

Digitization of the Traditional Karo Wedding Event through Virtual Tour

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Abstract

This research explores the digitization of the traditional Karo wedding event through the implementation of a virtual tour. The study aims to preserve and promote Karo cultural heritage by utilizing digital technology, allowing a broader audience to experience the rich traditions of Karo weddings remotely. By leveraging virtual reality and immersive digital tools, this research analyzes the potential of virtual tours to both educate and engage users, fostering a deeper understanding of cultural values. The findings suggest that the digitization process can enhance cultural preservation efforts and provide new opportunities for global exposure while maintaining the authenticity of the traditional event.

Keywords: Karo Wedding, Digitization, Virtual Tour, Cultural Preservation, Immersive Technology, Cultural Heritage

Introduction

Technology continues to evolve, catering increasingly to its users. Multimedia technology has proven beneficial for accessing information through both print and online media. Print media includes books and posters, while online media includes platforms such as websites or YouTube. In this study, information is presented in the form of digitized online media, such as a 360-degree virtual tour website used by businesses to capture and share moments without having to directly provide information to visitors. These sectors include marketing, tourism, and education.

A virtual tour, as a form of digitized media, utilizes technology to create 360-degree panoramas that combine text, images, sounds, and movements to spark users' interest and imagination. The results of the virtual 360-degree tour can be presented on a website. The navigation feature allows users to explore the tour without needing to manually crop images or videos. In the context of introducing North Sumatran culture, especially in the "German for Tourism" course, virtual tours in the form of 360-degree panoramas can be used by readers or users as learning material for students, lecturers, and teachers who are unable to visit the location in person but still wish to experience North Sumatran culture.

One of the cultures from North Sumatra that can be used as learning material in "German for Tourism" is the culture of the Karo tribe. The Karo tribe is the earliest indigenous tribe in Medan City, specifically in the Brastagi and Kabanjahe regions. Over time, changes have occurred in Karo's traditional marriage customs, making it essential

to preserve these transformations through 360-degree virtual tours, based on sources such as books and websites featuring these tours.

This form of digitization uses the Artsteps website, an effective tool for virtual tours, to simplify the editing of photos, videos, and audio files and improve navigation on the website. This allows users to virtually experience the traditional wedding culture of Karo. The results include information provided in German, which will be displayed to users. The virtual tour also includes music, text, and more, which can be utilized by the user (Aisyah et al., 2023).

An interview was conducted with Mr. Lisma Sembiring on February 20, 2024, at Jambur Tamsaka, Jamin Ginting Street, km 11.5, Kemenangan Tani, Medan City, North Sumatra, and Mr. Pebri Purba on June 21, 2024, at the "Desa Rumah Berastagi" office in Narsar Purba, Dusun III Street, Rumah Berastagi, Karo Regency, North Sumatra. The traditional Karo wedding process is highly complex. An informant explained the timeline of the traditional procession, the phases and types of traditional Karo processes, the batang unjuken or dowry required for conducting traditional Karo weddings, the terms and meanings of traditional Karo wedding attire and jewelry, and the bulang-bulang or headdress worn by the bride. They also provided explanations on the changes in names and processes of Karo customs that have undergone significant modifications.

The primary objective of this research is to explain the process of digitizing the traditional Karo wedding event through a virtual tour and to describe the outcomes of that digitization. The benefits of this research are multifaceted. For students, the digitization serves as an effective study tool for learning "German for Tourism" and "Culture and Tourism of North Sumatra," while also providing an engaging and interactive learning experience, especially for those studying German for Tourism. For lecturers, it offers valuable learning material that enhances the teaching process, making lessons more enjoyable and captivating for students. For researchers, it provides a useful reference point for future studies, contributing to the expansion of knowledge and discovery of new information.

Research Method

This study focuses on digitization, specifically creating a virtual tour of the traditional Karo wedding for the "German for Tourism" course. It applies the Richey and Klein model, which consists of three main stages: 1) Planning, 2) Production, and 3) Evaluation.

