multimedia Learning, emphasizing that well-integrated visual and verbal information facilitates meaningful learning.

Table 3. Material Expert Validation Result (Validator II)

Assessment Aspect	Total Score	Maximum Score	Validity Index	Category
Content Quality	22	25	0,88	Highly Valid
Content Usefulness	28	35	0,80	Highly Valid
Overall	50	60	0,83	Highly Valid

As presented in Table 3, the second material expert also classified the developed media as highly valid, although several suggestions were provided to improve terminology and content presentation. The overall agreement between both material experts indicates that the developed instructional videos are appropriate for vocational stage makeup learning after minor revisions. To provide a clearer comparison between both validators, the overall material validation scores are summarized in the following figure.



Figure 3. Comparison of Material Expert Validation Scores

Figure 3 illustrates that both material experts evaluated the developed learning media positively. The first validator provided slightly higher scores than the second validator across all assessment aspects. Nevertheless, both experts classified the product as very valid, indicating that the instructional content met the expected quality standards. The relatively small differences between the two evaluations suggest consistency in expert judgments regarding the feasibility of the developed media.

The present findings are consistent with Saskia Delanda & Hayatunnufus (2023), which reported that instructional videos developed for cosmetology education achieved a high level of validity because the learning materials were systematically organized, clearly presented, and appropriate for practical instruction. Similarly, Ledi Indahsari et al. (2024) found that well-designed instructional videos facilitate students' understanding of makeup procedures through sequential visual demonstrations. Taken together, the evaluations from both material experts indicate that the developed TikTok-based educational videos possess strong content validity and are suitable for use as instructional media in stage makeup learning.

The media expert validation was conducted to evaluate the technical quality of the developed TikTok-based educational videos. The assessment focused on the visual appearance, video presentation, layout, readability, typography, audiovisual quality, and overall usability of the learning media. Two media experts participated in this evaluation. The detailed results are presented in the following tables.



Table 4. Media Expert Validation Results (Validator I)

Assessment Aspect	Total Score	Maximum Score	Validity Index	Category
Media Quality	57	65	0,87	Highly Valid
Language Use	31	35	0,88	Highly Valid
Media Layout	26	30	0,86	Highly Valid
Overall	114	130	0,87	Highly Valid

As presented in Table 4, the first media expert considered the developed instructional videos highly feasible in terms of visual appearance, typography, audiovisual quality, and media presentation. These findings indicate that the instructional videos successfully integrated visual elements that support practical learning. This result is consistent with the principles of visual pedagogy, which emphasize that well-designed visual representations facilitate learners' understanding of procedural skills.

Table 5. Media Expert Validation Results (Validator II)

Assessment Aspect	Total Score	Maximum Score	Validity Index	Category
Media Quality	51	65	0,78	Valid
Language Use	27	35	0,77	Valid
Media Layout	23	30	0,76	Valid
Overall	101	130	0,77	Valid

As shown in Table 5, the second media expert also confirmed that the developed media met the required quality standards, although several improvements related to typography, subtitles, and video transitions were recommended. These revisions enhanced both the visual quality and instructional effectiveness of the videos before classroom implementation. To present a clearer comparison between both experts, the overall validation scores are illustrated in the following figure.



Figure 4. Comparison of Media Expert Validation Scores

Figure 4 demonstrates that both media experts considered the developed learning media feasible for classroom use. Although the second validator provided slightly lower scores than the first validator, both evaluations confirmed that the instructional videos met the essential criteria of educational media quality. The revisions suggested by the experts further enhanced the visual presentation and instructional effectiveness of the product. The findings are supported by Ledi Indahsari et al. (2024), who emphasized that instructional videos with effective visual design, appropriate typography, and systematic content organization can better facilitate practical learning activities. Likewise, Berlian Puteri Maharani et al. (2024) reported that TikTok-based learning media enhance students' engagement and motivation through accessible and visually appealing instructional content.

The revisions made following the media experts' recommendations indicate that expert feedback plays a crucial role in improving the overall quality of instructional media before implementation. Consequently, the developed TikTok-based educational videos satisfy the media feasibility criteria and are appropriate for use as learning media in stage makeup



instruction. The language validation was conducted to assess the linguistic quality of the developed TikTok-based educational videos. The evaluation focused on language accuracy, clarity of information, readability, and the appropriateness of language use for vocational high school students. The detailed validation results are presented in the following table.

Table 6. Language Expert Validation Results

Assessment Aspect	Total Score	Maximum Score	Validity Index	Category
Language Accuracy	18	20	0,90	Highly Valid
Information Clarity	13	15	0,86	Highly Valid
Language Style	14	15	0,93	Highly Valid
Overall	45	50	0,90	Highly Valid

As presented in Table 6, the language expert classified all assessed aspects as highly valid. These findings indicate that the instructional language was clear, communicative, and appropriate for vocational high school students. Clear instructional language is essential in multimedia learning because it supports students in understanding procedural demonstrations without creating unnecessary cognitive load (Mayer, 2009). To provide a clearer overview of the validation findings, the validity scores for each language assessment aspect are presented in the following figure.



Figure 5. Language Expert Validation Result

Figure 5 demonstrates that all language assessment aspects achieved the Highly Valid category. Although slight differences were observed among the three indicators, the scores consistently indicate that the instructional videos employed clear, understandable, and learner-oriented language. These findings suggest that the linguistic quality of the developed learning media effectively supports students in understanding the sequence of stage makeup procedures and facilitates independent learning.

