The Influence Of Anchor Characteristics On Purchasing Behavior:

A Systematic Review

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Abstract

Introduction: With the addition of live streaming technology, e-commerce anchors, as a new type of profession, have become the key to successful product marketing. Anchors interact with viewers through live online streaming, thus motivating consumers to purchase goods for marketing purposes.

Objectives: Therefore, this paper wants to find out which characteristics of anchors change consumer attitudes? How do the characteristics of anchors play a role?

Method: We conducted a systematic literature review of 31 articles from the Web of Science (WOS), Scopus, and ScienceDirect databases using the PRSIMA method to identify anchor characteristics that influence consumer purchase intentions.

Analysis: We analyzed the theories, research methods, independent variables, dependent variables, and findings in the literature.

Results: The results of the study show that anchors' professionalism, attractiveness, credibility, interactivity, popularity, affinity and responsiveness have a significant positive effect on consumers' purchase intention.

Conclusions: These findings emphasize the importance of anchor characteristics in consumer buying attitudes. This provides actionable advice for e-commerce marketers and anchors to increase consumer purchase intent.

Keywords: Anchor, Purchase intention, Systematic review.

1 Introduction

The amount of information contained in online shopping is even more enormous, and it is quite difficult for consumers to filter out the information that is useful to them in a limited

time (Huang et al., 2023)[1]. E-commerce live streaming allows people to browse and purchase the required goods an[2]d services anytime and anywhere through mobile devices, and thus gradually occupies a prominent position in people's lives (Zhu et al., 2021). Live e-commerce originated from Taobao's "Double Eleven" campaign in 2017, when the transaction scale of China's live e-commerce market reached 20.93 billion yuan ($2.9 billion) (Hu et al., 2017). Currently globally, the live e-commerce market share reached $1.06 trillion in 2023, and the number of users in the e-commerce market is projected to reach an estimated 5.29 billion by 2027 (Figure 1). The e-commerce market size is projected to reach $6.35 trillion by 2027 (Benchmark International, 2023). Live e-commerce is becoming an interesting, powerful, and popular channel for selling products online.

Figure 1: Number of Internet and smartphone users from 2020 to 2023

Smartphone & Internet Users
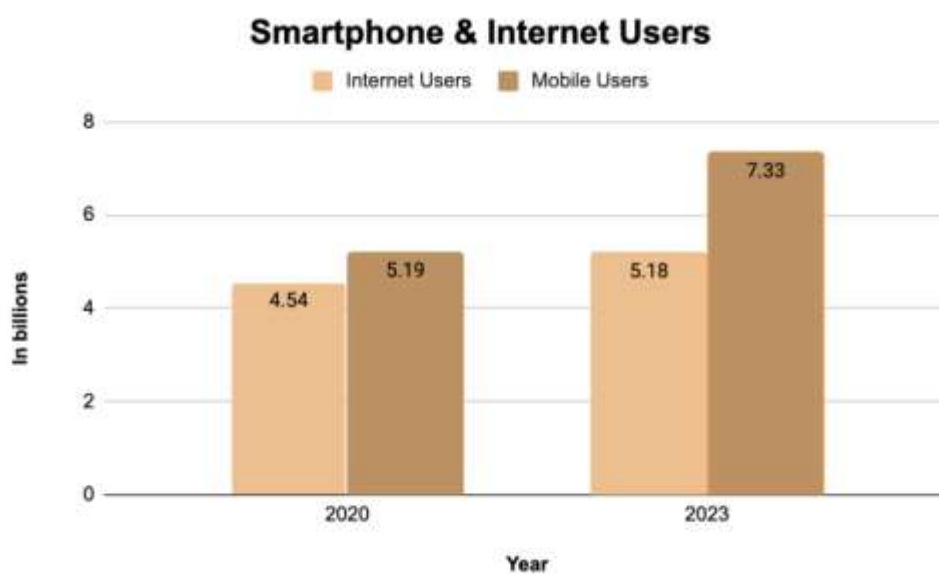
Note: This is the trend of growth in the number of web users over the last 3 years (Source: Benchmark International, 2023).

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In live broadcasting, anchors have the most direct and extensive contact with consumers. Anchors introduce and recommend products to their fans, and consumers can interact with them by sending pop-ups and comments to learn more intuitively about the product manufacturing process, product features, trial and experience sharing, and obtain more sufficient clues to support purchase decisions (Liao et al., 2023). As the creators of content dissemination in e-commerce live broadcasting rooms, there is no doubt that anchors have a greater impact on the dissemination effect, and the study of this group can help to better grasp the dissemination characteristics of e-commerce live broadcasting. Therefore, e-commerce network anchors have attracted the attention of the academic community. E-commerce anchor attributes can be defined as the qualities, character or features that e-commerce anchors have (Zhang et al., 2022). As shown in Table 1.

Table 1: Performance characteristics of anchors in live broadcasting

Trait	Meaning
Display Properties	It refers to the uses, characteristics and effects of the products shown by the e-commerce anchors.
Recommended Attributes	It refers to the characteristics shown by the e-commerce anchor in recommending the products with professional words, professional product knowledge and so on.
Charisma Attributes	It is the personality traits, image charisma, character traits and voice characteristics shown by the e-commerce anchor in the recommendation process.
Personality Charm	It refers to the charm presented by the e-commerce anchor in terms of character, talk and personality.
Voice Charm	It refers to the infectiousness of the voice of the e-commerce anchor.
Quality Charm	It refers to the glamour of the e-commerce anchor's eloquence, academic talent, and resilience.
Image Charm	It refers to the body, appearance, make-up and so on of the e-commerce anchor.
Visibility	It refers to the degree to which the e-commerce anchor is recognized and understood by consumers.
Interactive Attributes	It refers to the ability of the e-commerce anchor to actively answer consumers' questions during the live broadcast.

Note: Characteristics summarized based on the performance of anchors in live broadcasts (Source: own drawing).