The data for this research includes information on the traditional Karo wedding, gathered through interviews with key informants, Mr. Lisma Sembiring and Mr. Pebri Purba, who are Karo cultural experts. The study also references the book "Dinamika Orang Karo, Budaya dan Mornisme" by Drs. Sarjani Tarigan, MSP, published in 2008, which documents the traditional Karo wedding process, terminology, attire, and its cultural significance. The research was conducted at the Foreign Language Laboratory of the Faculty of Languages and Arts at Universitas Negeri Medan (UNIMED).

The research follows the Richey and Klein model, which includes the following steps: 1) Planning: This phase involves the needs analysis for materials and the virtual tour. The materials were sourced from the book “Dinamika Orang Karo, Budaya, dan Mornisme” and digitized into a 360-degree virtual format, supported by additional photos and videos. 2) Production: A digitalization method using the Artsteps website was employed to create the virtual tour of the traditional Karo wedding. Features like navigation and media integration (photos, videos, and music) were added to enhance user experience. Once completed, the product was tested by experts. 3) Evaluation: The content was evaluated by a German language lecturer at UNIMED and tested by teachers with expertise in media and computer use. The materials were further refined based on their feedback and incorporated into the virtual tour website.

Result and Discussion

The Process of Digitizing the Traditional Karo Wedding Event Through a Virtual Tour

The process in this study involves creating a virtual tour of the traditional Karo wedding using the Artsteps website as a virtual tour medium. This research follows a digitization method based on the Richey and Klein model, which consists of three stages: planning, production, and evaluation. The study was conducted from June 6, 2024, to September 19, 2024.

Planning

The planning phase included a needs analysis for both the materials and the virtual tour, which is further explained below.

Needs Analysis for the Material

The first step involved conducting an interview at the “Desa Rumah Berastagi” office, located on Narsar Purba Dusun III Street, Rumah Berastagi, Karo Regency, North Sumatra. The interview focused on the implementation process of the traditional Karo wedding. The planning results were based on interviews with traditional experts or village elders. One of the key interviews was with Mr. Pebri Purba on June 21, 2024, at 11:00 AM. He is a traditional expert and village head in “Desa Rumah Berastagi.” Observations and interviews revealed that there is currently no information available online about the “traditional Karo wedding event” in German, and many people are still unfamiliar with the process of this traditional wedding. Below is the information gathered on the “traditional Karo wedding event.”

The History of the Karo Tribe

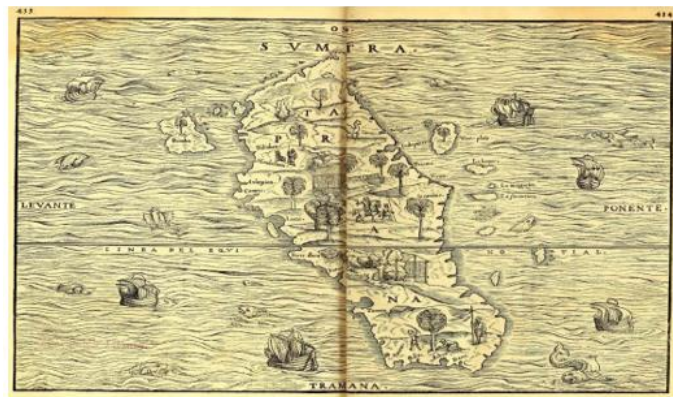


Figure 1 Sumatra in the year 1565 or the 16th century

Source : <https://www.merdeka.com/sumut/menelusuri-jejak-kerajaan-arupenguasa-perairan-di-sumatera-terkenal-dengan-negeri-perompak-76553-mvk.htm>

Between the 13th and 15th centuries, the Haru Kingdom ruled Sumatra, in Terre Laru. It can be seen in the upper southern part. At the height of the Haru Kingdom, they controlled the Strait of Malacca. Like other kingdoms in the archipelago (Nusantara), the center of the Haru Kingdom moved. According to some sources, the kingdom was located in Telok Aru at the foot of Mount Seulawah in West Aceh. Then, it moved to Lingga, Barumon, and even to Deli Tua, Deli Serdang District. The reason for the name change from “Haru” to “Karo” is unknown.

