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¿VIRTUAL O VIÑEDO? EXPLORANDO MODALIDADES DE CATA DE VINOS

Abstract

Thanks to technology and the pandemic, wine experiences have evolved. Now, tasters can participate in digital wine tastings from the comfort of their own homes. This study compares physical and digital wine tasting experiences (DWEs) using qualitative methods. Semi-structured interviews were conducted with participants who had experienced both types of tastings. A cyclic and interpretive qualitative data analysis approach was employed. The findings show that both formats offer socialization opportunities, though DWEs enable social interaction from home. The sensory dimensions were similar, while the cognitive and emotional aspects differed. As DWEs grow in popularity, they are emerging as valid tourism products. Understanding behavioral tendencies across both modalities can help the wine industry adapt and improve experience design.

Keywords: wine, wine taster, wine experience, physical wine experience, digital wine experience, Turkish wine

Resumen

Las experiencias enológicas han evolucionado gracias a la tecnología y a la pandemia. Los catadores ahora participan en catas de



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VIRTUAL OR VINEYARD? EXPLORING WINE TASTING MODES

Fecha de recepción: 8 de agosto de 2025
Fecha de modificación: 5 de noviembre de 2025
Fecha de aceptación: 20 de febrero de 2026

Arman, A., Mutlu, Ç., Ören, V. E., Ekin, Y., & Ören Şahin, T. (2026). Virtual or vineyard? Exploring wine tasting modes. *Turismo y Sociedad*, XXXIX, pp. 289-317. DOI: <https://doi.org/10.18601/01207555.n39.12>

vino digitales de forma remota, sin salir de su zona de confort. Este estudio, utilizando métodos cualitativos, compara las experiencias de cata de vino físicas y digitales (DWE). Se realizaron entrevistas semiestructuradas a participantes que habían experimentado ambas modalidades. Se utilizó un enfoque de análisis de datos cualitativo cíclico e interpretativo. Los resultados muestran que ambos formatos ofrecen socialización, aunque las DWE permiten la interacción social sin salir de casa. Se observó que las dimensiones sensoriales fueron similares, mientras que en los aspectos cognitivos y emocionales hubo diferencias. A medida que las DWE ganan popularidad, se están convirtiendo en productos turísticos válidos. Comprender las tendencias de comportamiento en ambas modalidades puede ayudar a la industria del vino a adaptarse y mejorar el diseño de la experiencia.

Palabras clave: vino, catador de vino, experiencia enológica, experiencia enológica física, experiencia enológica digital, vino turco

1. Introduction

In today's highly competitive landscape, wineries must not only meet consumers' basic needs (Trigo & Silva, 2022), but also deliver memorable experiences that resonate on emotional, physical, intellectual, and spiritual levels (Kastenholz et al., 2022). Offering the right type of experience through products, services, and strategic marketing has become increasingly important (Darmawan & Grenier, 2021). Wine tasting events allow attendees to sample and evaluate various wines under the guidance of a knowledgeable host, such as a sommelier or winemaker (Bhardwaj et al., 2024). These events range from informal social gatherings to structured tastings that emphasize education, appreciation, and sensory exploration (Brito et al., 2024). Wine tasting has evolved from a local tradition into a global phenomenon, influenced by historical development, industry expansion, institutionalization, tourism, digital transformation, and cultural adaptation. Whether experienced in person or online, wine tasting remains a significant way for people worldwide to appreciate and engage with wine culture. Both formats have their advantages: physical tastings provide richer sensory and cultural experiences, and digital tastings offer convenience, broader accessibility, and a cost-effective way to explore international wines (Crichton-Fock et al., 2023).

Physical wine tasting usually refers to an in-person experience in a structured setting, such as a winery or wine bar. It can also refer to a specific tasting event (Bruwer et al., 2013). In these settings, visitors are offered samples of different wines, which are often grouped or served individually (Maio, 2022). The process generally includes a visual assessment, swirling the wine to release its aromas, smelling it to detect scents, tasting it to evaluate its flavors and texture, and assessing its finish (Honoré-Chedozeau et al., 2024). Staff members, such as sommeliers or winemakers, often share information about grape varieties, production methods, and tasting notes (Inglis, 2021). They also share information about the winery's history, terroir, and winemaking philosophy to enrich the experience. To maintain objectivity and avoid getting drunk, participants are often encouraged to use spittoons. Wine tasting is also a social activity that offers opportunities to converse, share impressions, and build connections with fellow enthusiasts and staff. It is both a sensory and educational experience that refines tasting skills and deepens wine appreciation (Nimri

et al., 2024). Historically, physical wine tasting has been a cornerstone of the wine industry (Serra et al., 2023). However, the disruptions caused by the COVID-19 pandemic and rapid technological advancements have prompted a rethinking of how such experiences are delivered (Su et al., 2022).

Digital wine tasting involves engaging with wine through online platforms (Piras, 2024). Thanks to technological innovations, wine enthusiasts can now participate in tastings remotely without having to attend a physical venue. Wineries, clubs, hobbyist communities, and individual sommeliers host virtual tastings via video conferencing tools. Participants receive the wines in advance and join live sessions, during which experts guide them through the tasting and provide information on the characteristics and production techniques of each wine. Online wine education programs, ranging from beginner to advanced levels, use video lectures, quizzes, and discussion forums to facilitate learning (Pelet et al., 2025). Many wine-related apps and websites also offer virtual tasting experiences (Gastaldello, Rossetto et al., 2024). These experiences include personalized wine recommendations, interactive quizzes, virtual vineyard tours, and simulated tasting environments. Social media platforms like Instagram and Facebook host live tastings, facilitating real-time interaction and community engagement. Overall, digital wine tasting is a flexible, accessible, and convenient alternative that allows wine enthusiasts to explore, learn, and connect from anywhere in the world (Gogiali et al., 2023).