At present, many scholars have affirmed the advantages of e-commerce anchor marketing. The information disseminated by e-commerce anchors during live broadcasts is an important basis for consumers' purchasing decisions, and they influence consumers' purchasing decisions through their unique personal charisma, professional recommendations, and attentive services (Gao et al., 2023). It has been found that anchors' personal charisma and interaction can positively influence purchase decisions by enhancing users' emotional experience (Ma et al., 2023). This shows that recommendations from e-commerce webmasters can enhance consumer attitudes. E-commerce platforms have set up separate modules for opinion leaders and have made efforts to sign up or cultivate key opinion leaders to contribute to the marketing of their products. In China, for example, some of the top anchors have millions of viewers during live broadcasts. For example, Li Jiaqi, who has more than 40 million followers, made 25 billion yuan ($3.5 billion) in sales on his Shakeology live broadcast on Double 11, 2022 (The World of Finance, 2023).

In the era of e-commerce live streaming, e-commerce anchors have become the best way to link companies and consumers. But in the actual operation of e-commerce live broadcasting, the effect is not so ideal.

In addition, increasingly consistent e-commerce anchors are an exacerbating cause of consumer aesthetic fatigue and negative purchase experiences. Many anchors experience homogeneity because they receive little training and lack a clear understanding of their specific roles (Liao et al., 2023). Consumers' favorable perception of e-commerce anchors is decreasing, which seriously affects their purchase intention.

Finally, there is a lack of systematic descriptions of anchor roles, and scholars and practitioners have called for research to elucidate the roles and characteristics of anchors.

Therefore, to address this set of realities and issues, we conducted a literature review to provide an overview of research on the issue of anchor characteristics and consumer purchase intention. We review the research on the impact of anchor characteristics on consumer attitudes in e-commerce networks, analyzing the theories, sample sizes, and theories used in the literature. We summarize the current state of research on the influence of product information and anchor characteristics on purchase intention.

Based on the above analyses we propose the following research questions

1. what are the current research trends on anchor characteristics and purchase intention?

2. which e-commerce network anchors' characteristics have an impact on consumer attitudes?

3. the mechanism of anchor characteristics' influence on purchase intention?

Question 1: Focuses on analyzing the characteristics and trends of published articles. We considered factors such as country of origin, study population, and timeline of publication.

Question 2: Focuses on reporting the attributes of e-commerce anchors that influence consumers' purchase intention and identifying the characteristics of e-commerce anchors that have a transformative effect on consumers, which provides a clear framework for practitioners to train e-commerce anchors.

Question 3: The main theories, mechanisms and elements included in the study of anchor characteristics are summarized. We delve into the path of e-commerce anchors' attributes on consumers' purchase intention based on theoretical models and relational assumptions

and explore the role of different attributes of their e-commerce anchors on various levels of consumers.

2 Method

To answer the questions posed by the study, we conducted a search for papers on the topic of "the influence of anchor characteristics on consumer purchasing decisions" to create systematic literature data for subsequent bibliometric analyses. As a systematic literature review (SLR), we used the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) methodology for selecting papers to be included in the analysis. Prisma developed a literature review protocol describing the article selection criteria, search strategy, data extraction and data analysis procedures. The method is scientifically sound and replicable (Moher, 2019).

2.1 Search Strategy and Data Source

The literature search in this paper was based on 3 databases, Scopus, WOS and ScienceDirect. We searched for all papers with abstracts, titles, or keywords in the years 2016 to 2023. To ensure the quality of the study, we also searched and screened the reference lists of the selected articles. After completing all searches, we managed the results using Excel and Zotero.

We used a Boolean operator to put the keywords into search. To identify as many eligible studies as possible, we expanded the search terms and strategies. The keywords identified in this paper based on the research questions and objectives are shown in Table 2.

Table 2: Search terms

Search String	
Search Builder	Search String
E-commerce	"E-commerce live streaming"
Anchor characteristics	"anchor's characteristics" OR "anchor's feature" OR "anchor's attributes"
Purchase decision	"buy" OR "spend" OR "consume" OR "pay" OR "purchase" "intention" OR "willingness" OR "behavior"
Additions	"effect" OR "influence" OR "factors"

Note: Search strategies and keywords for Boolean operators (Source: own drawing).

2.2 Inclusion and exclusion Criteria for Studies

To ensure the quality of the results of the analyses, this paper has developed appropriate literature inclusion and exclusion criteria for the literature initially retrieved Table 3.

Table 3. Inclusion and exclusion criteria

Number	Index	Include criteria	Exclude criteria

| 1	Topic	Anchor characteristics and intention to consume	Irrelevant to the theme of game product consumption
2	Language	English (language)	Non-English
3	Years	2016-2023	Out of time
4	Type	Journals	Books, conference papers, reports, review articles, etc.
5	Number of occurrences	1 time	Repetition
6	Research Methods	Empirical research	Non-empirical research
7	Research design	The research process consists of a clear research question, research methodology and conclusions.	The research process did not address a clear research question, research methodology, or research conclusions. methodology and conclusions of the study.

Note: (Source: own drawing).

As shown in Table 3 we developed a total of 7 criteria to select the literature needed for this study. Articles 1-5 are the basic screening criteria through the database's excluder during the article search process, to ensure the currency and relevance of the results obtained. The English journal type of articles allows us to observe relevant studies from different regions and countries.6-7 are the criteria developed for the researcher to weed out studies that do not meet the quality of the study during subsequent reading, which helps the researcher to look for studies that meet the completeness needed for this paper.

2.3 Selection of Studies

All searches were conducted on 1 December 2023. We conducted a manual review and selected only papers that included an empirical analysis of the impact of gamification on online consumer decision-making. We followed Prisma's systematic literature review of the articles selected form for recording as in Figure 2.