However, some Karo people say that during this time, a child of King Haru was sick and went to Guru Pattimpus Sembiring until the child finally recovered. The Karo people called him datu-datu Hari-Haro. Eventually, they called him "Datu Karo" because he came from a mountainous area. Besides the Haru Kingdom, there was also the Si Capah Kingdom, the oldest kingdom in Karo, followed by the Lingga Kingdom.

Additionally, there is the origin of the clans in the Karo tribe, namely merga silima, or the five main clans of the Karo tribe, including Karo-karo, Ginting, Sembiring, Perangin-angin, and Tarigan. The five parent clans are descended from a Maharaja from South India, who had a daughter named Miansari, who married the Maharaja's bodyguard named Karo. They had up to seven children, the seventh of whom, the successor, was named Meherja, meaning “precious.” She married Tarlon's son, Cimata, and bore him five sons, from whom the five main clans of the Karo tribe descended.

Jambur (Traditional Karo wedding venue)



Figure 2. Jambur Taras, Berastagi, Karo, Nordsumatra

Jambur is a place for mourning ceremonies, weddings, consultations, or other activities for special traditional events, housed in a large building. Every village in Karo Regency has a Jambur as a public facility, and it is also indispensable in urban centers. One of the Jambur with a palm-thatched roof is Jambur Taras in Berastagi, Karo, which has existed since February 11, 1965. Palm fibers were chosen as the roofing material to keep the interior cool.

The fibers absorb heat, keeping the room cool during the day and resistant to rain. Palm fibers also represent simplicity. In addition to the palm-fiber roof, Jambur Taras also features the shape of a buffalo head at the end of the roof, which holds cultural significance related to the Karo cultural system. The buffalo is valued as a symbol of prosperity and serves to protect mystical things among the Karo people.

Rakut Si Telu or Si Rakut Si Telu

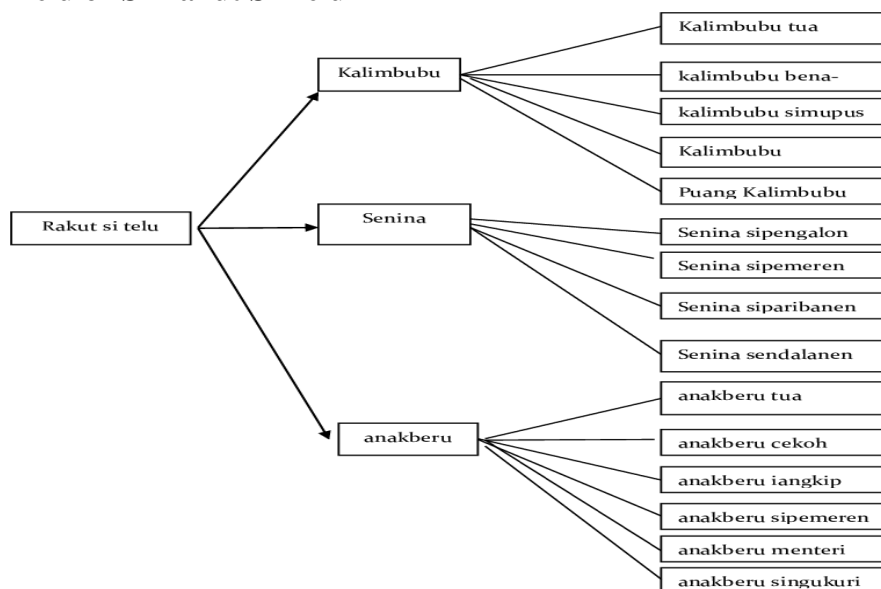


Figure 3. a traditional Karo wedding in the kinship system of the Karo (Rakut Si Telu)