Despite the growing popularity of digital wine tastings, significant gaps remain in our understanding of what constitutes a successful experience, especially compared to traditional, in-person events (Torricco et al., 2020). Limited research has been conducted on how digital platforms replicate or enhance sensory engagement, build emotional connections, or support consumer education. Technologies such as virtual reality (VR), augmented reality (AR), and multimedia tools have not been widely explored in the context of enhancing digital wine experiences (Sousa et al., 2026). The cross-cultural aspects of digital wine tasting, including preferences and behaviors, have not been sufficiently investigated. This limits the wine industry's ability to cater to a global and diverse audience (Berkholz et al., 2023). Although there is substantial research on sensory dimensions in physical settings, fewer studies have examined how digital platforms can recreate or enhance those experiences effectively (Gauhe, 2024). This study examines the strengths and limitations of digital wine tasting, highlighting its potential as an alternative to traditional formats. Furthermore, the crucial aspects of usability and design for digital platforms, which are essential for customer satisfaction and long-term engagement, have yet to be thoroughly examined. These gaps hinder the wine sector's ability to adopt digital wine tasting as a sustainable and competitive model, especially when it comes to attracting consumers who cannot or choose not to visit physical wineries. As the industry embraces digitalization, a comprehensive understanding of digital wine experiences is essential for fostering innovation, customer loyalty, and sustainable growth.

This research aims to address these deficiencies by evaluating the standards of physical and digital experiences, examining consumer behavior, and identifying ways to improve digital tastings with emerging technologies and creative design solutions. Despite the growing interest in digital wine experiences, there has been limited qualitative research comparing digital and physical wine tastings across cognitive, sensory, and emotional

dimensions. The present study addresses this gap by developing a comparative experiential framework based on Uses and Gratifications Theory and the Theory of Planned Behavior. Specifically, this study contributes to the literature in three ways: First, it provides an in-depth qualitative comparison of digital and physical wine tasting experiences. Second, it examines experiential differences within the Turkish context. Third, it conceptualizes digital wine tasting as an emerging experiential tourism format that extends beyond the pandemic context.

2. Literature Review

2.1 Dimensions of the Wine Tasting Experience

Tasters' levels of interest in wine are classified as "hangers-on," "wine novices," "wine interested," or "wine lovers" (Charters & Ali-Knight, 2002). Cognitive variables, such as wine knowledge and personal specializations, influence the wine tasting experience (Honoré-Chedozeau et al., 2020). Taster interest, prior experience (Gunasekar et al., 2022), wine region (Gaetjens et al., 2023), and wine context (Napolitano et al., 2022) influence sensory responses (Esau & Senese, 2022) during tasting (Ingrassia et al., 2022). Emotional reactions are also influenced by brand loyalty and destination branding (Bianchi et al., 2014; Dimitrovski et al., 2019; Drennan et al., 2015). Most research focuses on the hedonic aspects of wine tasting, including scenery, atmosphere, service quality, and products (Garner & Kim, 2022).

Although wine tasting has different meanings for each individual (Jackson, 2017), most people expect a high-quality experience (Santos et al., 2020). This experience involves cognitive, sensory, and emotional engagement, which has been especially shaped by the pandemic and technological change (Marino & Pariso, 2022). As wine tasting enhances one's social image (Lunardo et al., 2021), it suggests that drinking wine and experiencing wine are separate phenomena (Sternsdorff, 2014). Therefore, it is worth questioning whether different wine tasting formats offer equivalent experiential quality. Beyond these experiential dimensions, recent global developments, particularly the COVID-19 pandemic, have reshaped how wine experiences are delivered and consumed. During the pandemic, tourism businesses embraced digital wine tasting events to generate income and improve the online customer experience (Chandra Kruse & Drechsler, 2022). The pandemic created demand for low-contact, at-home hedonic services (Ponsignon, 2023) that focus on emotional engagement (Keltner & Oatley, 2022). Wine companies leveraged wine's associations with pleasure to create digital tastings as hedonic offerings (Amaral et al., 2024), which helped consumers find joy and socialization during isolation (Duncan et al., 2022; LaTour et al., 2020).

2.2 Digitalization and the Evolution of Wine Experiences

Various studies have examined wine experiences through different lenses, including gastronomic context (Rachão et al., 2021; Thanh & Kirova, 2018), food and wine pairing (Priilaid et al., 2020), pricing (Werner et al., 2021), consumer behavior (Lourenço-Gomes et al., 2015), multisensory aspects (Brochado et al., 2021; Campo et al., 2021), and digital formats such as virtual or video tastings (Deng et al., 2022; Martins et al., 2017; Wen & Leung, 2021). Although most studies focus on physical tastings, digitalization is becoming increasingly important for sustainability and competitiveness (Alebaiki et al., 2022; Lee

et al., 2023). Digital wine tasting enables wineries and consumers to interact remotely, providing convenience and safety (Paluch & Wittkop, 2021). It appeals to those who are unable or unwilling to visit wineries (Pelet et al., 2019). These tastings include sommelier-led experiences at home with specially prepared wine kits.

Despite its growing relevance, digital wine tasting remains understudied (Bartoli et al., 2025). The industry has traditionally relied on physical tastings to build brand loyalty and increase sales (Lease et al., 2023; Li et al., 2023). However, changes in consumption patterns and communication technology have made digital wine tastings possible (Cui et al., 2024). These experiences connect users regardless of their location, ensuring accessibility and inclusivity (Carvalho et al., 2021). Although digital tastings reduce logistical barriers (Adamashvili et al., 2024), physical experiences offer distinct tactile, olfactory, and social elements (Cosme et al., 2025). This study explores these qualitative differences by focusing on participant perceptions, preferences, and emotional responses in order to evaluate the strengths and weaknesses of each type of tasting and identify behavioral trends.

