

The Impact of Videogame Elements in MMORPG on Consumer Retention

In the modern world, the video game industry has become an integral part of entertainment and is becoming increasingly popular and large-scale. By competently developing a strategy for creating a game and highlighting priorities, companies may be able to increase customer satisfaction and, as a result, customer retention. This research aims to determine the impact of videogame elements on consumer retention in Massively Multiplayer Online Games. The research results revealed that an audio-visual group of elements provides the highest impact on the first impression of the casual player segment, while a content group of elements provides the highest impact on the first impression of the hardcore player segment. Insights from the research results might be applied by companies creating games and seeking to enhance customer retention.

Keywords: casual players, hardcore players, consumer retention, videogame elements.

Vaizdo žaidimų pramonė tampa vis populiariesne, neatsiejama pramogų dalimi. Kompetentingai parengusios žaidimo kūrimo strategiją, išryškindamos prioritetus, įmonės gali pakelti savo klientų pasitenkinimo lygį, taigi, ir labiau juos išlaikyti. Šiuo tyrimu siekiama nustatyti vaizdo žaidimų elementų poveikį vartotojų išlaikymui masiniuose kelių žaidėjų internetiniuose žaidimuose. Tyrimo rezultatai atskleidė, kad audiovizualinė elementų grupė daro didžiausią poveikį atsitiktinių žaidėjų pirmajam išspūdžiui, o turinio elementų grupė – profesionalių žaidėjų pirmajam išspūdžiui. Tyrimų rezultatų išvalgas gali pritaikyti žaidimus kuriančios ir labiau išlaikyti klientus siekiančios įmonės.

Raktiniai žodžiai: atsitiktiniai žaidėjai, profesionalūs žaidėjai, vartotojų išlaikymas, vaizdo žaidimų elementai.

Introduction

In the modern world, the video game industry has become an integral part of entertainment and is becoming increasingly popular and large-scale. Video games have become much more complex than they used to be due to technological progress and high levels of investment. Modern trends with various

genres and the high level of competition in the video game segment have become a serious challenge for game developers and marketing specialists, placing multiple difficulties and challenges before them in meeting consumer expectations. The Massively Multiplayer Online (further – MMO) genre is unique due to the continuity of interaction and cohesion of completely different people playing

Mykyta DIVIEIEV – Master in Business Management; Faculty of Economics and Management, Vytautas Magnus University, Lithuania. Address: K. Donelaičio g. 58, LT-44248 Kaunas, Lithuania. Phone: +370 37 327856. Email: diveev2001@gmail.com

Viktorija GRIGALIŪNAITĖ – PhD, associate professor at the Faculty of Economics and Management, Vytautas Magnus University, Lithuania. Address: K. Donelaičio g. 58, LT-44248 Kaunas, Lithuania. Phone: +370 37 327856. Email: viktorija.grigaliunaite@vdu.lt

the same game simultaneously. Games in the MMO genre are commercially difficult due to the need to constantly retain consumers. The company's financial models, such as free-to-play and subscription models, rely on how many consumers interact with the product at the moment. The MMO genre is not as popular as before, fewer people play games of this genre due to the wide variety of different game genres on the market, which does not entail the best consequences. Using the example of one of the cult MMO games, World of Warcraft (further – WOW), one can note a significant decrease in consumer retention. Since the end of 2015, the creators of the WOW company Blizzard, have stopped sharing data regarding the number of WOW subscribers. So according to the forecast, in 2016 5.67 million subscribers played the game, while in 2023 according to the forecast, there were 4.46 million subscribers (Statista, 2016). Thus, retention is one of the main challenges of the Massively Multiplayer Online role-playing game (further – MMORPG) genre. Therefore, understanding how different elements influence different consumers is a primary goal in understanding consumer trends and desires. With the necessary and in-depth analysis of this information, companies will be able to properly prioritize among all the factors of game elements that affect consumer retention. By competently developing a strategy for creating a game and highlighting priorities, companies will be able to increase customer satisfaction and, as a result, retention, which may directly affect their sales and revenue since they will understand and meet the customers' expectations. Hence, **the article**