Rakut Si Telu or Si Rakut Si Telu is a kinship system of the Karo tribe. Rakut Si Telu has a similar kinship system to Dalihan Na Tolu in the Batak Toba community. Rakut Si Telu can also be called Daliken Sitelu, which refers to the flow of daily life. There are three elements in Rakut Si Telu: Kalimbubu, Sembuyak or Senina, and Anak Beru. Kalimbubu is a group of female givers. Kalimbubu is also known as Dibata Ni Idah (the visible God). Anak Beru are those who take or receive women for marriage. Anak Beru is considered the moral judge, and if there is a conflict in the Kalimbubu family, it is the duty of Anak Beru to resolve the dispute. Senina or Sembuyak leads the discussion in consultations. Sembuyak are those who belong to the same clan. Sembuyak only applies to men, as women follow their husbands.

The traditional wedding ceremony of the Karo people

Mr. Pebri Purba says that traditional Karo weddings have five stages:

Sitandaan Ras Keluarga Pekepar (The Sitandaan Stage of the Pekepar Family)

Sitandaan Ras Keluarga Pekepar is a meeting between the families of the bride and groom to hold the wedding. In this phase, the parents of both families speak to their respective children to determine a good day. A good day is chosen for a meeting at the house of the Kalimbubu to discuss the Ngembah Belo Selambar or Mbaba Belo Selambar (MBS) plan.

Ngembah Belo Selambar or Mbaba Belo Selambar (MBS)

Ngembah Belo Selambar or Mbaba Belo Selambar (MBS), which means to carry a piece of betel, holds the meaning or symbol of betel, lime, areca nut, and tobacco inside it. In a non-Nangkih event, the Ngembah Belo Selambar phase is the first phase in a traditional Karo wedding ceremony. Ngembah Belo Selambar signifies the sincerity of the bride-to-be, the parents of the bride-to-be, and the Sirembah Kulau (aunt) of the groom-to-be. At this meeting, the Anak Beru Si Empo comes after dinner as a messenger from Si Empo to the house. The process is carried out after the exchange of cigarettes (Absaugen). This process is called Nungkuni. After the sincerity of the families is established, the Runggu conversation moves to questions regarding ceremonial customs.

Pasu-pasu or akad nikah (Marriage contract)

Pasu-pasu or akad nikah (marriage contract) takes place either before ngantin manug or after mbaba belo selambar and ngantin manug. Pasu-pasu means the blessing, which is carried out according to the faith of the bride and groom. If the pasu-pasu is conducted in accordance with Christian teachings, especially in the GBKP (Gereja Batak Karo Protestan), the activities include a blessing or prayer led by the priest, the exchange of wedding vows by the bride and groom, a request for the prayers or blessings of the parents of the bride and groom, the issuance of the marriage certificate, and the offering of tithes or donations.

There are also performances by choirs, such as those by Permata or Karo youth, the men's choir, and the women's choir, along with photo sessions and other activities. However, if the marriage contract (akad nikah) is conducted according to Islamic law, it takes place at the Kantor Urusan Agama (KUA) or in a mosque. In this procession, all the pillars and conditions of marriage are fulfilled, and the groom gives a dowry to the bride. Following this, a celebration is held according to Karo customary law, which is considered sacred because it adheres to the traditional law.

Ngantin Manuk or Maba Luah

Ngantin manuk, meaning "carrying a chicken," refers to an old tradition in which chickens were carried by the anak beru because there were no means of transportation, and people traveled on foot. The chickens were brought by the anak beru to the bride's parents' house, hence the term ngantin manuk. Before ngantin manug begins, the male family (si dilaki) must prepare a complete kampil of six parts, including amak mbentar (traditional food) for the kalimbubu, eight packets of cigarettes, rires (traditional dish), cimpa unung-unung (rice cake), ayam cipera (chicken dish), and rice and curry. The female group (si diberu) prepares two complete kampil for the kalimbubu.