2.3 Theoretical Foundations

Wine tasting is a blend of art and science (Casadó-Marín & Anzill, 2022), requiring sensory evaluation and subjective judgment (Barbe et al., 2021; Yuan et al., 2024). Perception and enjoyment are affected by external factors such as branding and expert opinion (Pickering et al., 2022).

According to gratification theory, people seek wine tasting for pleasure, social interaction, and intellectual stimulation (Falgoust et al., 2022; Quintal et al., 2022; Singh et al., 2021; Zadeh et al., 2023). Some people engage in wine tasting for status 9+ or for leisure (Duarte et al., 2025). The Theory of Planned Behavior (Ajzen, 1991) links intention to attitude, social norms, and perceived control. Factors such as enjoyment, cultural expectations, and accessibility influence behavior (Caliskan et al., 2021; Celuch et al., 2025). These theories form the basis of the present study. To the authors' knowledge, this is one of the first qualitative studies to compare digital and physical wine tasting in Turkey. Cross-cultural studies could examine how language, symbolism, and social norms influence the digital wine experience (Agnoli & Outreville, 2021). Usability studies can evaluate the design and satisfaction of digital tasting platforms. Addressing these areas could improve digital sensory engagement, increase consumer appreciation, and advance wine education.

Several avenues for future research emerge from these theoretical perspectives. For example, future studies could examine how VR/AR simulate sensory wine experiences, such as visual, olfactory, and gustatory experiences, and how these experiences influence preferences (Martínez-Velasco et al., 2024; Pandey & Tripathi, 2025). Another area of research could be exploring ways to increase sensory engagement in digital tastings via interactive platforms, live streams, and immersive media (Barbosa et al., 2021; Wadewitz, 2023).

3. Materials and Methods

This study compares digital and physical formats to explore the wine tasting experience. Instead of focusing on participants' wine knowledge, the study examines the tasting

process and experiential differences. Wine quality refers to its potential deterioration before reaching the consumer (see Table 3 in the Quality Perception section). Regardless of their wine knowledge, participants purchase the same experience. While this study does not measure the influence of wine culture, future research could evaluate this variable and examine the two processes separately. The inclusion criteria were as follows: (1) having attended a physical wine tasting at least once in the past two years, (2) having experienced a digital wine tasting during or after the pandemic, and (3) being over 18 and willing to share insights in an interview. Exclusion criteria included: (a) having only physical or only digital tasting experience, (b) having no background in wine tasting, and (c) declining or being unable to participate in interviews. Efforts were made to ensure diversity in age, gender, nationality, and professional background.

3.1 Recruitment and Characterization of the Panel

This study examined the experiences of consumers who participated in both digital and physical wine tastings. Due to accessibility constraints, the target population was defined as wine consumers in Turkey. Specifically, the study focused on individuals who had experienced both formats and shared their comments on social media. Wineries were contacted to identify potential participants, resulting in a list of 35 wine tasters.

Since the aim was to explore lived experiences, participants' nationality, language, or religion were not limiting factors. However, it was challenging to locate participants in Turkey due to cultural and religious norms. Ninety-nine percent of the population is Muslim, a religion that discourages alcohol consumption. Even discussing wine-tasting experiences can be socially sensitive. Consequently, the final sample includes individuals living in Turkey who commented on social media in Turkish. This research is a preliminary investigation and the first of its kind in Turkey. Any attempt to manipulate or expand the sample could jeopardize the study's validity. Thus, the initial pool of 35 tasters was contacted via email or social media using purposive sampling. Ultimately, 21 people agreed to participate, forming the final sample. Justification of the sample size is discussed further in the Methods section.

No classification regarding wine culture was made, and no responses were received from French or Italian participants. All participants responded to questions focusing on the tasting process and experiential elements. The wines used in the study came from Turkish wineries that offer tasting formats. All these wines were made with grapes from various Turkish regions, their sensory profiles may have been unfamiliar to some participants.

To address this, the wines covered a range of international grape varieties, such as Chardonnay, Cabernet Sauvignon, Riesling, Nebbiolo, and Champagne to promote familiarity. While some variation from participants' usual sensory expectations was anticipated, its impact was evaluated through qualitative analysis. Since controlling sensory perception is more difficult in digital settings, this was noted as a limitation in the findings.

3.2 Interview Questions

The interview questions were developed to evaluate the cognitive, sensory, and emotional aspects of wine tasting, based on multisensory experience and consumer experience

theories. According to the wine tasting and experiential marketing literature (Carmer et al., 2024; Kotur, 2023; Wörfel et al., 2022), the wine experience is typically described using three dimensions (Haller et al., 2021; Leri & Theodoridis, 2021; Rodrigues, 2025):

- Cognitive: Wine knowledge and tasting expertise
- Sensory: Physical sensations (sight, smell, taste, touch, and ambience)
- Emotional: Feelings such as excitement, pleasure, and relaxation

We designed semi-structured interview questions linked to each dimension accordingly. Examples include:

- Cognitive: “What does it mean to you to increase your knowledge about wine or learn something new during a tasting?” or “How did the information presented to you before or during the tasting affect your decision or perception?”
- Sensory: “How did you experience differences in terms of taste, smell and appearance, etc. during both physical and digital tastings?” or “How do you think the tasting environment (light, sound, etc.) affected your experience?”
- Emotional: “What emotions did you experience during or after the tasting?” “How did being in your comfort zone during the digital tasting affect your emotions?”

Pilot interviews with two academics, two sommeliers, and five wine tourists tested the clarity and sufficiency of the questions. After revisions were made, data collection began. Thus, the questions were shaped directly by theoretical foundations and pilot feedback.