addresses a relevant scientific as well as managerial **problem**: how videogame elements impact consumer retention. **The aim of the research** is to determine the impact of videogame elements on consumer retention in Massively Multiplayer Online Games. To achieve the aim of the article, **the research uses two methods**: a quantitative questionnaire and a qualitative semi-structured interview. The article is structured as follows: Firstly, a conceptual framework reveals videogame elements that impact consumer retention on a theoretical level. Further research methodology is provided. Finally, the research results are presented, and based on the research results, the impact of different videogame elements on consumer retention is determined, and recommendations for the companies are established.

Conceptual framework

In the modern world, in most different industries, including the video game industry, the markets are oversaturated with various products from companies due to the high level of competition. This is especially noticeable in the context of profitable areas where investment is sought. Therefore, it is deemed very important for a business to understand the challenges and develop competent strategies to implement certain ideas and fulfil assigned tasks to retain consumers. In general, consumer retention is a complex and systematic process that requires a significant level of effort on the part of companies, as well as an understanding of the specifics of their products and consumer needs. Retention is beneficial

to businesses and critical to certain business models. Retention can be achieved with a high level of customer loyalty, satisfaction, and experience. Thus, with high performance and a good customer experience, retention can manifest itself as the client's desire to stay with the company's products, services, and games (Malhotra, 2021). Thus, the importance of consumer retention for business and the specifics of a certain segment, for which retention is key to survival. Additionally, globally, retention is defined as a cheaper process than attracting new customers, provided that the needs of existing customers are met (Fook & Dastane, 2021). Consumer retention is a complex task of ensuring customer satisfaction by providing an ideal consumer experience as well as creating an emotional connection with the client by identifying the needs and trends of the client in the case where the interaction is comfortable, pleasant, and interesting for the client so that it leads to loyalty as well as retention (Matsuoka, 2022).

Modern video games have become very complex and detailed, including a huge number of constituent elements that can be defined as groups of elements.

Audio-visual group of elements forms a visible and audible component of the game for the consumer. The graphics and style of the game are the visual contact of the consumer with the game and his perception of the game; the development of graphics helps to create the game world and implement other elements by creating styles and images for the characters and their characteristics, as well as the visual appearance of the game world and its components. Good graphics can involve customers in

the process of perceiving the game, immersing them in what is happening and interacting with other elements. Thus, graphics influence perception and user experience (Friedman, 2014). Audio and music, at the same time, influence sound perception and complement the visual range. The sound component also plays a role in shaping the style of the game and influences other elements, complementing them by giving certain elements of the world the manner of sound and creating the character of the character due to his manner of speech. Audio and music can be immersive and influence player interaction (Peerdeman, 2010).

Interaction groups of elements act as levers of interaction with the game using the interface, capabilities, and many other components. Representing the technical component of the game through playability, which performs the functions of being responsible for what is pressed, how it is pressed, and how interaction occurs, as well as the mechanics of the game that determine what and how will work in the game world, by creating a process of comfortable interaction with the content of the game, providing opportunities for the client, as well as clarity and convenient interaction (Paavilainen, 2020).

Content group of elements represents the variability of what the player interacts with, representing the history and lore of the game world, characters, various tasks, activities, and events that the client can interact with. As well as providing the consumer with certain challenges, difficulties, rewards, and achievements for their completion. In addition, the system of interaction with other players also

complements the game's content (Strååt & Verhagen, 2018).

Retention is a complicated and complex marketing task, especially in the MMO genre, where the influence of game elements can shift depending on the stage of the player's interaction with the game regarding the early stages and later stages, where the scale of their influence changes for different elements. Thus, it is determined that these changes are associated with the fact that some elements have a greater influence due to the first impression and form involvement, while other elements at the same time can have a significant influence in the process of interaction at a distance (Park et al., 2017).