All sangkep nggeluh (members of the extended family) are present, including sembanyak sukut, senina, seninan kuranan, kalimbubu, puang kalimbubu, anak beru, and

anak beru menteri. Particularly, Empo must be present. The anak beru also helps with washing pots and cooking. In the ngantin manuk phase, the sincerity (*kesenangen ate*) of the kalimbubu is questioned, but this is more of small talk (*bunga-bunga ranan*), as it has already been discussed in the ngembah belo selambar or Mbaba Belo Selambar (MBS) phase.

The woman's family also asks the kalimbubu singalo ulu emas (the groom's uncle). In the adult ngembah belo selambar phases, two phases are combined into one: ngembah belo selambar and ngantin manuk. The common term in Karo today is ngembah belo selambar ditingkatkan ku ngantin manuk (Ngembah belo selambar is elevated to Ngantin manug). Ngantin manuk is held at the location or area where the bride lives, or it can take place in a jambur or a hall.

Kerja adat or the traditional Karo wedding ceremony

Kerja adat (the traditional Karo wedding ceremony), held on the day of the traditional Karo wedding, is the most important event in the Karo wedding process. During this phase, the groom's parents pay the customary debts to the singalo-ngalo ulu emas (paternal uncles), while the bride's parents pay their customary debts to the singalo-ngalo bebere (maternal cousins).

There are several phases in the traditional kerja adat erdemu bayu, including: a) The bride and groom's family. The families of the bride and groom begin entering the jambur. b) Pengalo-ngalo sukut, the parents accompany the bride and groom (*penganten dialo-alo anak beru*) In this phase, the bride and groom receive a rice leaf, which symbolizes blessings for their relationship as people say "*Mejuah-juah*" or "*bu ko page*" (expressions of goodwill). c) When the bride and her parents enter the jambur, The bride and groom invite the kalimbubu telu sadadalan (a group from the bride's maternal uncle's side) to enter, accompanied by music and the landek dance. The kalimbubu must bring a *luwah* (gift), including a mattress, pillows, and other kitchen utensils. d) Runggu (Meeting): This is a discussion about the *batang unjuken* or *tukur* (bride price or dowry) placed in an envelope. The anak beru tua (representatives from the families of the bride and groom) also speak during this discussion. Following this, the village chief asks the bride and groom for their personal details and those of their families. Then, the envelope with the money is handed over by the bride and groom to the parents of the bride, the *senina* or other sisters of the father, the maternal uncle, Puang Kalimbubu (father's parents), *Perbibin*, *Anak Beru*, and *Si Remba Kulau*. The envelope is also handed to the kalimbubu singalo ulu emas and kalimbubu perkempun. e) *Adu pengantin* or *landek penganten*. The bride and groom sing three songs and then dance together. During this phase, a basket (*raga-raga*) is set up for guests to donate or give money to the newlyweds. f) After the *adu pengantin* or *landek penganten*, both the bride and groom have lunch. g) *Sukut* or *pengalo-ngalo* from *senina*, *sipemerren*, *si paribanen*, *sadadalan*, and *si pengalo tukur* (the groom's family), followed by *pengalo-ngalo* from the bride's family. h) Followed by *landek* (dance), all with the aim of expressing gratitude and greetings.

Mukul or mecah-mecah tinaroh

This is the completion of the kerja adat (traditional wedding ceremony), marking the official union of the bride and groom as husband and wife. Mukul signifies the union of souls between the newlyweds and between the families of the bride and groom. During this phase, a ceremonial conversation known as ngerebuken or taboo discussion takes place between the father-in-law and daughter-in-law, as well as between the mother-in-law and son-in-law. Afterward, advice or instructions, known as kata pedah ajar, are given by the kalimbubu telu sadadalan. Finally, the anak beru of the groom offers advice or says the kata pedah ajar to the bride.

