

Dominant Playing Styles in an Authorial Role-Playing Game in Different Age Groups

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ABSTRACT:

The aim of the research is to investigate the correlation between age and playing styles in an authorial role-playing game. In the designed research the authors have assumed the playing styles defined by Richard Bartle, that is: the socializer, the killer, the achiever, the explorer. The research subjects came from three age groups: university students (18-25), corporate workers (35-50) and seniors (65+). The research was conducted with the use of the quantitative method on the basis of the playing styles observation sheet developed in accordance with the operationalization of Bartle's taxonomy. Throughout the conducted observations one could observe clear behaviours, adequate with the operationalized taxonomy of Bartle. The dominant type in every age group was the socialiser, on the other hand only a few behaviours were associated with the killer type. In every age category there was a specific pattern of the observed behaviours, which are possible to explain by comparison to the everyday activities of the investigated age groups. Knowledge about the correlation between age and playing style could be useful for game creators and educators, who want to use the game as an educational method.

KEY WORDS:

Bartle's taxonomy, early adulthood, LARP, late adulthood, middle adulthood, RPG.

"Playing makes it possible to explore the paper boundary between reality and imagination, between the real and the imaginary, between ourselves and others. Playing gives us the right to explore ourselves as well as the society that we live in. By playing we investigate culture, and we create it, as well".¹

R. Silverstone

Introduction

One of the main assumptions of the present paper is the conviction that learning and pleasure are not mutually exclusive. On the contrary, the pleasure that can be derived from, among others, a game, can constitute an interesting point of reference for those educators and researchers who are interested in innovations in education. An attempt to design educational activities on the basis of various activating methods such as games, role-playing, drama, simulation, or group work can constitute one of the aforementioned innovations. The educational activity proposed in this paper is a combination of elements of drama, a *role-playing game* (RPG), and a *live action role-playing game* (LARP). According to D. Michałowska drama² in education "plays a twofold role. Firstly, it is a didactic-educational method. Secondly, it is a method of the universal development of the personality of an individual. [...] It encourages students to enter into interpersonal relationships and diverse social situations".³

1 SILVERSTONE, R.: *Rhetoric, Play, Performance: Revisiting a Study of the Making of a BBC Documentary*. In GIPSRUD, J. (ed.): *Television and Common Knowledge*. London, New York: Routledge, 1999, p. 64.

2 Remark by the authors: Drama has been introduced into didactics by Caldwell Cook.

3 MICHAŁOWSKA, D.: *Drama w edukacji*. Poznań: Wydawnictwo Naukowe Instytutu Filozofii Uniwersytetu im., 2008, p. 64.

It allows one to “pay attention to such issues and values as:

- care, being noticed, and respect for those who are discriminated against because of their gender, race, religion, or disability,
- positive attitude towards oneself,
- caring for the environment and the community,
- respect for the values, beliefs, and opinions of others,
- being true, open, honest in words, feelings, and emotions,
- being responsible for oneself and for others,
- the will for reflection and reviewing one’s own convictions, values, feelings, and the will for change”.⁴

At the same time, G. Petty claims that it teaches one respect for oneself and self-confidence.⁵ It allows those who did not stand out to approve themselves and it is, at the same time, a great tool in shaping emotions.⁶ As J. Z. Szeja adds in his paper *Gry fabularne. Nowe zjawisko kultury współczesnej* [Role-playing games. A new phenomenon of contemporary culture] drama⁷ is supposed to teach one about life, and a role-playing game, which is the reference point for the authors of the present paper, is a simulation of life.⁸ Narracyjna gra fabularna is the Polish equivalent of a role-playing game which has been coined by J. Z. Szeja. The term denotes a game (play) in playing characters.

That definition, however, is not precise. When trying to explain the nature of role-playing games one must bear in mind that in their traditional form they require at least one gamemaster (author’s emphasis) and one player playing a role. The gamemaster describes the world and the events in which the character(s) take part. Its nature is defined by the selected system (author’s emphasis) of the role-playing game, which is described in a basic guidebook⁹ and by supplements such as printouts (descriptions of the narratives, the characters). Role-playing games are “interactive entertainment (author’s emphasis) consisting of action (author’s emphasis) in an imaginary world, different from our world”.¹⁰

D. Mackay, in turn, defines the tabletop role-playing game¹¹ as an episodic and participatory story-creation system that includes a set of quantified rules that assist a group of players and a gamemaster in determining how their fictional characters’ spontaneous interactions are resolved.¹² “In role-playing games are familiar for people in the modern society from youth. But the particular game could require a lot of preparation: reading the rules, understanding the roles, immersion into the situations presented. The participants

4 MICHAŁOWSKA, D.: *Drama w edukacji*. Poznań : Wydawnictwo Naukowe Instytutu Filozofii Uniwersytetu im., 2008, p. 51-52.

5 PETTY, G.: *Nowoczesne nauczanie: Praktyczne wskazówki i techniki dla nauczycieli, wykładowców i szkoleniowców*. Sopot : GWP, 2003, p. 240.

6 Ibidem.

7 Remark by the authors: According to J.Z. Szeja “even though role-playing games derive from board battle games they have many connections with the drama method, recognised in pedagogics”; SZEJA, J. Z.: *Gry fabularne. Nowe zjawisko kultury współczesnej*. Kraków : Rabid, 2014, p. 19.

8 Remark by the authors: J.Z. Szeja states that “a random observer could have some difficulty discerning between a lengthy multi-person drama and a live action role-playing game session, he assumes that the only significant difference between the two is the aim of the event, in the case of drama it is educational and didactic, and in the case of a LARP it is ludic, another difference is in the role of the gamemaster and clear narrative.; SZEJA, J. Z.: *Gry fabularne. Nowe zjawisko kultury współczesnej*. Kraków : Rabid, 2014, p. 20.

9 SZEJA, J. Z.: *Gry fabularne. Nowe zjawisko kultury współczesnej*. Kraków : Rabid, 2014, p. 11-12.

10 Ibidem, p. 21.

11 Remark by the authors: One ought to see the broader understanding of TRPG, RPG, and LARP.; For more information, see: GROULING, J.: *The Creation of Narrative in Tabletop Role-Playing Games*. London : McFarland and Company, 2010.; TRESCA, M. J.: *The Evolution of Fantasy Role Playig Games*. USA, Jefferson : McFarland and Company, 2011.; BOWMAN, S. L.: *The Functions of Role-Playing Games*. London : McFarland and Company, 2010.; ROGERS, S., EVANS, J.: *Inside Role-Play in Early Childhood Education*. Canada : Routledge, 2008.