An important aspect is that the consumer segments in the context of video games are defined as casual and hardcore players. Each segment has certain preferences, behavioral patterns, and trends. Casual games prefer an easy game in which they spend little time and fully relax in the game. At the same time, hardcore consumers want a more detailed, complex, and challenging game that challenges them and rewards them for completing that challenge. Therefore, the marketing difficulty is how to provide enough in one game to fulfil the desires and preferences of players from both segments, since both segments are important components of an MMO (Morin et al., 2016).

Hence, there is a gap in the literature determining which elements – audio-visual, interaction, or content – are the most influential for different segments of players and in which game stage (early or late) they are the most influential.

Research methodology

To research customer retention changes through the different elements of videogames and determine which elements of the videogames in the MMO genre are more influential for consumer retention, quantitative questionnaire and qualitative semi-structured interview research methods were chosen.

The initial task was clarified as defining the population and sample. For this research, the representation consists of average consumers of videogames, so-called “casual” players. The diverse sample has players of different genders, ages, education, and employment. Creating a representative sample would be beneficial for providing valuable insights regarding the impact of various videogame elements on the retention of “casual” videogame consumers.

The sample of the quantitative questionnaire consists of 400 “casual” players. Participants for the questionnaire were found through various social media channels and forums related to games and gaming-related topics, as well as among potential consumers of video games. The main tool for quantitative data collection is a structured questionnaire designed meticulously. The questions cover a broad spectrum of factors related to videogame elements: visual and audio effects (graphics, visual style, sound design, and music); interaction elements (playability, gameplay, user interface, controls, and training elements); elements of content (quests, story, challenges, events, tasks, social interaction, rewards and achievements). All these elements were asked to be evaluated

twice – for the importance of the element and for its interaction with retention within first impressions and long-term gaming. All the statements were evaluated on a Likert-scale. The questionnaire research was carried out on a European sample of English, Lithuanian and Ukrainian-speaking respondents. The questionnaire is available from the authors upon request.

To supplement the quantitative data and provide rich qualitative insights, semi-structured interviews were conducted. These interviews were with a sample of hardcore players, who have been playing MMO segment games since the release of the WOW game in 2004 and have achieved certain results. Therefore, their extensive experience and achievements emphasize an understanding of its elements, including those that influence the retention of players, including them. These interviews allow for discussion of the various elements regarding the MMO genre games with participants to provide examples, discuss experiences, and explore reasons behind their choices, giving the researchers a comprehensive understanding of player perspectives, insights and opinions. The questions are aimed at revealing the expert's opinion on how different groups of elements impact consumer retention, first impression and decision to stop playing game.

Within the above-designed methodology, the following research statements based on the conceptual framework were tested:

RS1: Audio-Visual elements are the most influential in retaining casual players segment in the MMO genre during the early stage of playing.

RS2: Interactions elements are the most influential in retaining casual players segment in the MMO genre during the later stage of playing.

RS3: Content elements are the most influential in retaining hardcore players segment in the MMO genre during the early stage of playing.

RS4: Interactions elements are the most influential in retaining hardcore players segment in the MMO genre during the later stage of playing.

Findings

The empirical analysis within the conducted reliable survey revealed that Audio-Visual elements group has the highest mean values among the other videogames elements groups in the context of the first impression on the casual player. The data shows that: graphics mean value 5.9; style mean value 5.9; sound mean value 5.4; music mean value 5.5; The following mean data indicative of the fact that the casual player considering these elements are considered to provide higher influence in the gaming process which is forming their first impression regarding the video game (*see* Table 1).

Among the group of interactions elements, the highest value of 5.1 stands out for technical quality and stability which is an indication of the exceptional importance of the technical condition of a video game for consumers (*see* Table 2).