Figure 2: Data Screening Records
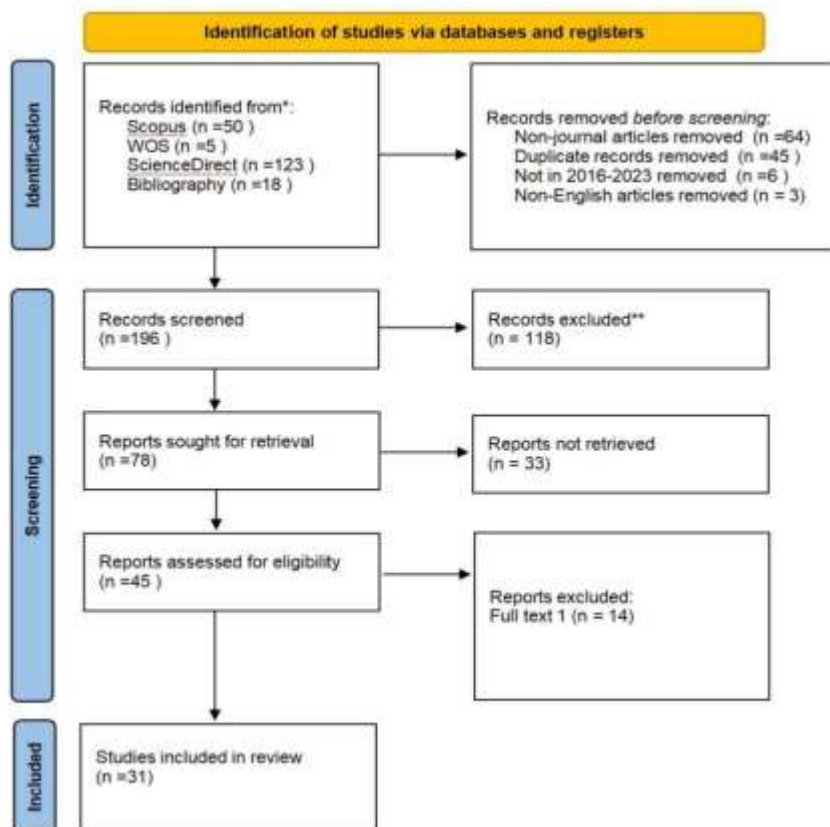
Note: The flowchart is taken from Prisma's standard, and the specific data is filled in for this article (Source: own drawing).

Specifically, our article selection process went through 2 processes.

In the first step, we obtained 196 articles by keywording the database. With the help of a qualification tool for online databases, we removed 118 articles according to the criteria (1-7) in Table 2. Excluding 33 documents that were not open access, we obtained 45 documents from the preliminary screening.

In the second step, we read the abstracts, research methods, and findings of the 45 documents obtained from the initial screening and additional search. Next, the researcher eliminated 14 papers with non-empirical studies and incomplete studies based on the criteria. We conducted a systematic literature review of the resulting 31 papers.

Table 4: All Review Article Information

Number	Author	Title
1	(Wen et al., 2024)	Anchor Characteristics and Consumer Purchasing Behavior: Based on Perceived Value Theory
2	(Luo et al., 2024)	Boosting customers' impulsive buying tendency in live-streaming commerce: The

		role of customer engagement and deal proneness
3	(Liao et al., 2023)	Boosting eCommerce sales with livestreaming in B2B marketplace: A perspective on live streamers' competencies
4	(Zhang et al., 2022)	Characteristics and roles of streamers in ecommerce live streaming
5	(Zheng et al., 2023)	Enhancing Sales of Green Agricultural Products through Live Streaming in China: What Affects Purchase Intention?
6	(Ma et al., 2023)	Exploring the mechanism of live streaming e-commerce anchors' language appeals on users' purchase intention
7	(Zhu et al., 2021)	How Do Anchors' Characteristics Influence Consumers' Behavioral Intention in Livestream Shopping? A Moderated Chain-Mediation Explanatory Model
8	(Li et al., 2024)	How do e-commerce anchors' characteristics influence consumers' impulse buying? An emotional contagion perspective
9	(Gao et al., 2023)	How do virtual streamers affect purchase intention in the live streaming context? A presence perspective
10	(Zhang et al., 2022)	How to retain customers: Understanding the role of trust in live streaming commerce with a socio-technical perspective
11	(Chen et al., 2023)	Influencing Factors of Chinese Millennial Consumers' Online Purchase Intentions via Following Influencers' Recommendations: An Empirical Study on Womenswear Market
12	(Lu & Chen, 2021)	Live streaming commerce and consumers' purchase intention: An uncertainty reduction perspective
13	(Lyu et al., 2022)	Proliferation in live streaming commerce, and key opinion leader selection
14	(Fei et al., 2021)	Promoting or attenuating? An eye-tracking study on the role of social cues in e-commerce livestreaming
15	(Liu & Wu, 2023)	Research on Modeling the Influence Mechanism of Anchors' Characteristics on Consumers' Online Purchase Intention and

		the Anchor Selection Strategy in E-Commerce Livestreaming
16	(Chen et al., 2022)	Research on the Impact of Marketing Strategy on Consumers' Impulsive Purchase Behavior in Livestreaming E-commerce
17	(Liang, 2023)	Research on the Influence of Anchor Characteristics on Consumer Response in Live Streaming
18	(Qian & Li, n.d.)	Study on the Influence of E-Commerce Anchor Characteristics on Consumers' Willingness to Buy for First Time
20	(Song & Ma, n.d.)	The Effects of Live-streaming Commerce Anchor Attributes on Perceived Value and Purchase Intention: Focusing on Chinese Agricultural Market
21	(Liu et al., 2022)	The effects of tourism e-commerce live streaming features on consumer purchase intention: The mediating roles of flow experience and trust
22	(Wang et al., 2022)	The Impact of Broadcasters on Consumer's Intention to Follow Livestream Brand Community
23	(Wu et al., 2023)	The impact of live streamers' improvisational responses to unexpected events on their entrepreneurial performance
24	(Zhou & Huang, 2023)	The influence of network anchor traits on shopping intentions in a live streaming marketing context: The mediating role of value perception and the moderating role of consumer involvement
25	(Zhang et al., 2022)	The Influencing Factors on Impulse Buying Behavior of Consumers under the Mode of Hunger Marketing in Live Commerce
26	(Huang et al., 2023)	The Mechanism of E-commerce Anchor Attributes on Consumers' purchase Intention Based on Grounded Theory
27	(Chen & Yang, 2023)	The Role of Influencers in Live Streaming E-Commerce: Influencer Trust, Attachment, and Consumer Purchase Intention