Ngulih tudung (Returning the Bride's Veil)

Ngulih Tudung means "returning the veil." The tudung is a traditional piece of clothing worn by Karo women instead of a crown. The male counterpart to the tudung is the bulang. After the traditional Karo wedding celebration, 2-3 days later, the ngulih tudung takes place. The bride and groom bring Karo foods, like Cimpa Matah, to the bride's parents' house. The ngulih tudung phase symbolizes that although the bride has been taken to the groom's parents, 2-3 days later, the couple, along with sangkep nggeluh or Rakut Si Telu (kalimbubu, senina, anak beru), visits the bride's parents as a sign of respect toward the kalimbubu (maternal uncle).

Traditional Clothing at a Karo Wedding

Groom's Attire a) Tudung mayang or bunga palas: Made of gold or gold-plated brass. b) Uis nipes bekas buluh or cengkok-cengkok: A fabric shaped as a hood or head covering. c) Sertali rumah-rumah kitik: A headpiece made of gold or gold-plated brass. d) Bura sidi laki (collared shirt): A shirt with a collar around the neck. e) Uis Beka Buluh: Worn as a hood or draped over the shoulders. f) Tie: A tie is mandatory for the groom due to the formality of the wedding. g) Surtali tanduk kerbau (rumah-rumah): A necklace draped around the neck. h) Songket or kadang-kadangan: A shawl worn under the uis beka buluh. i) Suit: The groom must wear a suit at a traditional Karo wedding. j) Gelang sarung: A large bracelet worn on the right hand. k) Rings: Various rings, including wedding rings, nipple rings, and patilokan rings, with the wedding ring worn on the middle finger. l) Uis gatip jongkit: The fabric used for the sarong. m) Pants. n) Shoes.

Bride's Attire a) Tudung or uis jujungen or kelam-kelam rumbai emas or tudung tegar: A cloth shaped and worn on the head as a head covering. b) Sertali layang-layang kitik or tudur tider limpek or sertali waluh: Made of gold-plated or silver materials and worn as a headpiece. c) Tabur berlian or kalung emas (gold necklace): Worn around the neck in a gold color. d) Sertali layang-layang: A large gold-colored necklace worn around the neck. e) Kebaya: The kebaya used in traditional Karo weddings is red. f) Kamisol or uis benang iring: The fabric covering the inside of the kebaya. g) Rings: The same ring as worn by the groom. h) Bracelet: Not visible. i) Uis langge-langge or uis nipes: The cloth used on the outside after uis gatip or uis julu-julu. j) Uis gatip or uis julu-julu: The second cloth, worn after the songket and before the uis langge-langge or uis nipes. k) Songket: The songket fabric is worn as a skirt.

Traditional Food at Karo Weddings

Food is an important aspect of traditional events for the Karo ethnic group, particularly terites and cipera, which are often served at traditional ceremonies. Terites is a Karo specialty made from grass taken from the rumen (stomach) of cows, while cipera is a traditional Karo dish made from native chicken meat and parts mixed with corn flour. However, for adult Karo weddings, the food is usually provided by a caterer. Besides terites and cipera, there is also lomok-lomok, which is common at traditional Karo events. Lomok-lomok is a typical Karo dish made from pork. Its distinct feature is that the pork is prepared without blood.

Traditional Wedding Musical Instruments

In kerja adat Karo there are traditional Karo musical instruments that have been passed down through generations: gendang indung, sarune, gendang anak, penganak, and gung. However, for adult Karo weddings, only one type of musical instrument is typically used, which is in the form of a keyboard that produces Karo music.