In the context of content group, the most important is story of the game with an indicator of 4.9. Identifying that in order to form a first impression and engage in the gaming process, the story of

Table 1. Descriptive Statistics Mean (First impression regarding the game audio-visual group)

Audio-visual group of elements	Mean
Graphics	5.9
Style	5.9
Sound	5.4
Music	5.5
Average	5.6

Table 2. Descriptive Statistics Mean (First impression regarding the game interactions group)

Interactions group of elements	Mean
User-friendly interface	4.8
Technical quality and stability	5.1
Amount and quality of possibilities	4.8
Control systems	4.7
Helpfulness of the tutorial system	4.2
Average	4.7

what is happening is important for the consumer (*see* Table 3).

In comparison with other groups of video game elements where average value of groups in terms of mean value are interactions elements group 4.7; content elements group 4.2; while audio-visual elements group 5.6.

Thus, it turns out that the visual and audio components of the game have the greatest impact on the formation of the first impression of casual players.

Delivering further into empirical analysis within the survey revealed that Audio-Visual elements group in addition to first impression also show strong correlations between casual player involvement, engagement and their desire to return to the company games, therefore willingness to repurchase of company products.

The analysis revealed that correlation coefficients between audio-visual elements group indicate a positive relationship between elements within the group. The data shows significant correlation at the 0.01 level between graphics and style variables: “How do graphics affect your involvement in the game?” and “How does style affect your involvement in the game?” significant correlation was revealed: 0.542. As well as sound and music variables: “How does sound affect your involvement in the game?” and “How does music affect your involvement in the game?” significant correlation was revealed: 0.717.

These correlations are shows that audio-visual group of elements are interconnected between each other and if a casual player has a positive assessment of the influence of one of the elements of the group, then he is inclined to have

Table 3. Descriptive Statistics Mean (First impression regarding the game content group)

Content group of elements	Mean
Quests	4.5
Story	4.9
Challenges	4.1
Amount and quality of events and tasks	4.4
Social interaction	3.7
Reward and achievements	4.0
Average	4.2

a high influence of other elements of the group.

Moreover, the analysis revealed that correlation coefficients between audio-visual elements group impact on involvement and willingness to return to the company games, which is indicative of repurchase desire.

The data shows significant correlation at the 0.01 level between audio-visual impact on involvement and audio-visual impact on returning to the company games: "How do graphics affect your involvement in the game?" and "How likely would you return to company's games if graphics are attractive?" significant correlation were revealed: 0.672; "How does style affect your involvement in the game?" and "How likely would you return to company's games if style is attractive?" significant correlation were revealed: 0.380; "How does sound affect your involvement in the game?" and "How likely would you return to company's games if sound is attractive?" significant correlation were revealed: 0.583; "How does music affect your involvement in the game?" and "How likely would you return to company's games if music is attractive?" significant correlation were revealed: 0.542.

These correlations show that the causal consumers who find the audio-visual elements important for them are more likely to return to company's games in the future which is deemed to increasing of retention and loyalty.

The empirical analysis within the conducted reliable survey revealed that interactions elements group has the highest mean values among the other video-games elements groups in the context of assessing casual player engagement and retention within the later stages of playing. In other words, causal players need technically stable game, with well-developed intuitive control system and good and easy user interface because they will lose desire to play the game.

The data shows that: interface mean value 5.5; technical quality mean value 6.3; possibilities limitation mean value 5.4; control system mean value 5.5; tutorial system mean value 4.7. The following mean data indicative of the fact that the casual player considering these elements as an element that providing higher impact in the gaming process on the long perspective which is forming their desire to continue or to stop playing the video game (see Table 4).

Table 4. Descriptive Statistics Mean (Desire to stop playing due to poor quality of interaction group)

Interactions group of elements	Mean
Interface	5.5
Technical quality	6.3
Possibilities limitations	5.4
Control systems	5.5
Tutorial system	4.7
Average	5.4

In the context of the group of audio-visual elements, respondents pay particular attention to the quality of style with a score of 4.4, identifying style as an important component for long-term gaming (see Table 5).

In the group of content elements, the story stands out with a score of 4.5 showing its importance not only in forming the first impression but also preferences of consumers in long-term gameplay (see Table 6).