12 MACKAY, D.: *The fantasy role-playing game: A new performing art*. USA, Jefferson : McFarland and Company, 2001, p. 4-5.

should manage with the proper terms and notions to understand the educational content. At the same time, the organizers of the game should maintain the model of the activity operable and consistently”.¹³

As J. Z. Szeja claims, interactive stories can be compared to the theatre. That is because an RPG session resembles a play in which the actors are also the directors and the audience. In such show the main role belongs to the gamemaster, because he/she knows the entire plot and possesses all the means necessary to lead the course of the game. According to this Polish researcher of games RPGs may even be compared to psychodrama, a therapeutic technique introduced by J. L. Moreno. That is particularly significant in LARPs, with their greater role of the actors and the setting.¹⁴ Live action role playing (LARP), *teatralna gra fabularna*, is a role-playing game in which entire characters are played, typically with the use of costumes and large spaces. One ought to notice that in a typical LARP there are many more players than an RPG session and the role of the gamemaster is reduced to assigning roles and an initial introduction of the space and the characters. The gamemaster in LARPs relies much more frequently than in regular sessions on assistants playing characters who are subject to his will or serving the functions of additional gamemasters, because the game typically consists of the players conversing among themselves and creating coteries that take up initiatives. In LARPs it is usually assumed that a certain story is to be acted out, however, taking control of the events is much more difficult than in RPGs.¹⁵ T. Utne states that “LARP as a free-form game gives the students the opportunity to distance themselves from the rules, and produce new ones. Thus, a dynamic organization emerges.

This characterization is based on the notion that free-form games enable a self-organizing capacity. This capacity gives the students a chance to explore the subject on their own premises”.¹⁶ M. Gade, L. Thorup and M. Sander define LARP as “abbreviation of Live Action Role-Play, a form of role-play where the participants (termed players) take on fictive personalities (called roles or characters) and act out their interaction in a pre-defined, fictive setting (see this). The form differs from tabletop RPG (see this) in that the players act the interaction out physically, hence «live action» Though the form may have some use in psycho-therapy and the setting may be virtually anything, most larping is done for fun, and the setting is traditionally fantasy or science fiction”.¹⁷ “The LARP may contain many smaller intrigues, where the intrigues are thematically connected. The LARP scenario may be a slice of reality. In real life, there are no main plots (...). LARP is action. The use of retrospect in the character description forces the player to relate to incidents that are not real. In LARP, an interactive form of art, the amount of actors and stories is theoretically unlimited”.¹⁸

Simulations and games (both computer-based and live) are considered as effective methods of teaching competences and *soft skills* by many authors.¹⁹ The educational

13 GADE, M., THORUP, L., SANDER, M.: *When Larp Grows Up – Theory and Methods in Larp*. Frederiksberg : Projektgruppen KP03, 2003, p. 17.

14 SZEJA, J. Z.: *Gry fabularne. Nowe zjawisko kultury współczesnej*. Kraków : Rabid, 2014, p. 14-17.

15 Ibidem, p. 17-18.

16 UTNE, T.: *Live Action Role-playing – Teaching through gaming*. [online]. [2018-12-26]. Available at: <<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.591.1171&rep=rep1&type=pdf>>.

17 GADE, M., THORUP, L., SANDER, M.: *When Larp Grows Up – Theory and Methods in Larp*. Frederiksberg : Projektgruppen KP03, 2003, p. 186.

18 Ibidem, p. 25.

19 See also: CROOKALL, D., OXFORD, R., SAUNDERS, D.: Towards a Reconceptualization of Simulation: From Representation to Reality. In *The Journal of SAGSET (Simulation/Games for Learning)*, 1987, Vol. 17, No. 4, p. 147-171. [online]. [2018-12-26]. Available at: <http://sites.unice.fr/sg/resources/articles/Article_Reconceptualization-simulation_200bw-upright.pdf>; FEDOSEEV, A.: Live-action role-playing games as an educational technology. In *International Scientific Conference “Interactive Education” Theses*. Moscow : Lomonosov Moscow State University, 2011.; HENRIKSEN, T. D.: Moving Educational Role-Play Beyond

potential of live-action role-playing games was confirmed recently. Great significance is also attached to game-based learning,²⁰ taking into account that it is generally considered as an effective means to enable learners to construct knowledge by playing, maintain higher motivation and apply acquired knowledge to solve real-life problems. Therefore, game-based learning becomes a promising method for providing highly motivating learning situations to learners. Through a combination of engaged playing, problem solving, situated learning and challenge, game-based learning can support learners to construct knowledge from ambiguity, trial and error²¹. K. Kiili²² also suggested that successful game-based learning was strongly correlated with higher degrees of flow experience. M. Pivec and O. Dziabenko²³ further indicated that pedagogy was one of the major components of successful game-based learning.

Description of the Spell of the Black Magic Master Game

The game *Spell of the Black Magic Master*²⁴ has been designed for 12 participants who are initially randomly put into two groups that compete for points and final victory. During the game the participants play the roles of adventurers who set out on a difficult mission to the Damned Castle where the Black Magic Master dwells. Cards with character descriptions were drawn at the beginning of the game and they, to a certain extent, determined the behaviour and the role of participants, at the same time giving them a lot of space for their own choices.

Depending on the card drawn the players could act the roles of *Strategist*, *Architect*, *Actuary*, *Sorcerer*, *Fearless Adept*, or a *Diplomat*. The information about a character that was passed on to the players was limited to an outline of the personality, the skills, and the tasks preferred within the group. They did not, however, define the types of tasks to be undertaken by a given participant of the game. "Diplomat" was an exception because his role would focus on negotiations with other players and the possible interactions were strictly limited by the creators of the game. The players could also draw the role of a mysterious character. This obliged two people from different groups to become undercover traitors.



Picture 1: An example of the card with character descriptions²⁵

Source: own processing; *Spell of the Black Magic Master Game*. [online]. [2018-12-26]. Available at: <<https://pixabay.com/pl/illustrations/kobieta-kobiet-pi%C4%99kno-pani-ogie%C5%84-2514504/>>.

The plot of the game *Spell of the Black Magic Master* is set in a fantasy world, in an unreal world, where people's lives are determined by magic. The main aim of the participants of the game was to neutralise the spell cast by the Black Magic Master in a time shorter than 120 minutes. To free mankind from the evil spell, and, consequently, to free it from time, ageing, and dying, the players had to decipher the meaning of the spell in four stages, prepare magical objects²⁶ and props²⁷, and, finally, act out a play in the final round. During the first stage of the game the teams had to develop an interpretation of a text they had received, that is, one of the four fragments of the spell, consider the way to act out the play and prepare elements of the costumes and the mise-en-scene. Each of the groups was supervised by a gamemaster and they worked within a defined space, where there were the materials needed to produce the props. After the preparatory stage the players had to face the Guardian and then the Black Magic Master. Both of the meetings ran according to the strict rules of the game, i.e., the mechanics of the game. In the final round, in turn, interpretation of the text played the crucial role, which is why the participants' acting and the ability to fit in the role were essential.



Picture 2: An example of the card with a spell²⁸

Source: own processing; *Spell of the Black Magic Master Game (Fantasy)*. [online]. [2018-12-26]. Available at: <<https://pixabay.com/pl/illustrations/fantasy-op%C5%82ata-%C5%9Bwiat%C5%82o-las-3972476/>>.