28	(Xie et al., 2022)	Tourism e-commerce live streaming: Identifying and testing a value-based marketing framework from the live streamer perspective
29	(Wang et al., 2023)	The influence and moderating effect of trust in streamers in a live streaming shopping environment
30	(Chen et al., 2023)	Understanding the role of live streamers in live-streaming e-commerce
31	(Ma et al., 2022)	Why do consumers hesitate to purchase in live streaming? A perspective of interaction between participants

Note: The above are the articles that were screened for inclusion in the literature review. Specific references are at the end of this article. (Source: own drawing).

2.4 Data Extraction Process and Quality Assessment

Data extraction and article quality assessment in this paper were carried out independently by 2 researchers. The two researchers performed a basic screening based on Table 3, after which the articles were read for careful screening.

In the content screening of articles, selected studies were analyzed separately by both researchers. The extracted data included information about the authors, the research question, the purpose of the study, the location of the study, the site of the study, the characteristics of the sample, the theory of the study, the results of the study, and the conclusions about the limitations of the study.

The data extracted from each study by the two researchers were recorded in an evidence table. All discrepancies were resolved by consensus with one of the researchers.

2.5 Characteristics of Included Studies

By collating and categorizing the articles we found that they belonged to different subject areas, the principal areas of knowledge covered by the studies included in this paper are psychology, social sciences, business management, economics, arts and humanities and decision sciences. The articles were mainly from the disciplines of business management and economics as shown in Table 5.

Table 5: Academic statistics

Discipline	Amount
Arts and Humanities	1
Social Sciences	3
Decision Sciences	5
Psychology	5
Economics	6
Business Management	11

Note: Disciplines included in the above 31 articles (Source: own drawing).

The range of content on anchor research was also broader, covering six major areas such as agricultural products, tourism, clothing, food, beauty, and gaming. Notably there are 5 articles from Frontiers in Psychology and Journal of Retailing and Consumer Services journals respectively.

Regarding methodology, we found that quantitative studies dominated (n=28). However, there was a more balanced distribution between qualitative and mixed-methods studies, with qualitative studies showing three results and mixed-methods studies showing three results. Statistical analysis of the data collection methods used in the studies shows that most scholars used questionnaire methods to obtain data (n = 24); followed by content analysis (n = 6); followed by interview methods (n = 3); and then experimental methods (n = 1). In summary, the current research on the consumption of anchor characteristics is still mainly carried out through the questionnaire survey method, the research method is more and concentrated, and does not involve too many other research methods and instruments. Therefore, the selection of research methods can be further expanded by combining a variety of research methods to strengthen the reliability and professionalism of the study.

In terms of sample selection, the study with the largest sample size was a content analysis of 1519 comments; secondly, 735 and 728 data collected using questionnaires, with the rest of the studies remaining at around 300 (n=17); and lastly, the study with a relatively small sample size used interviews, with a sample size of 12.

3 Results

3.1 Current Research Trends on Anchor Characteristics and Consumption Intentions

Firstly, we included more than 30 articles, the final selection revealed that they were all from China. That is to say, the research on the influence of anchor characteristics on consumer behavior has not been paid attention in other countries. Therefore, we analyzed the articles from the timeline. As shown in Figure 3, overall, the number of successful studies on anchor characteristics and consumer behavior increases year by year from 2020 to 2023, and the increase in the number of literatures shows that there is a general interest in the study of the influence of anchors on consumer behavior. Of the 31 articles selected for systematic review, the least number of articles published in 2020 was only one, and the most in 2023, with 15 articles published.

Figure 3: Years of publication of articles
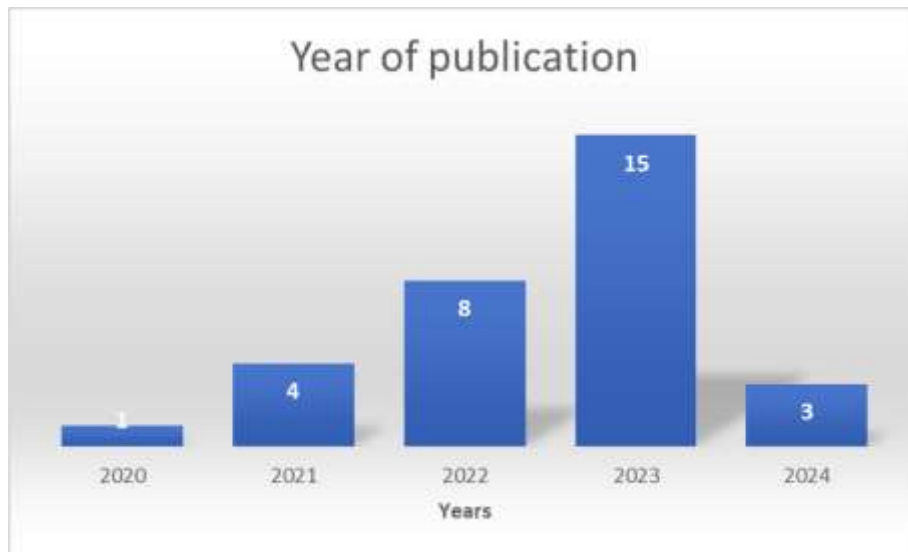
Note: Years of articles in Table 4 (Source: own drawing).

