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Influence of virtual reality on the process of personality socialization: A distance model of socialization

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Abstract

The purpose of the study is to substantiate the theoretical aspect of the distance model of socialization. The conducted theoretical analysis discloses the relationship between the growing popularity of virtual internet space and the emergence of new online social activities and form social interaction between individuals which proves that the internet has become a dynamic new environment of personality socialization. Based on an analysis of the theoretical provisions of socialization, the authors refine the essence of the concept of the distance socialization model. The paper gives substantiation to the provision that the distance model of socialization creates the conditions for a developing personality to express its social activity in relation to social action, inaction or social deeds through the mechanism of social expression. This distance mechanism is also present in the real social space, yet in the distance model of socialization on the web, it becomes predominantly relevant dominates and leads. The authors suggest that within the distance model of socialization, this mechanism becomes the basis for the construction of an individual's virtual identity and its online social space as well as a foundation for the expansion of the individual's social experience in the real social space.

Keywords: Distance, Individual, Model, Socialization, Social space, Virtual identity, Virtual reality.

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1. Introduction

The development of modern society is influenced by the globalization of information processes, the key manifestation of which is the development of a new information space. In this technological society, relationships between people are becoming virtual. Thus, the basis of the virtualization of society and the emergence of the virtual space is the transition to a

post-industrial or information society. Its functioning is based on information and technology which allow quick interaction. Computer technology has become the basis for computer-generated virtual reality.

Virtualization has impacted every aspect of human life, transforming a simple technology into an information and communications environment. At present, its scope expands in two primary interrelated directions: the increasing influence of virtuality on the real world and the virtualization of reality itself which manifests in all spheres of the human world and socio-cultural reality acquiring a virtual status. Virtual reality resembles an informational double of objective reality.

Individual consciousness changes under the influence of virtual communication and a new online way of thinking and existing is generated. These changes have a considerable affect not only on individuals but also on the functioning of society as a whole. The consequences of the operation of virtual reality alter the nature of a person's social interaction, social connections and organizational forms, thereby significantly affecting the individual's life activities. M. McLuhan emphasizes the impact of these consequences on changes in a person's thinking and social behavior: linear thinking has begun to be superseded by mosaic thinking and mythological thinking as a structuring principle of consciousness has been revived. In an unordinary way, the aforementioned affects the socialization of the personality because the individual's activity in the virtual space induces compliance with the norms and rules that to a certain extent differ from those inherent in the social space. This results in the modeling of a different stratification system, the creation of virtual network communities, the emergence of new means of transmission and assimilation of social experience, etc.

The relevance of the chosen research topic thus owes to the fact that the space of modern society virtualizes under the influence of informatization and the broad dissemination of computer networks. The virtual space affects social processes in modern society including socialization.

2. Literature Review

Among the numerous works devoted to the problems of virtual internet space and virtual reality, some papers consider virtual reality specifically from the point of its participation in the processes of human socialization and the formation of society. However, such works are rather few [1-4] and predominantly theoretical and descriptive. Virtual reality is understood by them as a socialization environment, yet it is still of an artificial technological nature. [Pronchev, et al. \[5\]](#); [Adilova, et al. \[6\]](#); [Sakenov, et al. \[7\]](#); [Suingariyev, et al. \[8\]](#) and [Aitbaev, et al. \[9\]](#) examine the virtualization of moral, political and social values. [Bryła, et al. \[10\]](#); [Leal, et al. \[11\]](#) and [Luchinkina \[12\]](#) study human-media interactions exploring their psychological and social implications. [Kurmanova, et al. \[13\]](#) and [Yu and Li \[14\]](#) research the vulnerability of human beings to computer technology. [Lorentz \[15\]](#) and [Suler \[16\]](#) interpret the human advancement into virtual reality as a unique opportunity to create a new artificial environment and way of life for a new human being "Homo Virtualis". [Sun and Gheisari \[17\]](#); [Rebihić and Smajović \[18\]](#); [Shukurov \[19\]](#) and [Volobuyev \[20\]](#) subject the phenomenon of social reality to in-depth conceptual and semantic analysis and attempt to establish the impact of virtual reality on the functioning and development of education, society and humans. The authors of a collective publication "Virtual Social Interactions" during the COVID-19 Pandemic [\[21\]](#) substantiate the influence of interpersonal motor synchronization on social interactions in the virtual space. [Khazieva \[22\]](#) and [Lothary, et al. \[23\]](#) explore virtual reality as a space of socialization from a socio-philosophical perspective.