Entertainment. In *Teoría de la Educación – Educación y Cultura en la Sociedad de la Información*, 2010, Vol. 11, No. 3, p. 226-262.; KLABBERS, J. H.: *The magic circle: Principles of gaming & simulation*. Rotterdam, Taipei : Sense Publishers, 2009.; LAINEMA, T.: Perspective Making: Constructivism as a Meaning-Making Structure for Simulation Gaming. In *Simulation & Gaming*, 2008, Vol. 40, No. 1, p. 48-67.; CHANG, M., KUO, R., KINSHUK, GWO-DONG, C., HIROSE, M. (eds.): *Learning by Playing Game-based Education System Design and Development*. Banff : Springer, 2009.

20 For more information, see: BAEK, Y.: *Gaming for Classroom-Based. Learning: Digital Role Playing as a Motivator of Study*. Hershey, New York : Information Science Reference, 2010.; MILLER, C. T. (ed.): *Games: Purpose and Potential in Education*. New York : Springer, 2008.

21 ADCOCK, A.: Making Digital Game-based Learning Working: An Instructional Designer's Perspective. In *Library Media Connection*, 2008, Vol. 26, No. 5, p. 56-57.; VAN ECK, R.: Six Ideas in Search of a Discipline. In SHELTON, B. E., WILEY, D. A. (eds.): *The Design and Use of Simulation Computer Games in Education*. Rotterdam : Sense Publishing, 2007.

22 KIILI, K.: Content Creation Challenges and Flow Experience in Educational Games: The IT-Emperor Case. In *The Internet and Higher Education*, 2005, Vol. 8, No. 3, p. 183-198.

23 PIVEC, M., DZIABENKO, O.: Game-based Learning in Universities and Lifelong Learning: "UniGame: Social Skills and Knowledge Training" Game Concept. In *Journal of Universal Computer Science*, 2004, Vol. 10, No. 1, p. 14-26.

24 Remark by the authors: The game "The Spell of the Black Magic Master" was created by the members of the Research Team "Games and Innovations in Education: Edutainment": Ilona ZAKOWICZ, MA, Justyna SOCHACKA, MA, Dominik FIGIEL, MA.

25 Remark by the authors: Translation of the card description: "Sorcerer. She has the ability to create and change ordinary things into entirely different, extraordinary ones, changing the reality, creating".

26 Remark by the authors: Provided by the organisers.

27 Remark by the authors: Made by the participants.

28 Remark by the authors: Translation of the spell on the card: "Spell – part three. When the last word echoes it all shall begin... let the bravest of all men in the circle appear. Let a voice so soft and sweet as the nightingale's song call: Every day the Sun goes down burying time and light. Every second slips away not to turn back. Mighty Chronos, god of time, please, hear our cry! Stop time, let us breathe, see into designs".

The game ran according to a set scenario, nevertheless the course of the game was not precisely defined by its creators, because elements of randomness were introduced and the players had a significant space to choose their strategies. The course of the events would largely depend on the choices of the players, but also on the intellectual effort that they contributed, as well as their creativity. The groups were obliged to focus on the time in which the tasks were done, the precision and the correctness of the constructed props, providing difficulties for the opposing group or on cooperation of the teams to develop solutions together. Each of the aforementioned strategies required a slightly different approach to the game and concentrating on diverse ways to achieve the main goal. Regardless of the assumed strategy each of the teams was required to meet their Guardian and the Black Magic Master at least 4 and 5 times respectively. The Guardian protected the entrance to the main chambers of the Damned Castle and made it difficult for the players for their props to be accepted and to receive further parts of the riddle. To meet the Black Magic Master the players were required to pay an amount that would change with the game levels, to fight the Guardian, or to bribe him with a gift. Even at this stage the players implemented a strategy to either choose the quickest and the most costly option, or a cheaper one, requiring more time and creative thinking, skilful negotiations, or they could rely on the random elements of the game. During their meeting with the Black Magic Master the players not only presented their theretofore progress made in the game to receive points, a further piece of the spell, and to check the table with the game results, but they could also decide to try to receive a ready-made object from the table of varieties. To do this they needed to confront the Black Magic Master and fight her, solve a logic riddle, pay, and, subsequently – if they had completed the verifying task – randomly draw of group of objects, from among which they could select a prop. The teams could also use additional ways to defeat their opponents such as: the Chest of Secret Tidings, from which they could receive gold; meeting the Guardian from the other team who, for a certain price in gold, provided information on the progress made by the opponent group; the opportunity to meet the second Diplomat and receive, for payment or, if a cooperation could be initiated, some tips pertaining to the course of the game; the opportunity to meet the other team.

The players were evaluated on a number of levels by 5 different observers playing three crucial roles. The Black Magic Master would issue the highest number of points, because she evaluated the prepared props and objects, including the elements of the mise-en-scene, decorations, and costumes. The teams could receive up to 5 points at each stage when a part of the spell was deciphered. What was decisive in the game, however, were the points won during the final round. After the first 4 stages the groups counted the gold they had won, gave the sum to the gamemasters, and got a point for every three gold bars. What is more, the teams could receive bonus points for finishing their preparations for the play before the opponents. During the course of the play they also got points issued by Advisors of the Actuaries for "spell correctness", that is, a proper interpretation of the words of the spell, which was represented, first and foremost, by the organisation of space, stage movement, and interactions between the participants. Ultimately, both the groups received points from the Black Magic Master who evaluated the proper interpretation of the spell and how it was acted out in the final round. The game was first played on March 4, 2015 by a group of working-age people who could subsequently share their comments on the construction and mechanics of the game in a heated discussion. After the pilot test which tested the assumptions and the mechanics of the game the creators decided to introduce certain simplifications making the course of the game faster. That is because it was suggested by the participants of the first edition of the game that the rules were too complex to be fully used by the players in only 120 minutes. An additional argument for the slight modification of the game mechanics was the age of the persons

involved in the research – one of the groups was to consist of seniors. Among the voices from those engaged in the test, especially of those who were professionals working with seniors, there were many stating doubts as to the seniors' ability to cope with the requirements of the game and to benefit from the game's complex dynamics.