Secondly, to clearly observe the hot topics of current research, we used the "write word" tool to count the word frequency of the abstracts and keywords of 31 articles. In terms of vocabulary selection, we chose words with a length of 2, which can effectively ensure the exclusion of high-frequency connectives and the retention of research-related phrases. The statistical results are shown in Table 6.

Table 6: Word frequency statistics

Keywords	Frequencies
Live streaming	96
E-commerce	89
Purchase intention	52
Streaming commerce	30
Impulse buying	24
Live streamers	27
Perceived value	23
Consumers' purchase	10
Buying behavior	10
Anchor attributes	10

Note: Results of the analysis of 31 article titles, abstracts and keywords (Source: own drawing).

Through Table 6 we find three categories of non-overlapping terms that appear most frequently: 1) Live streaming; 2) Purchase intention; and 3) Perceived value. First, it is easy to see from Table 3.1 that live e-commerce appears the most frequently. A total of 96 occurrences, an average of 3 occurrences per article. This also shows that sales and consumer purchasing behavior in live streaming scenarios are valued by researchers. Secondly, in the process of quantitative research on consumer behavior, researchers mostly use the dependent variable of "purchase intention" to measure consumer purchase behavior.

As for the articles mentioning theories in the abstract, scholars tend to use the perceived value theory to construct theoretical models to investigate the influencing factors.

We also found consistency in the researchers' choice of subjects. In terms of age, millennials are the consumers of live e-commerce (Chen et al., 2023); according to the Live E-Commerce Industry Report 2022, 18-37 years old is the main group of live e-commerce consumers ((UNNESCAP, 2023)). The data from the studies all show that most of the respondents are between 18 and 30 years old (n=24).

In terms of educational attainment, the proportion of college and undergraduate degrees is the highest, and the proportion of graduate and above degrees is the lowest, indicating that consumers who watch live e-commerce broadcasts are predominantly college and undergraduate degree holders (Lu & Chen, 2021), which suggests that the young student population is the backbone of live shopping. In terms of the frequency and duration of watching e-commerce live streams, the highest proportion of consumers watched 2 to 4 times per month (Fei et al., 2021); in terms of the duration of each e-commerce live stream, the highest proportion was less than 15 minutes, with most of the respondents watching e-commerce live streams for 16-30 minutes each time (Lyu et al., 2022). In terms of gender, several studies have shown that the average female population share is around 70% or so, which indicates that consumers who watch live e-commerce are predominantly female (Fei et al., 2021).

Overall, millennials are the main research target in the study of the impact of anchor characteristics on consumer behavior. The proportion of females in the consumer population is high. The problems of the current research on consumption under the influence of anchor characteristics are that it is not deep enough and thorough enough; the research area is limited to China, which leads to low universality and representativeness of the research; and the questionnaire-based research ignores the discussion of more issues by experiments and interviews.

3.2 Characteristics of key e-commerce anchors that influence consumer attitudes

According to existing research, e-commerce anchor attributes can be defined as the qualities, personalities, or characteristics that e-commerce anchors possess (Wen et al., 2024). E-commerce anchor attributes include morphological attributes, display attributes, recommendation attributes, glamour attributes, presentation attributes and interaction attributes, etc. (Qian & Li, n.d.). In this paper, we summarize the anchor characteristics of 7 high frequencies and explain their meanings as Table 7.

Table 7: Anchor characteristics of high frequency

Source	Characteristic	Initial Concept	Frequencies
(Wen et al., 2024)	Professionalism/Expertise	Expertise is the amount of knowledge a person has in a particular field. Anchors with expertise are professionals or similar experts.	9

(Zhu et al., 2021)	Attractiveness	Anchor attractiveness Can be external or internal. Externally, an attractive anchor has a good external image. Internally, attractive anchors are likeable and have personal charisma. It leaves a deep impression on the audience.	8
(Luo et al., 2024)	Credibility/ Trust	Credible anchors may be reputable, trustworthy, sincere, reliable and responsible. Anchors who have been in business for a long time and have no negative press are more credible. Credible anchors may be reputable, trustworthy, sincere, reliable and responsible. Anchors who have been in business for a long time and have no negative press are more credible.	6
(Zheng et al., 2023)	Interactivity /Interaction	This is reflected in the emotional and informational exchange between anchors and consumers. Anchors have strong communication skills and can initiate chats with consumers, which can create a lively atmosphere or enhance a sense of social connection.	9
(Lyu et al., 2022)	Popularity/I nfluence	Popular anchors are well-known and highly ranked. For example, popular anchors have a large number of fans and viewers and are recommended by the platforms for their social media platform activities.	6
(Song & Ma, n.d.)	Entertainme nt	Frequent interaction between anchors and consumers creates a feeling of temporary detachment from reality, forgetfulness of worries, and a sense of immersion.	4
(Zhang et al., 2022)	Affinity	Anchors who are relatable are friendly, kind, polite, patient, and approachable. When anchors call consumers "friends" or "family", it is easy for consumers to build a close relationship with them.	2
	Responsiven ess	Demonstrates the ability to respond quickly to consumer requests and suggestions as well as the willingness to help consumers and provide timely service.	2

Note: Statistics based on the conceptual framework in 31 articles (Source: own drawing).

Based on the research statistics there are 8 main characteristics of anchors, which we have divided into 3 categories: professional competence, personal charisma and additional attributes.

3.2.1 Professional competencies: Communication, Interaction, Marketing

Research has found that the real-time shopping environment of webcasting rooms, and the real-time, two-way, entertaining experience consumers get through interacting with anchors, can stimulate consumers' purchasing behavior (Chen & Yang, 2023). Anchor's professionalism, interactivity, and entertainment have significant positive effects on consumers' emotional and behavioral responses (Xie et al., 2022).