In comparison with other groups of video game elements where average value of groups in terms of mean value are audio-visual elements group 3.8; content elements group 4.0; while interactions elements group 5.4; It is important for players that the game works well, the user interface is clear and friendly, the control system is easy and not overloaded, and the game is feature-rich and tutorial system is helpful.

Delivering further into empirical analysis within the survey revealed that Interaction elements group in addition to desire to continue playing also show strong correlations between casual player involvement, engagement and their desire to return to the company games, therefore willingness to repurchase of company products.

The analysis revealed that correlation coefficients between interactions elements group indicating a positive relationship between elements within the group. The data shows significant correlation at the 0.01 level between interactions elements variables: “How does user friendly interface affect your involvement in the game?” and “How does technical quality and stability of the videogame affect your involvement?” significant correlation were revealed: 0.498; “How does technical quality and stability

Table 5. Descriptive Statistics Mean (Desire to stop playing due to poor quality of audio-visual group)

Audio-visual group of elements	Mean
Graphics	3.8
Style	4.4
Sound	3.5
Music	3.5
Average	3.8

Table 6. Descriptive Statistics Mean (Desire to stop playing due to poor quality of content group)

Content group of elements	Mean
Quests	4.2
Story	4.5
Challenges	4.1
Amount of events and tasks	4.0
Quality of events and tasks	4.1
Social interaction	3.5
Reward and achievements	3.7
Average	4.0

affect your involvement in the game?” and “How do the amount and quality of possibilities affect your involvement in the game?” significant correlation were revealed: 0.544; “How does user friendly interface affect your involvement in the game?” and “How do control system affect your involvement in the game?” significant correlation were revealed: 0.511; “How does the helpfulness of the tutorial system affect your involvement in the game” and “How do control system affect your involvement in the game?” significant correlation were revealed: 0.517; “How do the amount and quality of possibilities affect your involvement in the game?” and “How do control system affect your involvement in the game?” significant correlation were revealed: 0.377.

These correlations show that interactions group of elements are interconnected between each other and if a casual player has a positive assessment of the influence of one of the elements of the group, then he is inclined to have a high influence of other elements of the group.

Moreover, the analysis revealed that correlation coefficients between interactions elements group impact on involvement and willingness to return to the

company games, which is indicative of repurchase desire.

The data shows significant correlation at the 0.01 level between interactions impact on involvement and interactions impact on returning to the company games: “How does user friendly interface affect your involvement in the game?” and “How likely would you return to companies games if user interface is friendly?” significant correlation were revealed: 0.452; “How does the technical quality and stability affect your involvement in the game?” and “How likely would you return to companies games if game technical quality is good and stable?” significant correlation were revealed: 0.305; “How does the amount and quality of possibilities affect your involvement in the game?” and “How likely would you return to companies games if amount and quality of possibilities in the game is good?” significant correlation were revealed: 0.434; “How do control system affect your involvement in the game?” and “How likely would you return to companies games if control system in the game is good and easy?” significant correlation were revealed: 0.359; “How does the helpfulness of the tutorial

system affect your involvement in the game?” and “How likely would you return to companies games if tutorial system in the game is helpful?” significant correlation were revealed: 0.621.

These correlations are shows that the causal consumers who find the interactions elements important for them are more likely to return to company's games in the future which is deemed to increasing of retention and loyalty. To achieve this, the interface of the game should be user friendly, the technical quality and stability of the game perfect, the game consists of a lot of interaction opportunities, the control system is easy- intuitive and tutorial system is helpfulness.

The analysis of the survey data reveals valuable insights with significant evidence confirming that audio-visual group of elements is the most influential in forming the first impression of casual players. As well as the fact that interaction elements are the most influential within the later stages of playing. In addition, the audio-visual and interaction groups of videogame elements are showing significant correlations between involvement of the causal players in the gaming process and their desire to return to the company's products. Therefore, it is indicative of a positive relationship between these elements' groups and player retention. These findings reveal that audio-visual and interactions elements groups forming gaming experience of the casual consumers and influencing on their desire in terms of consuming companies' products. In terms of first impression casual players are mostly influenced by audio-visual group of elements such as graphics, style, sound and music. While within the process of

gaming interactions elements becomes increasingly important as well as their influence on the consumer desire to continue to play due to user friendly interface, technical stability of the game, easy control system, good game possibilities and helpful tutorial system.