After the pilot trials the creators of the game introduced a number of changes. In the final version the card of the mysterious character, the traitor who was required to betray their own team and provide a one-time help to the opponents did not appear. The main reason for turning away from that option was the feeling of discomfort among the players who thought that having to betray their team has a negative influence on how they feel and what they think of the game itself. That is why the creators, taking into account that one of the editions of the game would be aimed at seniors, who could dislike²⁹ this form of activity from the very start, decided to focus on building positive relations by increasing the interaction among all the players to make all the participants active. Yet another significant change was the supplementing of the character cards with functions and tasks that a character would be responsible for. Assigning strict roles was aimed at preventing a situation when a game could be dominated by a group of a few most active and decisive people, determined to win, people who would take over the initiative and make decisions, limiting the activity of other players. The Black Magic Master's evaluation key was also modified to allow for more interpretation. In the original version of the game, the Master evaluated the correctness of the prepared props according to a precise list. Nevertheless, even though the answer key was prepared by a number of people, the players were very creative, they thought in an abstract way and surprised the creators by selecting proper props which were not, however, included in the scenario. In further editions, the Black Magic Master, apart from issuing 5 points for preparing props concordant with the interpretation of the creators of the game, could also give out 3 points at every stage for creativity and adequacy of the prepared props. By broadening the range of possible interpretations of the text the additional points rewarded players' creativity. That is how thinking outside the box could help a team win. No points could be issued by the Assistants of the Actuaries, because their competences were to a large extent taken over by the Black Magic Master. The last of the introduced changes that was crucial to the mechanics of the game was the limiting of opportunities for contact between the two groups. Firstly, the Chest of Mysterious Tidings was removed, so that the players could not leave letters to the opposing team there, secondly, meeting between the teams could no longer be organised. It needs to be mentioned that both the options were virtually unused during the first editions of the game because the players mostly aimed at preparing proper props as quickly as possible, and these solutions seemed to introduce some complex rules. All the changes described above were aimed at greatly simplifying the game, which was deemed necessary because of the feedback from the participants of the pilot test claiming that at this stage of the introduction of games into the process of education we should concentrate first and foremost on making sure that the players are engaged in the game by employing simple mechanics. More developed rules can be applied when the participants are more familiar with this form of spending their leisure time. Furthermore, modified sessions of *Black Magic Master* were conducted on March 11, 18 and 25, 2015, with the participation of seniors, corporate workers and students of the University of Wrocław.

29 Remark by the authors: Games are still quite unpopular among people in this age group.

Playing Style

The interaction between the player and the game is mediated by a number of aspects,³⁰ among which we ought to focus on the style that players assume in RPGs. It needs to be added that not in all the definitions of the game the player, and what follows, his/her relation with the game, is discussed.³¹ In the designed research we have assumed the playing styles defined by R. Bartle, that is, the socializer, the killer, the achiever, and the explorer.³² Although this author has proposed the terms in relation to MUD³³ games (R. Bartle carried out his research on this group of gamers), following the suggestion of E. Aarseth³⁴ we have adapted this typology to research on RPG players. We have, however, omitted the type coined by E. Aarseth – the cheater, who breaks both the rules of the game and its mechanics, as well as deceiving other players, because the game was itself a debut, and it was new to the players, which is why it was necessary to eliminate such elements as cheat codes (endless ammunition, immortality) and walkthroughs. Presented below are detailed descriptions of the playing styles proposed by R. Bartle. It ought to be added that the author did not merely characterise them, but he also described a network of relations between them that influences the dynamics of the game as well as the opportunity to control the game when certain playing styles are observed. The first of the proposed playing styles is the *socializer* who adapts elements of the game to use them for conversation, interaction. The socializer concentrates on people and on what they have to say. The game is a common background to what happens to the players. What is important is the relations between the players – empathy, sympathising, jokes, entertainment, listening, observing the process of the individualization of other players, their development over time. The explorations in the game are motivated by what other players say and do, just like reaching new levels unblocks skills, here new opportunities for communication or achieving a certain status in the community are unblocked. Killing or harming other players is only justified when the player is a threat to a close friend. To sum up, socializers are proud of their friendships, contacts, and influences.

The opposite type is the *killer*, an opposing style, who uses and harms other players. The players with this style use the tools provided by the game to cause anxiety (and hardly ever help) others. What makes killers happy is the influence they have on how the others play. This can be expressed by being a kind, helpful co-player who does favours, but that is seldom the case. It is usually expressed by attacking and killing other players, hence the name. The bigger the loss of the attacker, the more glad the opponent is. Because of the initial limitations of the game (points, achievements, levels of skills) these players often develop new, creative ways to attack/kill the characters of other participants. They can pretend to be sociable to get to know the tactics of a future victim or they can start to cooperate with players with similar attitudes. Killers are entertained by the thought that

30 KRAWCZYK, S.: Osobowość a uczestnictwo w grach fabularnych. O relacjach między tożsamością, myśleniem narracyjnym i stylem gry. In *Homo Ludens*, 2013, Vol. 1, No. 5, p. 139-164.

31 JUUL, J.: The Game, the Player, the World: Looking for a Heart of Gameness. In COPIER, M., RAESSENS, J. (eds.): *Level Up: Digital Games Research. Conference Proceedings*. Utrecht : Utrecht University, 2003. [online]. [2018-02-24]. Available at: <<http://www.jesperjuul.net/text/gameplayerworld/>>.

32 BARTLE, R.: *Hearts, clubs, diamonds, spades: players who suit MUDs*. [online]. [2018-02-24]. Available at: <<http://mud.co.uk/richard/hcds.htm>>.

33 TRUBSHAW, R., BARTLE, R.: *MUDI*. [digital game]. Colchester : University of Essex, 1978.

34 Remark by the authors: "It seems Bartle has created a general model of human behaviour in virtual environments, and one which certainly could be used to classify game scholars as well"; See also: AARSETH, E.: Playing Research: Methodological approaches to game analysis. In *DiGRA '03 – Proceedings of The 2003 DiGRA International Conference: Level Up*. Utrecht : Utrecht University 2003, p. 28-29. [online]. [2019-03-19]. Available at: <http://www.bendevane.com/VTA2012/wp-content/uploads/2012/01/02_GameApproaches2.pdf>.

they have harmed a real person or that they have left them feeling helpless in the face of the suffered loss, and from affirming their superiority over others. They are proud of their reputation, tactics, and strategies. Yet another style is represented by those who prefer the strategies aimed to win, to be victorious and triumphant. That is the winning style, the *achiever*. Those players set tasks in the game and they work towards fulfilling them with dedication, which is typically connected with collecting a lot of resources in the game (gold, artefacts). Exploration of the game and making contacts are only aimed at gathering more resources. What is more, attacking and killing other players is only intended to achieve new goals, or to eliminate competitors. They are proud of their status in the game and the time spent fulfilling their tasks. The *explorer* appears to be a contrasting style. They try to get to know the world of the game as well as possible. At the beginning of the game they usually concentrate on mapping the topology of the game (structure of the levels, skills), and in the later stages they focus on experimenting with the game physics (mechanics). They derive pleasure from discovering the inner mechanisms of the game, which is why they search for mistakes, irregularities hidden in the recesses of the world, they try to understand how these work. Getting points and establishing contacts only lets them explore new levels of the game. Explorers like their games to be surprising. They look for "depth" in a game. They perceive reaching new levels and gathering points and resources as simple-minded behaviour. They are proud of their knowledge of the nuances of the game, especially when other players treat them as sources of such knowledge.³⁵

Adulthood vs (Pre-/Post-) Working Age: Early, Middle, Late Adulthood

The aim of our research was to define the dominant playing styles of persons at various stages of adulthood. In our explorations we employed the division proposed by A. Brzezińska: *early adulthood* – from 18 (20) to 30 (35) years of age; *middle adulthood* – from 30 (35) to 60 (65) years of age; *late adulthood* – from 60 (65).³⁶ Early adulthood is a period when the cognitive functions of young people are at a very high level thanks to their motivation to learn, to look for information, to collect professional and personal experiences. In early adulthood memory functions are very high both in short-term and long-term memory, changes in intellectual abilities are minute, between the ages of 35 and 40 fluid intelligence may worsen due to changes in the central nervous system.³⁷ This period is dominated by dialectic, relativist, and meta-systemic thinking which is practical in a number of categories of problems, what is more, these people learn quickly, especially the information that they study with personal engagement. The persons have no difficulties with identifying and solving problem situations. They easily find themselves in situations in which they decide to act. Some people in this period have the motivation to specify problems, which allows others to notice the problems and look for solutions or reformu-

35 For more information, see: BARTLE, R.: *Hearts, clubs, diamonds, spades: players who suit MUDs*. [online]. [2018-02-24]. Available at: <<http://mud.co.uk/richard/hcds.htm>>.