Specifically, pleasurable emotions are key influences that drive consumers' impulse purchases, which are facilitated by anchors' attractiveness, professionalism, and interactivity (Wang et al., 2023). In other words, the higher the e-commerce anchor's popularity, professionalism and product engagement, the higher the consumers' first purchase intention. The attractiveness of anchors depends more on their professional output, sincere and serious explanation of products, and situational interaction with live viewers in line with the brand's tone and their own characteristics. Based on this reliable image and effective interaction, consumers are more loyal and inclined to choose the products and brands they recommend (Ma et al., 2022).

Overall, there is no significant difference in the order from strongest to weakest of the factors affecting online satisfaction, namely professionalism, attractiveness, credibility, and interactivity. It is worth noting that the role of interactivity and entertainment of anchors in agricultural products is not a significant result (Zheng et al., 2023), which is inconsistent with the results of studies in other fields.

3.2.2 Personal Attractiveness: Appearance, Affinity, Language, Humor

The more charismatic the anchor is, the more psychological pleasure it can bring to consumers (Wen et al., 2024). Research proves that e-commerce anchors can lead consumers to emotional resonance and increase their desire to buy by displaying personal charisma and sharing common interests. The attractive appearance and personality of live hosts can also greatly increase their online satisfaction and significantly influence online loyalty (Luo et al., 2024). In triggering consumers' impulse purchases, the attractiveness of the anchor has the greatest positive impact on consumers' pleasurable emotions, followed by the anchor's professionalism and interactivity (Liao et al., 2023).

In terms of endogenous attention to products and anchors, anchors should focus on personal image building, strengthen their own characteristics, and create a warm and attractive anchor image. Anchor's verbal attractiveness is positively related to self-reference and self-brand consistency, and self-reference and self-brand consistency are positively related to purchase intention (Zhang et al., 2022).

In addition, humorous and personalized information expression is conducive to enhancing consumer experience. The different and humorous costumes and mini-theatre performances of anchors in live broadcasts create a unique and humorous contextual atmosphere and establishing an emotional connection with viewers through friendly words, enthusiastic and

immersive explanations and interactions is a recommendation strategy for anchors (Wen et al., 2024).

3.2.3 Additional attributes: Emotional Value, Trust, Influence

The results show that anchor characteristics positively affect purchase intention and product information positively affects product trust. Celebrity anchors contribute more to consumers' willingness to pay attention and can enhance the brand to attract potential followers (Zhu et al., 2021). Anchor reputation and popularity play a key role in consumers' online purchase propensity (Li et al., 2024). Anchor influence determines consumers' trust in live hosts. Positive customer experience provided by live hosts can build trust or attachment with consumers, which can effectively enhance consumers' purchase intention (Gao et al., 2023).

In addition, the professionalism, attractiveness, and credibility of the host, i.e., the knowledge of the product field they are selling, as well as the user's real and objective understanding of the product through the product introduction and replies during the live broadcast (Chen et al., 2023). Users' questions can inspire trust. Anchor characteristics positively affect online trust and online satisfaction, with interactivity having the greatest impact on online trust, followed by professionalism, credibility, and attractiveness (Lu & Chen, 2021).

In this regard, global e-commerce companies and live e-commerce operation teams need to focus on cultivating anchors' interactive abilities during the recruitment and training process (Lyu et al., 2022). Based on the unique personality of anchors, interactive labels with more Internet recognition and memorability can be created, and by maintaining such a public image, consumers' online trust can be further consolidated, which leads to an increase in online stickiness and repurchase willingness (Zhang et al., 2022).

In general, anchors play an especially key role in the live broadcast process, which can directly affect the purchase behavior of consumers. E-commerce platforms and anchors have the obligation to correctly guide consumers to rational consumption and give full play to the positive role of live e-commerce. The e-commerce platform should give full play to the advantages of the anchor to establish good customer relations and improve consumer satisfaction. The e-commerce platform should employ anchors with a certain degree of popularity, professional knowledge, and a good image.

If the anchor provides high-quality interactive information during the live broadcast (responding quickly, accurately, and truthfully to the audience's enquiries about the product), users will be able to obtain the information they need, enliven the live broadcast atmosphere, create a trusting shopping atmosphere, and effectively improve the user's online trust and satisfaction, which will have a positive impact on purchase intention.

3.3 Theories and Models for the Study of Factors Influencing Consumer Attitudes on the Characteristics of E-Commerce Web Hosts

To better summarize the findings, it is useful to show that the mechanisms of action of anchor characteristics are analyzed against theoretical models. We report on the theories used in the articles, and there were 25 articles that explicitly used theories, of which 10 used the SOR (Stimulus-Organism-Response Theory) theoretical model, 4 used the

Perceived Value Theory, and 3 used the Rootedness Theory. In addition, the use of theories and models in the other 18 articles was rather scattered.

We also counted the dependent variables in the articles. Table 8 reports all the dependent variables in the articles' studies of consumer behavior, in descending order of frequency. The dependent variable that has been most studied in the research on anchor characteristics on consumer behavior is purchase intention. Purchase intention is a pre-behavioral process that must be experienced before decision-making behavior occurs, and it drives consumers to make a final purchase decision (Fei et al., 2021).

Table 8: Frequency of dependent variable

Dependent variable	Frequencies
Willingness to buy	1
Online stickiness	1
Follow/Trust a live stream	2
Consumer behavior	2
Repurchase intention	2
Sales performance	3
Impulse buying intention	4
Purchasing intention / behavior	13

Note: Statistics based on the conceptual framework in 31 articles (Source: own drawing).

In conjunction with Table 8, one of the most used theories is the SOR model (Mehrabian, 1974). SOR was proposed by Mehrabian and Russell, and later used by scholars to study consumer behavior in e-commerce. In this case, the stimulus (s) is the external factor that affects the individual and organism (o) to the internal factor that affects the individual. The response (r) is the resulting expected or actual behavior. In conjunction with Figure 4, scholars often use the SOR theory to construct a model with a mediator to verify the relationship between influences. Along with the SOR model, anchor characteristics are used as the dependent variable. By acting on consumers' engagement and emotions, they in turn influence purchase intention.