To identify differences between physical and digital wine tastings, we contacted participants through Turkish wineries that offer both experiences. Participants needed to have engaged in both formats, ideally before and after the pandemic, in order to capture the influence of pandemic-related digitalization.

Most participants reported experiencing DWE during or after the pandemic. While some had only physical tastings before, they later explored digital options. Thus, DWE was largely viewed as a pandemic-era practice, though a few participants had joined online tastings prior to or early in the pandemic.

3.3 Analysis

The findings suggest that digital tastings were preferred for their “comfort zone” and “remote accessibility” advantages during the pandemic. In contrast, physical tastings, which were more common pre-pandemic, evoked different emotional responses post-pandemic due to restrictions and anxiety. Participants’ evaluations reflect these shifts, and the findings must be interpreted in the context of pandemic-related impacts.

The initial analysis involved comments from individuals who had experienced both digital and physical wine tastings on social media. The 35 individuals who provided these comments formed the target population. They were invited to participate via email and social media platforms. Purposive sampling based on wine-tasting experience (Baumüller, 2007) was used to ensure diversity (Patton, 2015). In qualitative research, increasing the volume of data does not necessarily provide more insight, and achieving saturation is difficult to quantify (Lowe et al., 2018). Recommendations for sample size vary: Boddy (2016) suggests 12 participants, while Hennink and Kaiser (2022) propose 9–17. Due to the low prevalence of wine consumption in Turkey, finding participants with experience who had shared their views publicly was particularly difficult. Therefore, participants of other nationalities who commented in Turkish were also included. Data were collected using a semi-structured interview form based on a literature review of wine experiences. The questions addressed tasting formats and experiential differences. To ensure the data's validity and reliability, a pilot study was conducted with two academics, two sommeliers, and five wine tourists. This pilot study tested the clarity and relevance of the questions and the length of the interview. Interviewees were encouraged to respond objectively to the open-ended questions. No guiding prompts were used. Neutral interaction was maintained throughout the process. The questions from the semi-structured interview form are listed below.

- How would you define the physical and digital wine experience processes?
- How do you describe the difference in experience between the two?
- If you consider the benefits, which experience would you prefer?
- When you consider all aspects, which option is more comfortable? Does this experience satisfy you? If not, what challenges does the chosen experience present?
- How do you feel about the physical and digital wine experience cognitively, sensorially, and emotionally? In other words, what is your attitude?

Interviewees were contacted between September and December of 2021. During this time, the type of interview (video call or in-person interview) and the interview date were determined. The interviews lasted between 49 and 85 minutes. Table 1 provides detailed information about the interviewees.

Table 1. Sample Information

<i>Code</i>	<i>Profession</i>	<i>Gender</i>	<i>Age</i>	<i>Int. Type</i>	<i>Nationality</i>	<i>Income</i>	<i>Marital St.</i>
I1	Architect	F	40	Video Call	Russian	125000	Single
I2	Housewife	F	45	Video Call	Ukrainian	N/A	Married
I3	Doctor	F	47	Video Call	Ukrainian	80000	Married
I4	Doctor	M	54	Video Call	Turkish	200000	Single
I5	Retired	F	63	Video Call	Russian	100000	Married
I6	Executive	M	61	Video Call	French	175000	Married

<i>Code</i>	<i>Profession</i>	<i>Gender</i>	<i>Age</i>	<i>Int. Type</i>	<i>Nationality</i>	<i>Income</i>	<i>Marital St.</i>
I7	Gastronomy	M	55	Video Call	French	250000	Married
I8	Lawyer	F	46	Video Call	Ukrainian	125000	Married
I9	Housewife	F	39	Video Call	Italian	N/A	Married
I10	Engineer	M	45	Video Call	Italian	275000	Married
I11	Salesman	M	42	Video Call	Russian	125000	Married
I12	Banker	M	44	Video Call	Russian	160000	Married
I13	Brand Mng. Specialist	F	24	Face-to-face	Turkish	210000	Married
I14	Retired	M	66	Video Call	Russian	80000	Married
I15	Retired	F	67	Video Call	German	95000	Married
I16	Housewife	F	48	Video Call	French	N/A	Married
I17	Investor	M	51	Video Call	French	225000	Married
I18	Soldier	M	62	Video Call	Turkish	90000	Married
I19	Academician	F	38	Face-to-face	Turkish	93000	Married
I20	Housewife	F	49	Video Call	Russian	N/A	Married
I21	Influencer	F	28	Video Call	Italian	180000	Married

Note. Own construction.

Since the study only included volunteers, the findings represent a subset of individuals interested in digital or physical wine experiences. Including a broader range of demographics in future research could provide a more comprehensive analysis. According to Table 1, the participants were between the ages of 28 and 67 and held various professions, including housewife, doctor, gastronomy employee, investor, and brand manager. Most interviews were conducted via video call, while two were face-to-face to allow for more open-ended responses. Participants included Russian, German, Ukrainian, Italian, and Turkish nationals. The final sample consisted of 21 people, including 11 women and 10 men. Income ranged from 80,000 to 275,000 TL. Two participants were single, and the rest were married. Data were obtained through purpose-designed interview questions and analyzed using Güçlü's (2019) cyclic and interpretive qualitative approach. First, researchers independently read the transcripts, noting key themes and repetitive expressions as preliminary codes. These codes were then refined and grouped based on similarity. This iterative process ensured a consistent review and development process. After the initial coding was completed, the researchers compared the codes and applied triangulation to resolve any discrepancies. When necessary, they consulted a third expert. The final codes were grouped into thematic categories based on similarities and cross-checked with the original statements to ensure consistency.

This cyclical approach enhanced the quality of the codes and the reliability of the interpretations. Themes and subcodes are presented alongside participant quotes in the findings section, providing a transparent, data-driven framework that supports methodological soundness.