36 BRZEZIŃSKA, A.: *Psychologiczne portrety człowieka. Praktyczna psychologia rozwojowa*. Gdańsk : GWP, 2005, p. 9.

37 See also: BIRCH, A., MALIM, T.: *Psychologia rozwojowa w zarysie. Od niemowlęctwa do dorosłości*. Warszawa : Wydawnictwo Naukowe PWN, 1995.

late them. People at the threshold of early adulthood typically undertake developmental tasks that they can cope with the use of their abilities and according to their limitations. This is usually connected with developing intellectual skills, with professional activities, the willingness to educate themselves and to broaden their competences. In problem-solving situations they concentrate on the analysis and selection of proper strategies connected with short- and long-term consequences. High psychophysical conditions allows persons to not only act constructively in problem situations, but also to achieve proper insight in their own resources, benefiting from and asking for help.³⁸

In the middle adulthood period persons become more pragmatic which is why they can concentrate on solving everyday problems; the so-called pragmatic intellectual skills are helpful in solving family and professional problems³⁹. Individualisation constitutes the basis for the development of intelligence, the former pertains to the pool of personal experience. Adult people focus on solving the so-called main tasks, broadening their knowledge, improving skills and competences in safe educational environments. Individuals in this period are engaged in professional activities and family lives, but they also develop their interests and carry out previously defined goals. In this period it is the aim of individuals to accept the changes that occur within and outside them.⁴⁰ In this period learning and problem-solving processes are based on personal experience. People appreciate solving problems and working on tasks that are categories people modify their theretofore knowledge and broaden it with new information. In task situations the people present very high levels of attention concentration, they are resistant to fatigue and put situations under inner control. Education and being engaged in new task situations allow them to verify their habits, preferences, and convictions. Teamwork may be an inspiration to be creative and to free oneself from outside influences and be ready to even accept one's own mistakes. At the beginning of the late adulthood period cognitive functions of an individual are at the same level as in middle adulthood. After 75 years of age cognitive processes are significantly slowed down. Seniors have problems remembering, and they have difficulties with recalling information, particularly its source. What characterises people in this period are problems with concentration and finding proper solutions in difficult situations.

When cognitive skills are stimulated and trained and when new intellectual challenges are set seniors achieve much better results than their peers in memory functions, vocabulary, and analytical skills.⁴¹ The fundamental developmental aim for people in this period is, according to the theory of being active, to maintain their theretofore levels of psychophysical functions. People who exercise and develop their skills and competences have increasing chances of undertaking new actions. The factors that to a great extent determine this are working until reaching retirement age, taking care of interests and hobbies, their ways of spending leisure time.⁴² In task situations seniors use their life and educational experiences. They attach great importance to solving problems, particularly to the adequacy of the solution. That is why they will look for information, connect discovered information with that which they already have, verify it, but they can also be inspired by their peers. Teamwork with younger people is especially important in the stimulation process.

38 For more information, see: BRZEZIŃSKA, A.: *Psychologiczne portrety człowieka. Praktyczna psychologia rozwojowa*. Gdańsk: GWP, 2005.

39 Ibidem, p. 512.

40 See also: BIRCH, A., MALIM, T.: *Psychologia rozwojowa w zarysie. Od niemowlęctwa do dorosłości*. Warszawa: Wydawnictwo Naukowe PWN, 1995.

41 BRZEZIŃSKA, A.: *Psychologiczne portrety człowieka. Praktyczna psychologia rozwojowa*. Gdańsk: GWP, 2005, p. 602-603.

42 Ibidem.

Research Methodology

The aim of the research is to recognise the dominant playing styles and their correlation with metrical age. The research subjects came from three age groups: university students (18-25), corporate workers (35-50) and seniors (65+). The playing styles have been proposed by R. Bartle (2015). Operationalization of the playing styles is presented in the table below:

Table 1: Operationalization of Bartle's taxonomy

Playing style	Indicators
socializer	<p>DOING TASKS together WITH OTHERS</p> <p>GETTING TO KNOW EACH OTHER in new circumstances</p> <p>PROBING THE STRATEGIES of the opposing team (INTERACTION) (talking with the players on the opposing team)</p> <p>HAVING FUN together (defining the main function of the game as having fun)</p> <p>having a GOOD TIME (defining the main function of the game as having a good time)</p>
killer (opposing style)	<p>LURING opponents into traps (leaving deceiving messages to the opposing team in the chest prepared for this aim).</p> <p>PROBING THE STRATEGIES of the opposing team (HARMING) (making it impossible to quickly finish tasks by initiating unnecessary discussions with members of the opposing team; pointing out that the opposing team get too many points)</p> <p>looking for ways to CHEAT THE PLAYERS of the opposing team (asking the characters for the ways of cheating that can be used in the game)</p> <p>bringing CHAOS AND ANXIETY to the opposing team (passing false information on to the opposing team, e.g. pertaining to the rules of the game)</p>
achiever (winning style)	<p>CONCENTRATION on doing your best with the task (depending on the number of points doing the task quickly or meticulously).</p> <p>PROBING THE STRATEGIES of the opposing team (VICTORY) PROBING THE STRATEGIES of the opposing team (VICTORY) (checking the results of the opposing team in order to make up for the losses in points)</p> <p>COLLECTING as much gold as possible (reluctance to spend the gold for which the team gets extra points at the end of the game, choosing other actions instead of paying)</p> <p>using the rules, the gold, and the opponents' playing style to WIN AS MUCH AS POSSIBLE FOR YOUR OWN TEAM</p> <p>LOOKING FOR new sources of INCOME (asking the characters if money can be made)</p> <p>collecting AS MANY points as possible</p>
explorer (perceptive style)	<p>TESTING different VARIANTS of the game (buying more props, substituting characters for props, implementing objects from outside the game)</p> <p>TRYING DIFFERENT ACTIONS regardless of the costs (buying objects despite losing money and time, trying out various strategies of communicating with characters: bargaining, rolling dice, proposing one's own solutions, answering questions)</p> <p>PROBING THE STRATEGIES of the opposing team (CURIOSITY about other solutions)</p> <p>trying out NEW OPPORTUNITIES (asking the characters about different opportunities which are not in the rules of the game)</p> <p>GETTING TO KNOW the rules of the game (spending more time reading instructions than other players, referring to instructions during the game)</p> <p>OBSERVING interesting ideas of OTHERS (being interested in the actions of both the teams to use certain elements of the propositions of other players to create new solutions, to be inspired)</p>

Source: own processing, based on the Bartle's taxonomy, by the members of the research team "Games and Innovations in Education: Edutainment" Agnieszka GIL, Ph.D. & Ewa Jurczyk-Romanowska, Ph.D.