Figure 4: Stimulus-Organism-Response Model
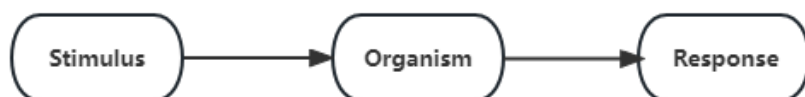
Note: (Source: Mehrabian, 1974).

In addition, certain outcomes may be unpleasant for consumers. Consumers need to bear the uncertainty of decision outcomes and the loss of wrong decisions in purchase decisions. Therefore, scholars have used the perceived value theory to analyze the mediating role of trust and perceived emotion on anchor characteristics and purchase intention.

Based on existing research models, there are three main categories of research on the relationship between anchor characteristics and consumers. One category is the direct impact of anchor characteristics on purchase behavior, which is characteristic of early research. One category is dominated by mediation or moderation models that explore how anchor characteristics change consumers' emotions, trust, and engagement, indirectly influencing consumer decision-making. The last small group uses a complex combination of mediation and moderation models to illustrate the results of the role of different anchor characteristics at the level of consumer attitudes and behaviors.

It is necessary to visually demonstrate the mechanisms of influence of anchor characteristics in the study, therefore, we have produced Table 9 to report some of the main anchor characteristics that researchers regard as self-varying that can have an impact on consumer behavior. In addition, Table 9 counts the anchor characteristics that can be used as moderating and mediating variables to make it easier to describe the different mechanisms by which different anchor characteristics work.

Table 9: Moderating or mediating anchor characteristics

Independent variable	Mediator variable	Moderator variable
Professionalism	Trust*6	Trust*2
Popularity	Emotional value*3	Interaction
Visuality.	Performance	Influence
Interaction	Attractiveness	Popularity
Credibility	Professionalism	Professionalism
Attractive	Influence	Streamer product matching
Cognitive competence	Interactivity	
Emotional competence	Streamer product matching	

Note: Statistics based on the conceptual framework in 31 articles (Source: own drawing).

3.3.1 Moderating effect

It was found that the degree of anchor-product match positively moderated the relationship between anchor reputation, anchor popularity, and anchor trust.

Consumers' tendency to interact online positively moderated the effect of anchor characteristics on consumers' purchase intention. However, this occurs only about the anchor's appearance attractiveness and social attractiveness and has no effect on the anchor's professional competence.

Online reviews positively moderated the relationship between anchor popularity and trust, while online shopping experience positively moderated the relationship between anchor reputation and anchor trust.

In addition, findings regarding the moderating effect of anchor popularity and professionalism on the relationship with live sales are noteworthy.

Visibility/professionalism persuades consumers to convert to purchase.

3.3.2 Mediating role

The mediating effect of network trust in the influence paths of professionalism, credibility, interactivity, and the three perceived values of the live streaming platform on repurchase intention holds, while network trust does not have a mediating effect in the influence path of attractiveness.

Anchor trust has a mediating effect in the influence of anchor characteristics on purchase intention.

Anchor's initiative to become an information disseminator can improve the perceived value of products in the live streaming environment. Perceived emotional value and perceived risk mediate significantly between anchor attributes and purchase intention. Perceived value partially mediates the anchor's professionalism and purchase intention, while it fully mediates the anchor's interactivity, entertainment, trustworthiness, and purchase intention. In addition, anchor-brand congruence mediated between anchor language claims and purchase intention.

4 Discussion

Considering these results and thus the problems in the study, future research directions may be worth exploring.

4.1 Limitations

Firstly, the review shows that anchor characteristics research has surfaced from 2020 to today, with a significant increase in literature on the topic. Our geographical filtering reveals that the extant studies are all based on consumers in the Chinese market. This leads to limitations in the findings and sample coverage to show the current state of the live streaming consumer landscape globally or in more countries. This study presents new requirements and directions for global marketing practitioners in the live streaming e-commerce industry: expanding the scope of respondents will help to build a model of factors influencing anchor characteristics with better applicability.

Secondly, previous research on consumers has been less professionally researched on opinion leaders themselves. There is a lack of research on opinion leaders in live broadcasting globally. Although the academic research on consumer attitudes has been unabated and there are more mature research results, the specific application of consumer attitudes has not yet been involved in the field of e-commerce live broadcasting. This study based on a literature review can be seen as a preliminary mapping of research on the characteristics of live streamers. All data in this study were collected through self-reporting and may be subjectively biased. Future work should analyze this in more depth and use more sophisticated meta-analysis methods to synthesize the findings.

Finally, we provide an in-depth explanation of the impact of the anchor's various competencies on live streaming consumers. This paper identifies the role of live-streaming anchors' professionalism, credibility, visibility, attractiveness, interactivity, and entertainment in eliciting consumer attitudes. However, these characteristics are derived from the description of the characteristics of opinion leaders and lack in-depth exploration of the uniqueness of the anchor's profession. There are four roles that anchors can play during live broadcasting: opinion leader, spokesperson, interactive friend, and salesperson.

Some studies even point out that each different type of anchor can be subdivided into 64 characteristics (Zhang et al., 2022). Therefore, the existing research is far from enough to discuss the characteristics of anchors. In the future, it can be discussed from other perspectives, such as body language and language style of anchors. In addition, since most of the studies in the review analyzed the beauty industry, it is still doubtful whether the findings can be generalized to other industries such as food and beverage.

4.2 Suggestions for future research

Based on the shortcomings in the study, we propose five future research themes for researchers.

4.2.1 Research methods: diversity

Future research should experiment with different methods (for example, psychological experiments, web ethnography) and distinct types of data (for example, objective data) to improve the validity of the results (Chen et al., 2022).