Manual coding was employed due to limited sample size, budget, and time constraints (Basit, 2003). In small-scale studies, manual analysis is often sufficient (Wicks, 2017). The coding process was guided by theoretical frameworks to ensure it was systematic and reliable.

Before coding began, existing studies on wine experiences were reviewed across three main dimensions:

- Cognitive: wine knowledge, learning, and evaluation
- Sensory: taste, smell, and environment
- Emotional: pleasure, excitement, comfort, and anxiety

The interview transcripts were analyzed line by line. Participant statements were categorized under relevant sub-codes. For instance, the statement “I really liked the smell of the wine, and it excited me” was coded under “smell” (sensory) and “excitement” (emotional). To ensure consistency, two researchers coded the transcripts independently and then compared and aligned their results.

4. Findings

This section begins with an outline of the processes involved in physical and digital wine experiences. Next, it examines the differences between the two experiences, followed by the reasons behind participant preferences. Then, it explores the unique aspects and attitudes related to both experiences. Lastly, preferred formats, repurchase intentions, and recommendation conditions are presented.

4.1 Description of the Wine Experience Process

Participants described their experiences with physical and digital wine tastings based on their level of personal involvement. Table 2 summarizes these descriptions and compares both modalities.

Table 2. Physical and Digital Wine Experience Process

<i>Physical Wine Experience Process</i>				<i>Digital Wine Experience Process</i>
<i>Wine Selection</i>	– Usually known in advance (I5, I7, I8, I19, I21) – Pre-selected by the person or the business (I1, I3, I4, I6, I12) – Low chance of blind tasting (I2, I4, I8)	– Low chance of blind tasting (I2, I4, I8)	– Usually, blind tasting (I9, I11, I17, I18, I19, I21)	– Pre-selected by the person or the business (I2, I3, I4, I11, I12, I20) – Usually, blind tasting (I4, I6, I8, I12, I14, I21)

Type	Personal	Group		Professional	Online
		Knowing each other	Come together to taste	Competition, workshop etc.	Personal, group or professional
Wine Experience Motivation	– Interest in wine (I1, I2, I3, I5, I8, I19, I21) – Wine experience (I4, I7, I18, I19, I20, I21) – Environmental effects (social pressure etc.) (I11, I4, I15, I20)	– Interest in wine (I2, I3, I5, I8, I10, I11, I18, I19, I21) – Wine experience (I5, I8, I19, I21) – High wine interaction (I5, I8, I19, I21) – Increase knowledge of wine (I4, I7, I19, I21)	– Education (I3, I5, I17, I19) – Make a rating (I5, I8, I19, I21) – Participate in competitions (I5, I8, I17, I21) – Measuring the level of knowledge (I5, I8, I19, I21)	– Pandemic (I1, I4, I5, I6, I8, I19, I21) – Easy (I5, I7, I8, I9, I11, I19, I21) – Not leaving the comfort zone (I5, I8, I19, I20, I21) – Accessible (I5, I9 I17, I8, I19, I21) – Financial (I5, I7, I8, I19, I20, I21) – Silent area (I4, I5, I8, I19, I21) – Playback (I3, I4, I13, I14, I21)	
Authority overseeing the experimentation process	– If the question arises: sommelier, wine connoisseurs (I5, I7, I8, I19, I21) – Brochure (I2, I5, I8, I19) – BookletI3, (I5, I6, I8, I19)	– Accompanied by a sommelier (I5, I6, I9, I19, I21)	– Wine instructors (I5, I8, I19, I20) – Wine connoisseurs (I5, I8, I17, I21) – Sommelier (I2, I8, I19, I21) – Jury (I5, I9, I19, I20)	– Wine connoisseurs (I7, I8, I19, I20) – Sommelier (I9, I11, I19, I21) – Wine house owner (I5, I7, I8, I19, I20)	
Effect on taster	– Experience happens mostly without guidance (I5, I6, I17, I21)	– Own taste – Taster may be influenced by authority. – The taster may shy away from group members (I5, I8, I13, I19)	– The taster is usually unaffected (I5, I7, I14, I21)	– Experience happens mostly without direction (I5, I12, I15, I21)	

Note. Own construction.

As shown in Table 2, participants divided the physical wine tasting experience into three stages. Accordingly, the process or form of the experience varies depending on the taster. When tasting wine alone, a person is not exposed to external factors to a great extent. They can also evaluate wine based on their own preferences, interests, and knowledge.

4.2 The Process of Personal Wine Experience

The following comments regarding the taster's role in the process were stated by the interviewees:

- “The taster takes an active part in every tasting process. In tastings, which are usually carried out for commercial purposes, either the company's prepared tasting or the individual's selected wines can be tasted” (I21, F, 28).
- There are no sommeliers present during wine tastings. If I have a question, I ask the waiter who brought the wine” (I1, F, 40).

Some responses were outside the expected framework:

- “I go for wine tasting because my wife wants me to” (I6, M, 61).
- “It's good that there's no one around me. I feel more comfortable” (I10, M, 45).

4.3 The Process of Group Wine Experience

The responses regarding being a part of a group and engaging in social interaction were as follows:

- “I enjoy going with my group of friends” (I3, F, 47).
- “I plan according to the hours specified by the wineries. It provides the opportunity to meet different people” (I9, F, 39).
- “I think that my friends and I have a very different, profound experience in everyday life. It's good for our friendship” (I4, M, 54).
- “I like wine and I enjoy spending time with other wine lovers” (I20, M, 49).

The presence of a sommelier or expert was perceived both positively and negatively, as illustrated in the following statements:

- “A group and a sommelier make me a little nervous. I'm afraid to say something if I feel differently” (I15, F, 67).
- “I like to do it according to a plan with a sommelier. It feels good to know about taste in advance” (I16, F, 48).