The research was conducted with the use of the quantitative method on the basis of the playing styles observation sheet developed in accordance with the operationalization of Bartle's taxonomy, presented in Table 1. Each of the age groups was monitored by 5 independent observers who had no prior knowledge of the belonging of certain behaviours to particular types of players. Only clear behaviours, i.e., those witnessed by all of the observers, were included in the final observation form. Subsequently the number of behaviours of a particular type was counted for each age group and categorised according to Bartle's taxonomy. The information was posted on Facebook profiles and announcement boards at the University of Wrocław and the University School of Physical Education in Wrocław and the Universities of the Third Age at both of these institutions. The advertisement was also sent to corporations which cooperated with both institutions. The research subjects were recruited from among volunteers. As a result, the following research sample groups were compiled: 16 people for the pilot test, and 12 persons from three age categories: early, middle, and late adulthood. 16 persons aged 24 to 47 participated in the pilot test. The people were randomly assigned to two opposing teams playing according to the rules of the game. The research subjects received a sticker with an identifying code to be at on all the levels of the research process and in analysis of the results. Each group was accompanied by one of the researchers at all times. The researcher filled in the observation sheets of the developmental age and the playing styles of the participants. The aim of the pilot test was the verification of game mechanics and research tools. Immediately after the game was over the participants filled in the questionnaire and took part in a focus interview. The questions in the questionnaire were connected with the observation sheets. One further element on the questionnaire was a metric checking the age of the participants and evaluation scales, including: usefulness of the game as an educational method, its attractiveness, entertaining qualities, educational qualities, and reliability of the preparation of the game.

In the main stage of the research the most important research tool was the quantitative observation form. As a result of the verification of the research tools the groups were reduced from 16 to 12 because it proved to be difficult to observe higher numbers in detail. Because of the large number of spontaneous reflections of the research subjects on the mechanics of the game the number of questions pertaining to this area in the focus interview was reduced. As a result of the verification of game mechanics some changes were made, including: shortening the instruction manual, making the roles of the characters more precise, separation of the roles of the guardian and the gamemaster, which is why the only role of the gamemaster was to explain the rules of the game and resolve the doubts of the players. The aim of the changes was to make it easier for the participants to understand the rules, and that is because those who took part in the pilot test emphasised that the rules of the game were complicated, which is why they could be difficult to understand for those that do not play games on a daily basis. The research was carried out on samples of three age groups: early adulthood (12 university students aged 19-26), middle adulthood (12 workers aged 35-49, higher education, professionally active) and late adulthood (12 U3A students aged 65-74, higher education). In all cases the participants were randomly divided into even opposing teams. The procedure from the pilot test remained the same.

Results

Throughout the conducted observations one could observe clear behaviours, adequate with the operationalized taxonomy of R. Bartle. Each individual behaviour was marked on an observation form by independent observers. After the game observers agreed on the observations and included into the observation form only clear behaviours accepted by the majority. To verify the hypothesis that the playing type correlates with belonging to the age group, variance analysis and a post-hoc test were used. Statistically significant differences were observed in the "killer" ($p = 0.002$) and "explorer" type ($p = 0.068$), which is presented in Table 2.

Table 2: Analysis of the variance between four playing styles and age groups

	SS - Effect	df - Effect	MS - Effect	SS - Error	df - Error	MS - Error	F	p
Socializer	9.39	2	4.69	613.6	33	18.59	0.25	0.778
Killer	4.06	2	2.03	9.2	33	0.28	7.3	0.002
Achiever	29.56	2	14.78	397.4	33	12.04	1.23	0.306
Explorer	39.06	2	19.53	220.5	33	6.68	2.92	0.068

Source: own processing

The socializer uses the game to socialise and to adapt elements of the game to use them for conversation, interaction. The socializer concentrates on people and on what they have to say. The game is a common background to what happens to the players. What is important is the relations between the players – empathy, sympathising, jokes, entertainment, listening, observing the process of the individualization of other players, their development in time. Explorations in the game are motivated by what other players say and do, just like reaching new levels unblocks skills here new opportunities for communication or achieving a certain status in the community are unblocked. Killing or harming other players is only justified when the player is a threat to a close friend. To sum up, socializers are proud of their friendships, contacts, and influences. Domination of the socialiser-type behaviours comes as no surprise because it was a team game. The participants had the opportunity to achieve a better score if they did cooperate. As a result of the conducted research (post-hoc test), it can be stated that a statistically significant difference has not appeared (see Table 3), and the score of the socializer-type behaviour was high in every age group (see Table 4).

Table 3: The post-hoc test for the playing style: socializer

	Early Adulthood - M=6.5833	Middle Adulthood - M=6.0000	Late Adulthood - M=5.3333
Early Adulthood		0.742461	0.482644
Middle Adulthood			0.70733
Late Adulthood			

Source: own processing

Table 4: Breakdown table for the socializer type (N=36)

AGE	Means	N	Std.Dev.	Minimum	Maximum
Early Adulthood	6.58	12	5.47	0	14
Middle Adulthood	6	12	2.3	3	12
Late Adulthood	5.33	12	4.54	0	12
All Groups	5.97	36	4.22	0	14

Source: own processing

Opposite to this tendency was the killer type, which was hardly ever present (1 observed in the early adulthood group, 9 observed in the middle adulthood group, and none observed in the late adulthood group). Using the post-hoc test, it can be concluded that statistically significant differences are observed between groups: early adulthood and middle adulthood ($p = 0.003959$, see Table 5), as well as middle adulthood and late adulthood ($p = 0.001409$, see Table 5). Only in the middle adulthood group the sum of observed killer-type behaviour was related higher (see Table 6). The reason why the behaviours aimed to hurt other players were observed so seldomly might have been that the game was being monitored, that it was overt. The mechanics of the game did, however, provide the players with the opportunity to present such behaviours (cheating, hurting, impeding), which the players did not use.