These findings are consistent with Ledi Indahsari et al. (2024), who reported that the use of clear, communicative, and systematically organized language in instructional videos improves students' comprehension of practical learning materials. Similarly, Saskia Delanda & Hayatunnufus (2023) emphasized that appropriate language use is an essential component in determining the feasibility of instructional video media for cosmetology education. Therefore, the language validation results indicate that the developed TikTok-based educational videos employ appropriate linguistic elements and satisfy the language feasibility requirements for implementation in vocational cosmetology learning. Based on the suggestions provided by the material experts, media experts, and language expert, several revisions were made to improve the quality of the developed learning media before the practicality test. The revisions included improvements to typography, instructional text, terminology, subtitles, and video presentation.



Table 7. Product Revision Based on Expert Feedback

No.	Aspect	Validator's Feedback	Revision Implemented
1)	Typography	The font size used in several sections of the instructional video was considered too small for comfortable reading.	The font size was increased to improve readability and facilitate students' comprehension.
2)	Video Title	The typeface used in the video title lacked clarity and readability.	The title font was replaced with a clearer and more legible typeface.
3)	Text Presentation	The instructional text displayed in each stage did not provide sufficient visual emphasis.	A background highlight was added to the instructional text, and the text size was enlarged to improve visual presentation.
4)	Terminology	The term “karet sayur” was considered inappropriate for instructional purposes.	The terminology was revised by replacing “karet sayur” with the more appropriate term “karet gelang”.
5)	Language Use	Several instructional sentences were written as declarative statements rather than procedural instructions.	The sentences were revised into imperative forms to better match the characteristics of tutorial videos.
6)	Video Presentation	Several video segments were considered less effective in delivering the learning content.	Selected scenes were trimmed to produce a more concise, engaging, and effective instructional video

Disseminate Phase

Following the validation and revision stages, the finalized TikTok-based educational videos were published through the researcher's TikTok account (@arfzh_) as the dissemination stage of the Four-D (4D) development model. After publication, a practicality test was conducted involving 39 eleventh-grade students from the Beauty and Cosmetology Program at SMK Negeri 3 Payakumbuh to evaluate the usability and practicality of the developed learning media.

Practicality Test

The practicality test was conducted to evaluate students' perceptions regarding the ease of use, visual attractiveness, and usefulness of the developed TikTok-based educational videos. The overall practicality results for each assessment aspect are presented in the following figure.

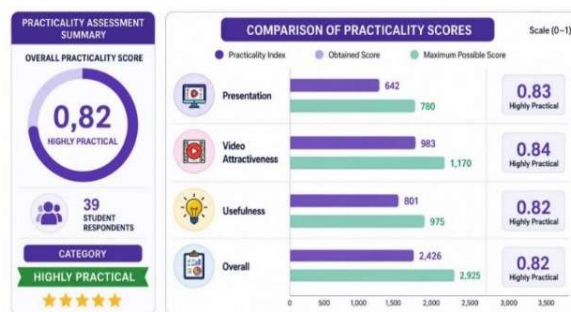


Figure 6. Summary and Comparison of Practicality Test Result

As illustrated in Figure 5, students perceived the developed TikTok-based educational videos as highly practical across all assessed aspects. The findings indicate that the videos



were visually engaging, easy to use, and beneficial for supporting independent learning. These results are consistent with the concept of micro-learning, which suggests that short instructional videos enable learners to access practical content flexibly, reduce cognitive load, and review learning materials repeatedly according to individual learning needs.

The positive responses from students suggest that presenting learning materials through short-form instructional videos can increase learning motivation while providing greater flexibility for independent learning. Students were able to replay the videos repeatedly according to their individual learning needs, enabling them to review each stage of the makeup procedures more effectively. This finding is in line with the concept of micro-learning, which states that short instructional videos enable learners to access learning materials flexibly in small, manageable segments, thereby supporting independent learning Hug (2005).

These findings are consistent with Fitri Fajriani et al. (2024), who reported that TikTok can improve students' engagement and motivation by providing interactive and accessible educational content. Likewise, Berlian Puteri Maharani et al. (2024) concluded that TikTok-based learning media positively influence students' participation and learning experiences because the audiovisual presentation is attractive, practical, and compatible with the learning characteristics of Generation Z. Overall, the practicality test demonstrates that the developed TikTok-based educational videos are highly practical and suitable for supporting stage makeup instruction in vocational high schools.

Conclusion

This study successfully developed TikTok-based educational video content for stage makeup learning intended for students of the Beauty and Cosmetology Program at SMK Negeri 3 Payakumbuh. The developed learning media consists of three instructional videos covering complexion, eye-eyebrow-lip makeup, and stage hairstyle techniques. Expert validation demonstrated that the developed product met the criteria of valid to highly valid across the content, media, and language aspects. Furthermore, the practicality test involving 39 students demonstrated that the developed media was highly practical for classroom implementation. These findings suggest that the TikTok-based educational videos are appropriate for supporting stage makeup instruction and provide an alternative digital learning medium that aligns with the learning characteristics of Generation Z students in vocational education.

The findings also demonstrate that social media-based micro-learning platforms such as TikTok can effectively support the teaching of procedural and motor skills in vocational education when the instructional content is systematically designed. By combining concise video segments with clear visual demonstrations, TikTok-based learning media enable students to repeatedly observe practical procedures, thereby promoting independent learning and complementing classroom instruction. This study contributes to the growing integration of digital pedagogy in vocational education by showing that social media can function as an effective instructional medium rather than solely as an entertainment platform.

Recommendation

It is recommended that vocational school teachers integrate the developed TikTok-based educational videos into stage makeup instruction as a complementary learning medium to enhance students' engagement and independent learning. Future research is encouraged to examine the effectiveness of the developed media in improving students' learning outcomes,



practical skills, and learning motivation. Furthermore, the educational video content may be expanded to include other cosmetology topics and evaluated in a broader range of vocational schools to increase its applicability and generalizability.

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