4.4 The Process of Professional Wine Experience

Participation with the goal of learning was expressed as follows:

- “I want to increase my knowledge level through wine training” (I5, F, 63).

- “I need to increase my knowledge about wine; wine tasting is my hobby” (I11, M, 42).

The professional dimension of participation was concentrated around specialization and competition:

- “I participate in competitions to prove that I am a specialist in wine tasting” (I8, F, 46).
- “It’s fun to participate in wine-related competitions” (I19, F, 38).

The physical wine tasting process varies according to the type of participation. Interest in wine is evident in all groups. Personal and professional wine experiences are not greatly influenced by external factors. However, a sommelier is usually involved. In group experiences, there is a possibility that the tasters may be influenced by the sommelier. The main motivation in the individual and group wine tasting processes is interest in wine. Increasing or measuring wine knowledge is considered the primary motivator. It is necessary to be physically present during the wine tasting process. However, it is not necessary to leave your comfort zone for the digital tasting process. The digital tasting takes place in an environment designed by the taster. It is usually a blind tasting, meaning the taster does not know which wines they will taste in advance. Sometimes, however, the taster determines the wines in advance, and businesses are included in the tasting process. The three groups of the physical wine experience (personal, group, or professional) are united in the DWE tasting experience group. Emerging factors that initiate the digital wine experience process include motivational sources such as the pandemic, easy transportation, low cost, and not leaving one’s comfort zone. A sommelier usually leads the digital wine experience. However, the experience mostly takes place without guidance.

- “I can taste wines from regions that normally exceed my budget, such as Bordeaux wines, because it’s much more affordable this way” (I13, Female, 24).
- “People such as sommeliers, connoisseurs, or wine house owners accompany the tasting process and provide preliminary information” (I12, Male, 44).
- “In order to become a sommelier or wine educator, I register by choosing a specific wine house. Sometimes I prefer a tasting set that challenges my prior knowledge — sometimes I choose without knowing anything in advance” (I6, Male, 61).
- “It’s easy for me to taste wines at different times and on different days. So, I can organize my own schedule” (I3, Female, 47).
- “During the pandemic, it felt great to do something different without even leaving my home” (I16, Female, 48).
- “It’s an experience that I arrange myself, in a peaceful setting that I can easily access — what more could I ask for?” (I5, Female, 63).

4.5 Comparison of Traditional and Digital Wine Experiences

Both physical and digital wine tastings have three core elements in common: the environment, the taster, and the tasting itself. Ideal conditions include proper lighting, odor-free surroundings, and a neutral surface. Tasters should avoid strong foods, perfumes, and smoking. They should also refrain from tasting while ill because illness affects sensory perception. It is also essential to refresh the palate between tastings. In terms of cognitive engagement, traditional wine experiences (TWEs) enabled more in-depth learning through expert guidance. The knowledge transfer of digital wine experiences (DWE) was limited to digital tools and was often impacted by the setting.

Sensory perception was more vivid in physical settings due to environmental control. In contrast, the DWE experience varied based on the participant's home setup and the quality of the wine set. Emotionally, TWEs fostered social connection and satisfaction, while DWEs offered comfort but lacked direct interaction.

Overall, physical experiences promoted stronger social bonds and engagement, while digital tastings offered flexibility and accessibility. While sensory impressions were similar, but cognitive and emotional dimensions differed. These insights can inform strategies for integrating digital formats into the wine industry.

Table 3. Comparison of Physical and Digital Wine Experience

Criterion	Digital Wine Tasting	Physical Wine Tasting
<i>Quality perception</i>	Product quality may deteriorate. (I5, I7, I8, I19, I21) Connection problems (I5, I8, I19, I20) Easy distraction (I5, I6, I19, I21) Quality is at risk. (I4, I7, I18)	Easy control of the product (I5, I9, I15, I17) Quality problems. (I4, I9, I16, I18) Quality of service problems. (I1, I2, I11, I13)
<i>Feelings</i>	Comfort zone. (I13, I14, I15, I8, I19, I20) Enjoyment of good time in pandemic. (I2, I3, I8, I9) Self-improvement. (I1, I7, I13, I13) Opportunity to socialize in the comfort zone. (I11, I13, I19, I20)	Socializing. (I5, I16, I8, I19, I21) Socializing gives pleasure and pleasure. (I5, I8, I19, I21) Becoming professional (I5, I8, I19, I21) Anxiety about missing something due to inexperience (I5, I8, I19, I21)
<i>Degree of satisfaction</i>	Not high. (I5, I8, I19, I21)	High. (I5, I6, I7, I16, I17)
<i>Psychological effect</i>	Positive effects. (I5, I8, I19, I21) Away from the restrictive feeling of the pandemic. (I5, I8, I19, I21) Excitement of innovation (I5, I8, I19, I21) Being comfortable (I5, I8, I19, I21)	Values of physical environment. (I3, I8, I19, I21) Feeling of anxiety in the group. (I5, I6, I18, I20) Sense of accomplishment (I2, I6, I17, I18)
<i>The effect in terms of personal development</i>	Wine knowledge. (I1, I7, I19, I21) Positive effects. (I2, I6, I19, I20) Self-improvement for people with social phobia. (I4, I8, I16, I20)	Wine knowledge. (I1, I2, I3, I4) Positive effects. (I4, I7, I15, I18)