Overall, emphasizes the significance of importance of both audio-visual and interactions element groups to enhance casual consumer involvement, engagement as well as retention and loyalty.

The empirical analysis within the conducted reliable semi-structured expert interview revealed that audio-visual group of elements has very little or no impact on their involvement in the engagement and retention of hardcore consumers. At the same time, clarified that the audio-visual group could be a good addition to other more important groups of elements.

At the same time, the interviewer asked experts about specific elements of the game that formed the first impression of the hardcore players' segment. The analysis of the interviewees' answers revealed that content elements group the most important in formulation of the first impression and attracting of a hardcore segment into the process of gaming. The experts agreed on the fact that for them content elements group playing a key role to form first impression and immerse into gaming.

Therefore, it is deemed that, first impression of hardcore segments of consumers mostly formed by content elements group with well developed: story, characters and interesting and challenging tasks, quest as well as other type of activities.

The experts were asked regarding the elements of video games that play an important role in maintaining the retention of players. Overall, an important point was made, since all of the experts agreed that the technical stability of the game was critical to keeping both consumer segments in the long-term perspective of videogame consumption. At the same time interviewees provided valuable insights regarding the fact that in addition to stability, other components of the interaction group of elements also have a significant impact on both consumer segments, but in different ways. According to experts, for casual consumers, in addition to stability and the absence of various errors, it is important to have an easy and balanced gameplay, which will include: a user-friendly interface, a simple control system and helpful tutorial system on how to interact with the game. While, for the hardcore segment, the interviewee stated that in addition to stability, it is important to ensure that the interaction with the game is balanced, the gameplay is moderately complex and interesting.

Therefore, it is deemed that, for casual player retention and engagement in long term perspective mostly formed

by seamlessly functioning videogame, free from glitches and errors with an intuitive control, user friendly-interface, helpful tutorial system and easygoing interaction. While, for retention and engagement of hardcore player in long term perspective the game should be seamlessly functioning free from glitches and errors. However, instead of easy and relaxed interaction, hardcore consumers need well-developed captivating control as well as interesting challenging missions and tasks that intriguing and rewarding consumer for overcome.

Accordingly, interaction group of elements has the greatest impact on long-term engagement and retention of casual and hardcore player segments.

As the results the following could be concluded all research statements of the paper were substantiated (*see* Table 7).

The results of the quantitative questionnaire and qualitative semi-structured interview revealed that the audio-visual group of elements provided the highest impact on the first impression of the casual player segment, while the content group of elements provided the highest impact on the first impression of the hardcore player segment. At the

Table 7. Research statements results

Research statements	
Audio-visual elements are the most influential in retaining casual players segment in the MMO genre during the early stage of playing.	Accepted
Interactions elements are the most influential in retaining casual players segment in the MMO genre during the later stage of playing.	Accepted
Content elements are the most influential in retaining hardcore players segment in the MMO genre during the early stage of playing.	Accepted
Interactions elements are the most influential in retaining hardcore players segment in the MMO genre during the later stage of playing.	Accepted

same time, it was identified that the interaction group of elements provided the highest impact on the long-term retention of both player segments. The analyzed data results showed the differences between casual and hardcore segment preferences. The insights reveal that graphics, style, sound, and music predominantly impact the first impression of casual consumers, while quests, stories, challenges, tasks, social interaction, and rewards predominantly impact the first impression of hardcore consumers. Moreover, for both segments, interactions are crucial for long-term retention.

This research underlines the fact that videogame technical conditions must be smooth and gameplay experiences must be immersive to meet the specific needs of both categories of consumers. Therefore, when developing a game, the main emphasis should be on its stability, technical components, and a competent marketing strategy, which will be included in the development process by providing each segment of consumers with the needs that correspond to their expectations and needs. The provided insights from research results might be applied by companies creating games and seeking to enhance customer retention.