As sales transactions have been used to measure performance, such data may need to be used with caution as it does not account for subsequent returns, as well as spurious sales data, such as those purchased by known buyers (Liang, 2023).

Future scholars may use scenario-based experimental methods or collect data using web crawlers or other techniques to better validate future research.

Future research may use more advanced computer video analytics to measure the behavior of live hosts at a fine-grained level. A lot of information can be extracted from the video, such as the anchor's facial expressions, speech transcripts, tone of voice, body movements, sales techniques, presentation style, and other physical characteristics to analyze the anchor's capabilities more comprehensively (Luo et al., 2024).

4.2.2 Anchor Characteristics: Innovative

In subsequent research, a broader study should be conducted considering factors such as live streaming platform attributes, live streaming anchor characteristics, and audience location (Li et al., 2024).

Further research should also consider diverse types of e-commerce anchors, including key opinion leaders, celebrities, famous e-commerce anchors, and merchant-employed anchors (Chen et al., 2023). These types of anchors may employ different marketing strategies and may have varied factors influencing impulse purchases. Therefore, it is recommended to further explore whether different anchor characteristics have different mechanisms of influencing consumer behavior.

Research suggests that there will be increasingly artificially intelligent live anchors in the future. Advances in information technology, such as neural network learning techniques, may enhance the ability of AI anchors to express emotions. Future research should not ignore the emotional connection between AI-driven live anchors and consumers (Gao et al., 2023).

4.2.3 Study population: diverse groups

Future research could include analyses across different age groups, different live streaming platforms, and other sales categories to test the model's universal applicability.

Firstly, the current study focuses on China as the research background, as online live streaming has become popular worldwide, cultural differences may lead to bias in respondents' responses (Xie et al., 2022). Therefore, to improve the generality of the findings, scholars in the future may further select survey respondents from different countries and cultures to assess whether cultural differences affect the impact of anchor-audience interactions on live streaming results. Examples include live event broadcasts, live education broadcasts, and live personal sharing broadcasts on different platforms such as Twitter, YouTube, or Instagram (Zhang et al., 2022).

Second, the sample of papers in the review is mainly young people, and the sample source is relatively single. The follow-up study can expand the sample to cover more regions and age groups to make the sample distribution more even and further improve the external validity of the findings (Chen et al., 2023). Considering the increasing popularity of the Internet and the global aging problem, the sample of the elderly group should also be increased in the future to study the impact of the generation and gender of live streaming consumers on their purchase intention, so that operators can improve their services for different consumer groups (Ma et al., 2022).

4.2.4 Research Theory and Modelling

In live streaming consumption studies, scholars have used several alternative measures for dependent variables. Future research could further explore more sales performance variables such as return percentage, repeat purchase behavior, sales performance and listening to anchor intention. We can see that audience buying behavior under the influence of anchor characteristics is not measured by the variable of purchase intention alone.

The use of popular SOR, perceived value, TAM and TPB in the main body of literature has established some common ground and existing theories and findings can partially support the findings. However, more research is needed to further explore the relationship between anchor characteristics and purchase segmentation status. For example, purchase intention does not necessarily lead to purchase behavior. "I want to buy" and "I buy" may be two different states when shopping.

Most studies have examined purchase intention, rather than purchase hesitation, at the interaction level in live streaming environments. Although purchase hesitation accounts for only a small percentage of live broadcasts, it still has an important link to the next stage of purchase behavior or abandonment. The high frequency and engagement of consumer-anchor and consumer-consumer interactions in live streaming commerce as a factor influencing purchase hesitation is also an extension of the previous focus on contextual factors and consumer personality. This unexpected finding motivates us to pay more attention to the state of segmentation from psychological needs to behavioral execution.

In addition, future research could focus on other mediating variables such as traffic, consumer experience, engagement, and perceived uncertainty to reveal other mechanisms by which anchor characteristics influence consumers. The presence of other mediating and

moderating structures in the influence mechanism also requires further research in the future.

4.2.5 Ethical Question

However, our findings emphasize the key role of live anchors in marketing campaigns. They can market goods and services while building emotional relationships with consumers. While live streaming marketing enhances marketing effectiveness, it also brings negative impacts such as ad fraud and malicious competition. There has been controversy about the unexpectedly high return rate in live streaming e-commerce. Live-streaming hosts often accuse sellers of poor product quality. Understanding the influencing factors and mechanisms of live host marketing ethics is an important but less explored social issue that deserves further research.

5 Conclusion

This paper reviews articles related to anchor characteristics and purchasing behavior. The paper analyses the theory, research methodology, variables, sample, findings, and limitations of the articles. The article reports on anchor characteristics that influence consumers' emotional and behavioral responses. The results of the study show that anchors' professionalism, attractiveness, credibility, interactivity, popularity, approachability, and responsiveness have a significant positive effect on consumers' purchase intention. Professionalism ranked first in influencing consumer buying behavior. Since consumers cannot actually touch and observe the products, it is difficult for viewers to make an objective and accurate judgement on the actual value of the products. Therefore, the professional level of the anchor is an important basis for consumers to deeply understand the quality of the product and make a purchase decision. The higher the anchor's interactivity, professionalism, and credibility, the higher the perceived emotional value and the lower the perceived risk. The higher the emotional value, the lower the perceived risk and the higher the purchase intention. In addition, trust positively affects consumers' purchase intention, and trust mediates between anchor characteristics and consumers' purchase intention. Therefore, e-commerce live streaming platforms and anchors should enhance consumers' trust to increase their purchase intention.

Overall, there is a gap in research on the topic of the impact of anchor characteristics on consumer attitudes. Future scholars can implement innovative studies based on different research methods, in multiple countries, and in different age groups. Let the issue of anchor characteristics in consumer behavior research be paid attention to, to build new theoretical perspectives to study the change of consumer attitudes.

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