<i>Criterion</i>	<i>Digital Wine Tasting</i>	<i>Physical Wine Tasting</i>
<i>Annoying situations</i>	Incomplete experience (I15, I18, I19, I21) Lack of face-to-face communication (I5, I8, I19, I21) Packing problem (I5, I8, I19, I21) Not tasting enough products (I5, I8, I19, I21)	Dominant person in the group. (I1, I7, I18, I21) Decreased productivity due to the higher number of participants (I3, I8, I16, I18) Poor service (I2, I4, I6, I20) Noisy environment (I9, I11, I16, I20) Transportation problem (I15, I18, I19, I20)
<i>Length of the feeling that the experience created</i>	Short-term (I5, I6, I18, I20)	Long-term (I1, I7, I20, I21)
<i>Benefit</i>	Rapid increase in wine knowledge in a short time (I5, I8, I19, I21) Comfort zone (I7, I9, I19, I21)	Satisfaction (I3, I5, I11, I13) Meeting the professionals (I4, I8, I15, I20) Opportunity to socialize (I1, I8, I17, I21) To know about wine producers (I2, I4, I17, I18)
<i>Ease</i>	Online participation (I2, I3, I4, I5)	
<i>Online participation</i>	Positive contribution. (I5, I6, I17, I21) Education is higher. (I3, I4, I17, I18) Accessibility. (I4, I6, I11, I12)	
<i>Flexibility</i>	Time limit due to product deterioration. (I3, I5, I7, I11) Playback (I5, I7, I12, I19)	There is no time limit for individual tastings (I4, I9, I18, I21) Space and time imperative (I5, I8, I19, I20) No compensation (I1, I6, I17, I21)
<i>Clarity</i>	Experts tend to give more information. (I1, I7, I20, I21) A large group does not create a communication problem. (I5, I8, I9, I11) More understandable. (I1, I9, I19, I20)	Individual tastings are straightforward (I5, I8, I19, I21) Crowded groups may lead to problems. (I5, I8, I19, I21)
<i>Mental effort</i>	Much effort to focus. (I3, I9, I11, I13)	If exposed to another taster's interpretation. (I4, I6, I17, I20) Easier to focus. (I5, I16, I17, I18)
<i>Effort for the realization of the experience</i>	Finding the best way by doing good research. (I6, I7, I18, I19, I20) Information on the wines in the wine set, the length of the tasting process, the total number of tasters, the money spent, and the labor measurements made. (I5, I8, I11, I19, I21) Storage conditions of the wine set. (I5, I8, I12, I19, I21) Suitable service temperatures. (I5, I17, I18, I19, I20)	Reaching the tasting location (I2, I7, I19, I20) Budget and time. (I4, I5, I8, I19, I20)

<i>Criterion</i>	<i>Digital Wine Tasting</i>	<i>Physical Wine Tasting</i>
<i>Comfort</i>	Evaluation of free time (I5, I8, I19, I21) Self-improvement (I5, I8, I 17, I19, I21) Increasing knowledge of wine (I5, I8, I10, I11, I19, I21) Saving time (I5, I8, I9, I19, I21) Opportunity to take more accurate notes (I1, I8, I19, I20)	Willingness to relive the wine experience (I5, I8, I9, I10, I19, I21) Increasing knowledge of wine (I5, I8, I9, I19) Meeting new people (I5, I8, I19, I20) Getting to know new products (I4, I7, I18, I21)

Note. Own construction.

5. Discussion

Product quality issues are easier to manage in physical wine experiences than in digital wine experiences (DWEs). Connection problems and distractions from the comfort of one’s own home can negatively affect the experience of digital tastings. Socializing and acquiring knowledge enhance the physical wine experience. Although DWE is generally considered psychologically positive, satisfaction levels are moderate. Physical tastings provide a higher level of satisfaction. DWEs are valued for their convenience, flexibility, and clarity. Physical tastings, on the other hand, offer social interaction, deeper satisfaction, and immersive environments. Despite being less convenient, physical tastings foster socialization and the discovery of new products. Examples of social interaction and stress management include physical activities that enhance social bonds and face-to-face interaction, which support stress relief. For instance, one participant stated, “I enjoy spending time with my friends” (I3). During isolation, DWE emerged as a coping tool, providing an opportunity for relaxation and connection from home (e.g.: “I was very happy to do something different at home during the pandemic” — I16). Thus, both modalities offer stress relief in different contexts. Participants highlighted differences in the process and definition. In physical tastings, tasters were categorized as individual, group, or professional, whereas DWE did not have such a classification. Product quality and economic, environmental, and social sustainability are vital to digitalization in the wine industry (Golicic, 2022; Nave et al., 2021). Wine offers social benefits and helps manage stress, especially during times of crisis (Solanelles et al., 2021). Both tasting methods reflect these advantages, as elements such as enjoyment and socialization influence the experience (George, 2006). Cultural and historical factors matter in physical tastings (Eusébio et al., 2023), while staying in one’s comfort zone is a key advantage of digital tastings.

Tasting reviews are subjective and influenced by factors such as age, gender, generation, price, and wine list (Capehart, 2021; Payini et al., 2022; Romero-Rodríguez et al., 2021; Staub & Siegrist, 2022; Wolf et al., 2022). This study suggests that group dynamics, noise, poor service, and overcrowding can negatively impact the physical experience. Other factors that influence tasting reviews include pour size, bottle design (Rahman & Reynold, 2015), wine temperature (Tarasov et al., 2020), setting (Spence, 2024), and wine culture (Rita & Moro, 2022). The tasting experience involves cognitive, sensory, and emotional aspects (Coppin et al., 2021) and varies depending on the taster’s level of knowledge. Experts appreciate taste nuances more than novices, who are influenced more by sensory and emotional cues (Oyinseye et al., 2022). In DWE, perceived quality may decrease due

to wine spoilage, connection issues, or distractions. These factors affect cognitive engagement. In contrast, issues in physical tastings can be addressed immediately, which improves perceptions. Physical tastings allow winemakers to control the conditions, whereas DWE relies on the taster's environment. However, data collection is easier in DWE, making it more efficient in some respects.