Conclusions

The conducted research revealed that each group of video game elements impacts consumer involvement, retention, and engagement, as well as forming the first impression and fostering long-term

sustainable retention of consumers. The obtained findings explain the consumer behavioral profiles of different segments of players. As well as their distinct preferences, needs, and trends in the videogame segment. For the casual consumer, the first impression is most often formed by the audio-visual group of elements. For the hardcore consumer, the main thing for the first impression is content. Also, in the process of interacting with the game for both segments, the elements of interaction are critically important, which will include a stable game and calm, easy, and understandable content for the casual consumer. As well as complexity, challenges, and competitions with rewards for completion for the hardcore consumer.

Thus, the conducted empirical research fills the gap in the scientific literature by detailed analysis of the preferences of different segments of video game consumers in the context of the influence of video game elements on the retention of casual and hardcore segments of consumers at various stages of playing the game, determining the first impression and desire to continue playing in the long term. Hence, valuable scientific findings regarding the consumption patterns of gamers within interactions with videogames are provided. Moreover, the provided insights from research results might also be applied by companies creating games and seeking to enhance customer retention.

References

1. Fook, A. C. W., Dastane, O. (2021). Effectiveness of Loyalty Programs in Customer Retention: A Multiple Mediation Analysis // *Jindal Journal of Business Research*. Vol. 10, No. 1, pp. 7–32. doi: 10.1177/22786821211000182
2. Friedman, A. (2014). The Role of Visual Design in Game Design // *Games and Culture*. Vol. 10, No. 3, pp. 291–305. doi: 10.1177/1555412014559977
3. Malhotra, G. (2021). Consumer Retention in Two-Wheeler Industry: A Moderated Mediation Model // *Asia Pacific Journal of Marketing and Logistics*. Vol. 34, No. 8, pp. 1681–1701. <https://doi.org/10.1108/apjml-03-2021-0187>
4. Matsuoka, K. (2022). Effects of Revenue Management on Perceived Value, Customer Satisfaction, and Customer Loyalty // *Journal of Business Research*. Vol. 148, pp. 131–148. doi: 10.1016/j.jbusres.2022.04.052
5. Morin, R., Léger, P.-M., Senecal, S., Bastarache-Roberge, M.-C., Lefebvre, M., Fredette, M. (2016). The Effect of Game Tutorial: A Comparison Between Casual and Hardcore Gamers / In *CHI PLAY Companion'16: Proceedings of the 2016 Annual Symposium on Computer-Human Interaction in Play Companion Extended Abstracts*, pp. 229–237. doi: 10.1145/2968120.2987730
6. Paavilainen, J. (2020). Defining Playability of Games: Functionality, Usability, and Gameplay / In *Proceedings of the 23rd International Conference on Academic Mindtrek*, pp. 55–64. doi: 10.1145/3377290.3377309
7. Park, K., Cha, M., Kwak, H., Chen, K. T. (2017). Achievement and Friends: Key Factors of Player Retention Vary Across Player Levels in Online Multiplayer Games / In *WWW'17 Companion: Proceedings of the 26th International Conference on World Wide Web Companion*, pp. 445–453. doi: 10.1145/3041021.3054176
8. Peerdeman, P. (2010). Sound and Music in Games by Peter Peerdeman. Internet access: <https://www.semanticscholar.org/paper/Sound-and-Music-in-Games-by-Peter-Peerdeman-Peerdeman/bc94d9346385c-c767ab78805b19da1060d2ed329> [accessed May 10, 2024].
9. Statista (2016). World of Warcraft Estimated Subscribers from 2015 to 2023. Internet access: <https://www.statista.com/statistics/276601/number-of-world-of-warcraft-subscribers-by-quarter/> [accessed May 10, 2024].
10. Strååt, B., Verhagen, H. (2018). Exploring Video Game Design and Player Retention – a Longitudinal Case Study / In *Mindtrek'18: Proceedings of the 22nd International Academic Mindtrek Conference*, pp. 39–48. doi: 10.1145/3275116.3275140