Table 5: The post-hoc test for the playing style: killer

	Early Adulthood - M=.08333	Middle Adulthood - M=.75000	Late Adulthood - M=0.0000
Early Adulthood		0.003959	0.701022
Middle Adulthood			0.001409
Late Adulthood			

Source: own processing

Table 6: Breakdown table for the killer type (N=36)

AGE	Means	N	Std.Dev.	Minimum	Maximum
Early Adulthood	0.08	12	0.29	0	1
Middle Adulthood	0.75	12	0.87	0	2
Late Adulthood	0	12	0	0	0
All Groups	0.28	36	0.61	0	2

Source: own processing

In all the investigated groups the achiever style was present. Those players set tasks in the game and they worked towards fulfilling them with dedication, which is typically connected with collecting a lot of resources in the game (gold, artefacts). Exploration of the game and making contacts were only aimed at gathering more resources. What is more, attacking and killing other players was only intended to achieve new goals, or to eliminate competitors. They were proud of their status in the game and the time spent fulfilling their tasks. The behaviours typical of the achiever category dominated in the middle adulthood group (63 observed), in the late adulthood group they had the second position (45), and the lowest level was reached in the early adulthood group (37). Such proportions may be interpreted in the context of professional life. In the middle adulthood group there were only professionally active persons, who were used to the task-oriented structure of

the corporations in which they were employed. However, in the post-hoc test these differences did not show statistical significance (see Tables 6, 7).

Table 7: The post-hoc test for the playing style: achiever. No statistically significant differences

	Early Adulthood - M=3.0833	Middle Adulthood - M=5.2500	Late Adulthood - M=3.7500
Early Adulthood		0.135712	0.641048
Middle Adulthood			0.297394
Late Adulthood			

Source: own processing

Table 8: Breakdown table for the achiever type (N=36)

AGE	Means	N	Std.Dev.	Minimum	Maximum
Early Adulthood	3.08	12	3.15	0	9
Middle Adulthood	5.25	12	3.57	0	11
Late Adulthood	3.75	12	3.67	0	12
All Groups	4.03	36	3.49	0	12

Source: own processing

The explorer type, in turn, was present to a nearly identical extent in the early adulthood (44 observed) and in the middle adulthood group (43). These players try to learn as much as possible about the game itself. They derive pleasure from discovering the inner mechanisms of the game, which is why they search for mistakes, irregularities hidden in the recesses of the world, they try to understand how these work. Getting points and establishing contacts only lets them explore new levels of the game. Explorers like their games to be surprising. They look for "depth" in a game. They perceive reaching new levels and gathering points and resources as simple-minded behaviour. They are proud of their knowledge of the nuances of the game, especially when other players treat them as sources of such knowledge. The explorer type is connected with learning the game, which may be related to similar behaviours in the students' and professionals' environments, because both these groups are required to learn new contents. In the case of the late adulthood group the explorer was present much less frequently (only 17 observed). The difference between the late adulthood group and early adulthood group ($p = 0.04053$), as well as the middle adulthood group ($p = 0.048055$) was statistically significant, which is presented in Tables 9 and 10. It may be explained through the individual aims in the game. Persons from the early adulthood and middle adulthood groups are interested in the game as it is. The elderly are interested in some social activity with others and the mechanics of the game are of secondary importance.

Table 9: The post-hoc test for the playing style: explorer

	Early Adulthood - M=3.6667	Middle Adulthood - M=3.5833	Late Adulthood - M=1.4167
Early Adulthood		0.937536	0.04053
Middle Adulthood			0.048055
Late Adulthood			

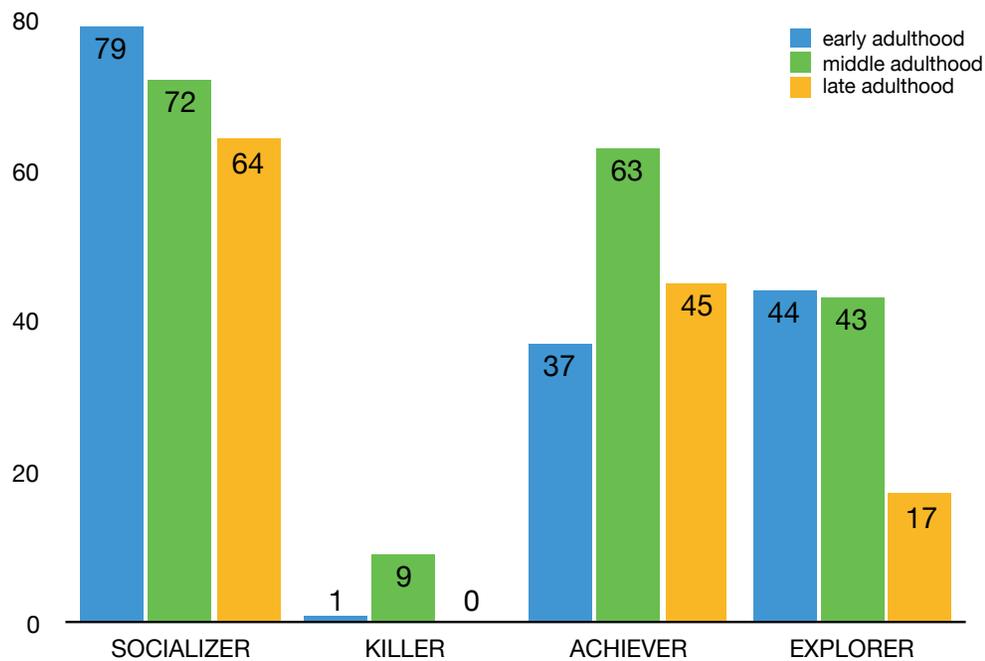
Source: own processing

Table 10: Breakdown table for the explorer type (N=36)

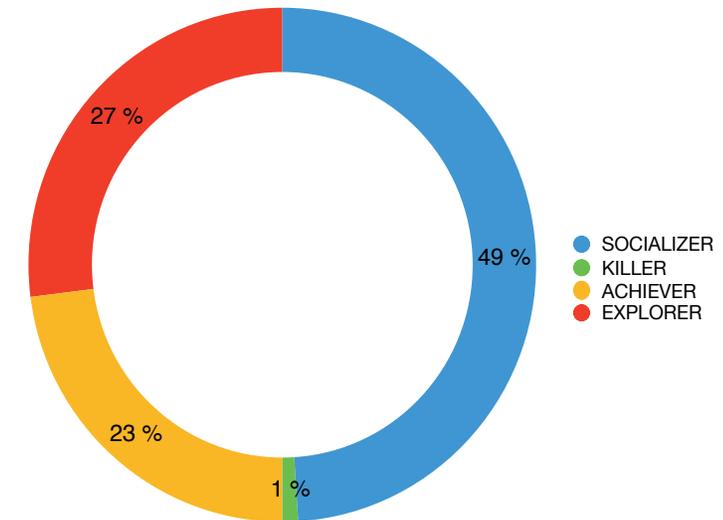
AGE	Means	N	Std.Dev.	Minimum	Maximum
Early Adulthood	3.67	12	3.42	0	9
Middle Adulthood	3.58	12	2.23	2	9
Late Adulthood	1.42	12	1.83	0	5
All Groups	2.89	36	2.72	0	9

Source: own processing

Juxtaposition of the types of players according to Bartle's taxonomy and the ones observed is presented in Graph 1. When analysing the data from the particular age groups one can notice that the proportions of the behaviours presented in the game bear certain qualities. In the early adulthood group, comprised of students, nearly half of the behaviours would represent the socializer type. This can be explained through group work which students frequently need to take part in, or the fact that the groups would often spend their free time together. At this age people have a high motivation to learn, to seek out new information, as well as taking part in activities unrelated to school. At the same time, they function in a task-oriented, competitive environment. In order to graduate they need to fulfil certain criteria defined in the curricula, and they are being compared on the basis of the grades which they receive, and they compete in scholarship programmes. That is why presenting behaviours of the achiever and explorer type appears to be justified. In the early adulthood group only once did we notice the behaviour of the killer type, which may prove a lack of the necessity to hurt others in order to get ahead in the game. In this age group contact with other players is the most important element, satisfying one's curiosity and winning are secondary (see Graph 2).