Physical tastings appeal to wine lovers and draw them to destinations (Madeira et al., 2019), while DWE opens new markets. AR/VR can enhance DWE by offering virtual tours and insights into winemaking. Providing educational content can increase its value, particularly for beginners. Hybrid models allow for both in-person and digital access, reaching a broader audience. DWE appeals to younger wine consumers. Wineries can reach this group through social media and influencers. Hybrid formats provide flexibility and resilience during crises while expanding market reach (Thach et al., 2021). Customized tasting sets can boost customer loyalty and personalize the experience (Králíková et al., 2025). Ultimately, DWE introduces a novel product technology-driven product that expands wine culture and market potential.

6. Conclusion

The digital wine experience (DWE) presents a significant opportunity for the industry. It has been observed that it provides advantages such as accessibility, affordability, and the ability to reach a wide audience, especially during times of crisis like the pandemic. These advantages highlight the potential for wineries to expand their customer base by integrating digital platforms. Blending the strengths of the physical wine experience-- such as social connection and face-to-face interaction-- with digital experiences can lead to the development of hybrid wine tasting events. Tools such as virtual tours and real-time guidance can enrich the user experience. It has been emphasized that DWE can be used for educational purposes, such as sommelier training or increasing wine knowledge, while providing greater flexibility to participants.

The connection between the digital wine experience and the technology acceptance model can be assessed as follows: Perceived convenience (e.g.: accessibility in the home environment) and perceived usefulness (e.g.: access to international wine varieties) were the main factors that influenced participants' adoption of the experience. These findings demonstrate how we can use the model's components to introduce the digital wine experience to a wider audience. The study's findings can help us understand why certain user groups, such as physical wine tasting enthusiasts, are particularly resistant to technology and have difficulty adopting the DWE. Future research can develop strategies to overcome this resistance.

6.1 Theoretical Implications

Current research explores the potential of digital wine experiences (DWEs) to transform traditional wine tasting. The research found that DWEs can democratize access to wine tasting. Through technology, wine tasting becomes accessible to a wider audience. Technology eliminates barriers such as cost, geography, and expertise. The integration of virtual reality (VR) and augmented reality (AR) tools enhances sensory and educational experiences,

and data-driven insights pave the way for personalization and market responsiveness. Furthermore, the connection between DWE and the technology acceptance model underscores the importance of perceived convenience and usefulness in adoption, providing a framework to introduce DWE to broader and more diverse audiences.

6.2 Limitations of the Study

Despite its valuable insights, this study has some limitations that should be taken into consideration. Due to time and budget constraints, the research was conducted with a small sample size that lacked representation from the Turkish wine tasting culture. This limits the generalizability of the findings to broader populations. The research primarily focused on the context of Turkey, which may not fully capture the global applicability of the digital wine experience. The scope of the evaluated technological tools and platforms was restricted by the available resources, potentially missing other innovative digital wine technology applications. The categories and criteria in Table 2 and Table 3 emerged from the cyclical and interpretive qualitative data analysis process. Table 3 lists 15 criteria/categories that indicate the differences in digital versus physical wine tasting among 21 tasters.

A recent study confirms that attitude, subjective norms, perceived behavioral control, wine involvement, and future wine tourism intentions positively influence intentions, while risk aversion negatively affects behavior (Gastaldello, Schamel et al., 2024). Keeping this in mind, the main criterion for selecting participants in this study was that they had both a physical and digital wine experience. Thus, we aimed to interview individuals with the knowledge and experience to compare these experiences across diverse cultures. Including people living in both Türkiye and abroad who work in various sectors and have different cultural backgrounds contributed to our findings reflecting a broader perspective. Therefore, we used purposive sampling to meet two basic conditions in participants: having both a physical and digital wine experience, while also taking demographic diversity into account. This allowed us to more clearly reveal the similarities and differences between different profiles.

The data obtained in this study were collected through online video interviews with some participants and face-to-face interviews with others. While both methods are useful for reflecting the participants' unique experiences, the interview environment (e.g.: home, office, café) and method (e.g.: online, face-to-face) may affect the content and scope of the responses. In online interviews especially, participants were sometimes more comfortable making longer and more detailed statements because they were in their own comfort zones. Conversely, face-to-face interviews offered the advantage of more clearly observing body language and emotional reactions. During the coding and analysis process, we closely examined whether there were any inconsistencies due to the method. Since the length, content, and depth of the responses showed similar thematic patterns, we processed the data as a whole. Future studies comparing how both interview methods shape the participant experience and data quality may provide additional insights.

6.3 Suggestions for Further Research

Future research could explore the following areas: 1) Conduct comparative research on the cognitive, sensory, and emotional differences between physical and digital wine experiences

across diverse cultural and demographic groups to deepen understanding. Investigating the application of advanced technologies, such as blockchain for ensuring authenticity, AI for personalized recommendations, and the Internet of Things (IoT) for optimizing wine production. Another area of exploration could be the design and accessibility of digital wine platforms, to ensure inclusivity for individuals with disabilities and address adoption barriers faced by physical wine consumers. Another area of research could be analyzing the sustainability of digital wine experiences, with a focus on reducing the carbon footprint of virtual platforms and addressing issues related to the digital divide.

Virtual reality (VR) can simulate vineyard tours and interactive wine tastings, making wine education more immersive. The metaverse could host global wine events in which users can taste wines from home while participating in engaging virtual environments.

To capture global trends and preferences in digital wine experiences, the geographical scope of studies should be expanded to include a wider range of countries and regions. It would also be valuable to develop and evaluate digital platforms for consumer education and professional training, such as sommelier certification programs and interactive learning tools. Further research could examine the cultural shifts driven by the adoption of digital wine experiences and their impact on social practices and community building. These topics may be considered as key areas for further research. This study is a foundational step toward understanding the role of digital wine tasting in the evolving dynamics of the wine industry. Addressing these areas will allow future studies to expand our knowledge and contribute to the development of innovative, inclusive, and sustainable approaches to wine appreciation.

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