The Results of Digitizing the Traditional Karo Wedding Event

The outcome of this research is a virtual tour hosted on the Artsteps website, serving as a digital medium on the theme of "The Traditional Karo Wedding Event." The creation of this virtual tour is only accessible through the Artsteps website. This virtual tour is designed to introduce the traditional Karo wedding event, featuring information in Indonesian in the photos and videos, and in German for the tour on the Artsteps website.

The virtual tour of the traditional Karo wedding event on the Artsteps website includes a "Tour Guide" function, making it easy for students or authors to follow the sequence of a traditional Karo wedding. The instructions for use are as follows: 1) By clicking on the website <https://www.artsteps.com/view/66d86b7c4021cc6a38f0daff>, users can view the virtual tour titled "Digitizing the Traditional Karo Wedding Event." 2) After that, users can move around with the cursor or rotate the tour using the triangle symbol to find the first step in the traditional Karo wedding event. To view the descriptions, click on the photo or video on the wall, and to listen to music, click on the green checkmark to play the song.

Discussion

The result of this study is a virtual tour on the theme of "The Traditional Karo Wedding Event," which serves as an appropriate medium for research. These methods can be accessed online via the Artsteps website (a virtual tour platform). The research is based on the theory of Richey and Klein, which consists of three steps: (1) Planning, (2) Production, and (3) Evaluation. The data for this study is information on traditional Karo wedding events, and the data sources include Mr. Lisma Sembiring and Mr. Pebri Purba as Karo experts, as well as the book *Dinamika Orang Karo, Budaya dan Mornisme*, written by Drs. Sarjani Tarigan, MSP in 2008.

In the first step of this research model, data and information were collected. In this step, the author found that traditional Karo wedding events have evolved over time due to financial constraints and changing times. For example, the mbaba belo selambar

and ngantin manuk processions have been condensed into one step, the mukul activities, which used to take place at the groom's house, can now be held at the Jambur, and the ngulihi tudung ritual, which was more common in the past, is now rarely practiced.

The challenge in this step was the lack of documentation of mbaba belo selambar and ngantin manuk, as these activities are rarely documented nowadays. There was also no documentation of mukul activities held at home or ngulihi tudung activities. Therefore, the author began the digitization process by taking photos and recording videos of traditional Karo wedding events with elders, which were then edited and incorporated into the virtual tour website.

In the second step, a virtual tour was created on the Artsteps website. The collected and edited information was turned into a virtual tour in both German and Indonesian, complete with music and audio. The challenge in this step was ensuring that the network and laptop specifications were adequate. If the network and laptop specifications are not compatible, the process cannot proceed smoothly.

In the third step, the evaluation was conducted. A German lecturer and a computer teacher corrected the content of the materials. On September 2, 2024, the German lecturer provided an evaluation of the materials on the traditional Karo wedding event, and the result was good. On September 18, 2024, the computer teacher provided an evaluation of the methods for the traditional Karo wedding event, and the result was very good.

Conclusion

The conclusions drawn from this study are as follows: 1) This research focuses on the digitization technique using the Richey and Klein model as described by Erni Fatmawati and Isnania Lestari (2021). The digitization of the traditional Karo wedding event was conducted through a virtual tour, following the three steps of the Richey and Klein model: 1) Planning, 2) Production, and 3) Evaluation. 2) The virtual tour of the traditional Karo wedding is based on interviews with elders, books, and articles. The research outcomes were incorporated into the Artsteps website (a virtual tour platform) in the form of text, photos, and videos. The digitized virtual tour was evaluated by media experts and received an overall score of 91.25.

Based on the results and conclusions of this study, the following suggestions are made: 1) To ensure that the Karo culture is not lost to modern influences, young people and students should continue to study and preserve Karo culture. This can be achieved through the digitization of texts, photos, audio, and video files and their further dissemination, such as the creation of virtual tours showcasing traditional Karo weddings. 2) German lecturers can use the virtual tour as a learning medium in German courses, particularly for subjects like "German for Tourism" and "Culture and Tourism of North Sumatra."

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