The paper submitted: May 30, 2024

Prepared for publication: August 30, 2024

Mykita DIVIEIEV, Viktorija GRIGALIŪNAITĖ

VAIZDO ŽAIDIMŲ ELEMENTŲ POVEIKIS VARTOTOJŲ IŠLAIKYMU MASINIUOSE KELIŲ ŽAIDĖJŲ INTERNETINIUOSE ŽAIDIMUOSE

S a n t r a u k a

Vaizdo žaidimų pramonė tampa vis populiarese, neatsiejama pramogų dalimi. Vaizdo žaidimai pasidarė daug sudėtingesni nei anksčiau dėl technologinės pažangos ir didelių investicijų. Didelė konkurencija vaizdo žaidimų rinkoje – rimtas iššūkis žaidimų kūrėjams ir rinkodaros specialistams, siekiantiems patenkinti vartotojų lūkesčius. Kompetentingai parengusios žaidimo kūrimo strategiją, išryškindamos prioritetus, įmonės gali padidinti savo klientų pasitenkinimą, taigi, ir labiau juos išlaikyti. Šiuo tyrimu siekiama nustatyti vaizdo žaidimų elementų poveikį vartotojų

išlaikymui masiniuose kelių žaidėjų internetiniuose žaidimuose.

Tyrimo tikslui pasiekti pirmiausia atlikta mokslinės literatūros analizė ir sintezė, leidusi nustatyti vaizdo žaidimų elementus, teoriniu lygmeniu turinčius įtakos vartotojų išlaikymui. Empiriniam tyrimui atlikti taikyti du metodai: kiekybinė anketinė apklausa ir kokybinis pusiau struktūruotas interviu.

Tyrimas atskleidė, kad kiekviena vaizdo žaidimų elementų grupė daro poveikį vartotojų išlaikymui, taip pat formuoja pirmąjį įspūdį ir skatina

ilgalaikį tvarų vartotojų išlaikymą. Tyrimo rezultatai leidžia teigti, kad audiovizualinė elementų grupė padarė didžiausią poveikį atsitiktinių žaidėjų pirmajam įspūdžiui, o turinio elementų grupė – profesionalių žaidėjų pirmajam įspūdžiui. Taip pat nustatyta, kad sąveikos elementų grupė padarė didžiausią poveikį ilgalaikiam abiejų žaidėjų segmentų išlaikymui. Remiantis tyrimo rezultatais, atsitiktiniam vartotojui svarbiausi sąveikos elementai yra stabilus žaidimas ir ramus, lengvas bei suprantamas turinys, o profesionaliam vartotojui – užduotys, istorijos, iššūkiai, socialinė sąveika ir apdovanojimai.

Remiantis tyrimo rezultatais, vaizdo žaidimų techninės sąlygos turi būti aiškios, be trikdžių, o žaidimo patirtis – įtraukianti, kad atitiktų

specifinius abiejų vartotojų segmentų lūkesčius. Taigi, kuriant žaidimą, pagrindinis dėmesys turėtų būti skiriamas jo stabilumui bei techniniams komponentams.

Atliktas empirinis tyrimas užpildė mokslinės literatūros spragą: išsamiai išanalizuoti skirtingų vaizdo žaidimų vartotojų segmentų lūkesčiai, atsižvelgiant į vaizdo žaidimų elementų įtaką atsitiktinių ir profesionalių žaidėjų išlaikymui įvairiuose žaidimo etapuose. Remiantis tuo, pateikiamos vertingos mokslinės išvados apie žaidėjų vartojimo įpročius žaidžiant vaizdo žaidimus. Be to, pateiktas įžvalgas apie tyrimų rezultatus gali pritaikyti ir žaidimus kuriančios bei labiau išlaikyti klientus siekiančios įmonės.