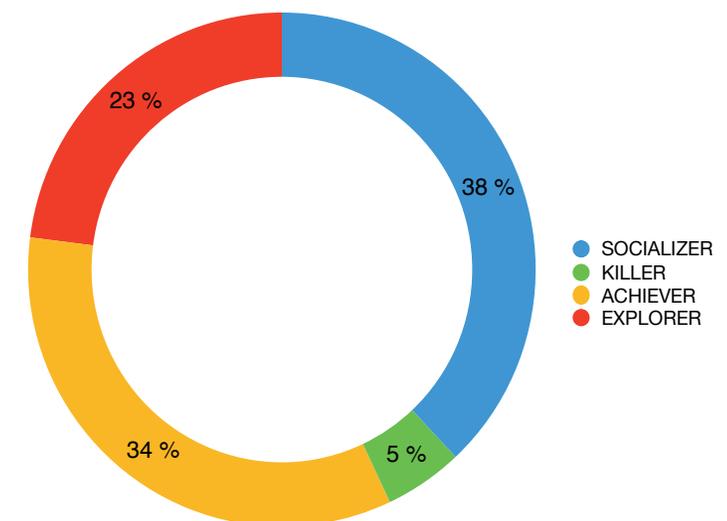


Graph 1: Representation of the playing styles in the investigated age groups
Source: own processing



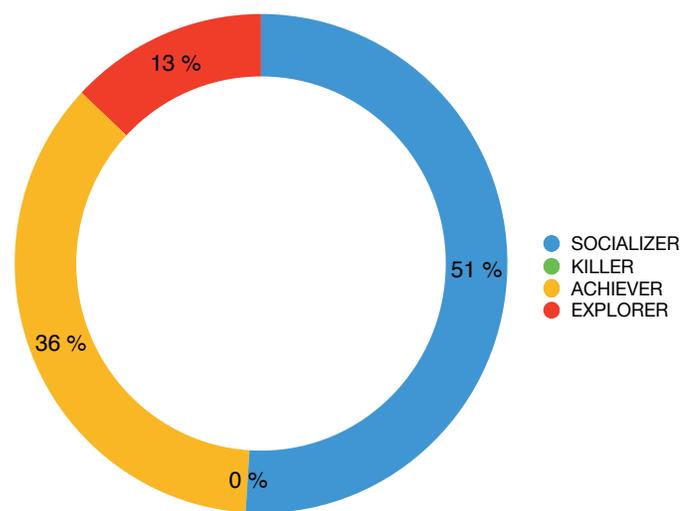
Graph 2: Playing styles represented in the early adulthood group
Source: own processing

In the middle adulthood group the socializer-type behaviours are dominant, at a level nearly equal to that of the achiever type. This group was recruited from among educated, professionally active corporate workers. These individuals participate in group work, they complete projects together, and at the same time they are task-oriented. Their aims are measurable and defined in time. In their professional environments they compete and they are evaluated, which is why the high number of behaviours aimed to win is hardly surprising. What is interesting is that it was in this group that the killer-type behaviours were present to the highest extent (8 out of 9 of all observed in all the age groups). This can be explained by "rat race", in which, as it is commonly believed, corporate workers take part. On the other hand, the explorer style is also clearly noticeable. This style is connected with curiosity, with learning new things, exploring the surroundings, which the persons in the middle adulthood group also find time for (see Graph 3).



Graph 3: Playing styles represented in the middle adulthood group
Source: own processing

In the late adulthood group almost half of the observed behaviours were connected with teamwork (the socializer type), and no killer-type behaviours were observed. Individuals in their late adulthood are often lonely and they seek contact with other people, which is why their will to cooperate with other players is so clearly visible. What may be surprising is the high level of the behaviours of the achiever type, which suggests that the will to win was the second most important motivation in the game. Cognitive behaviours aimed at exploring the game were the least frequently undertaken in this group. Seniors would play to enter into interactions with others, and to win, and what game they were playing and what options it would offer was of decisively secondary importance (see Graph 4).



Graph 4: Playing styles represented in the late adulthood group
Source: own processing

Conclusions

Definition of the prevalent playing styles in the particular age groups may appear practical in developing games dedicated to adults. The research was conducted with the use of a game including elements of RPG/LARP and drama. Undoubtedly it would be interesting to supplement the research with other types of games, especially ones presenting more individual contents, and ones without the possibility of being judged by observers, as well as ones with simpler mechanics. The authors assume that in such a case the proportions between the socializer- and the killer-type behaviours would change greatly. What might also be interesting is the observation of the levels of satisfaction and engagement in the game of the particular age groups. On the basis of the observations made by the researchers it may be concluded that the game brought a lot of satisfaction and happiness especially in the late adulthood group, which contradicts the stereotype of seniors perceiving games as juvenile. Designing games for seniors is the subject of interest of an increasing number of creators and researchers. The Gerontoludic Society may serve as proof thereof. The designed games may serve entertainment and socialisation purposes, and they can be therapeutical and educational, which might attract the interest of practitioners and academics in social sciences. It is undoubted that games dedicated to adults, including seniors, are an excellent part of the edutainment current. Apart from providing answers to the main research

question a number of conclusions could be drawn from the game connected with preparing games for seniors. What turned out to be essential was the theme of the game. In the games designed for seniors the black magic theme should be avoided, because religious persons tend to associate it with Satanism. This resulted in a lower number of volunteers after the point when they were provided initial information about the game.

The time and location of the game are also crucial. In the case of the conducted research the game started at 5 PM and together with the research the meeting took 4 hours. This time is definitely too late for seniors, who made it clear in the focus interviews that they would have preferred to take part in such activities earlier. The game was conducted in the lecture hall of the Institute of Pedagogy of the University of Wrocław. This location is perfect for drama. What makes it difficult to use is that it is located on the second floor and there is no lift, which makes it problematic to access for those seniors with limited moving ability. To sum up it needs to be emphasised that designing games of the RPG and LARP type dedicated to seniors is difficult but it is worth the effort. The seniors engage strongly in activities of this sort and they understand their meaning. Let the following opinion of the one of the seniors serve as the conclusion: "...we have this time that is running, and we're running with it all day. All the day we're so busy, and here you can find such spiritual revival, and we can relax. While talking we can ... we can remember who we really are. It's not that we are to learn... we can do it all, it's easy: we can... It's just that we've forgotten who we are, that we can play, laugh, be in a group...".

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