However, the framework of socialization does not have a universal understanding of virtual reality. The importance of the problem of human socialization in the virtual space implies the need to study virtual reality specifically as a space of socialization. Virtual social reality can be created by people themselves from a distance.

Since, the latter prevents a comprehensive examination of this process, it appears necessary to introduce the concept of the distance model of socialization that would define the socialization of a person in virtual reality. As a working definition of virtual reality, we propose the following: the distance model of socialization is the process of expansion of the user's social experience when entering the socio-cultural environment of virtual reality through the assimilation of information technology.

We identified the following as a leading contradiction:

- The contradiction between the high level of social requirements for a socialized person and the lack of effective socialization in the real social space.
- The contradiction between the need to create new distant, virtual models, programs and certain means of socialization, human-human interaction in the internet space and the lack of those in the traditional socialization system.

The identified contradictions and the ensuing research problem define the goal of the present study: to substantiate the distance model of socialization as a basis for the construction of the virtual identity of an individual in the process of expansion of the individual's social experience in the real social space.

3. Methods

To achieve the goal of the study, we conducted a qualitative mixed-methods study in virtual reality on the process of personality socialization through the distance model of socialization in the Republic of Kazakhstan.

The study employed the following research methods:

- Analysis of research literature on the problem of the study. Criteria for the selection of information sources (monographs, articles from scientific journals and proceedings of scientific and practical conferences) were the authors' research interests, the topics of the publications and the credibility of the publisher or publication.

- An expert survey was used to distinguish the primary components of the distance model of socialization in virtual reality as well as its main trends and risks.

The expert survey was conducted through e-mail. E-mails containing two open-ended questions: "What do you consider to be the main trends of distance socialization in virtual reality?" and "name the main risks of the distance model of socialization in virtual reality?" These questionnaires were sent to 54 experts (academic researchers). The letter asked the respondents to substantiate the answers in a free form and send them back within two weeks. The criterion for the selection of experts was the presence of at least three publications on the research problem. All participants were informed of the goals of the survey and of the organizers' intent to publish the study's results in a summarized form.

Responses were received from 49 experts. The responses that were understandable for future analysis were taken into consideration. Attention was paid to those trends and risks of the distance model of socialization in virtual reality whose percentage of experts exceeded 50%.

Next, we ranked the expert opinions, the consistency of which was assessed using Kendall's concordance coefficient (W) using the SPSS software.

$$W = 12S/n^2(m^3-m)$$

Where S is the sum of the squared deviations of all rank assessments of each of the analyzed indicators from the mean value, n is the number of experts and m is the number of analyzed indicators.

4. Results

The results of the expert survey highlighted the main trends that testify to the need for greater attention to the problem of youth socialization within the distance model of socialization as shown in Table 1.

Table 1.
The main trends of the distance model of socialization in virtual reality.

No.	Main trends of the distance model of socialization	%*	Rank
1	Younger age of acquisition of basic ICT and internet skills	81.6%	1
2	Extremely rapid growth in the popularity of mobile devices with Internet access and their use for entertainment and development	73.5%	2
3	Gradual replacement of traditional book reading by listening to and watching audio and video content based on the respective works	69.4%	3
4	Increased time spent on social media	65.3%	4

Note: Based on the expert survey, the following statistics were compiled: * the percentage of expert mentions, the value of the concordance coefficient W = 0.74 (p < 0.01), suggesting a strong consistency of expert opinions.

According to experts, the main risks associated with the socialization of young people include family and information culture are shown in Table 2.

Table 2.
The main risks of the distant model of socialization in virtual reality.

No.	The main risks of the distant model of socialization	%*	Rank
Family-related			
1	Minimization of parent-child communication	77.6%	1
2	Development of addiction to social media	71.4%	2
3	Lack of interaction with significant adults	67.3%	3
4	Dependence on unproductive, passive activities	65.3%	4
Related to information and culture			
1	Changes in the communication practices of children, teachers and parents (The phenomenon of social networks)	89.8%	1
2	Changes in everyday behavior practices	81.6%	2
3	Changes in mainstream art and related aesthetic standards and practices	65.3%	3
4	Psychopathological consequences associated with the proliferation of new ICTs	63.3%	4

Note: Based on the expert survey, the following statistics were compiled: * the percentage of expert mentions, the value of the concordance coefficient W = 0.69 (p < 0.01), suggesting a strong consistency of expert opinions.

5. Discussion

The results of the expert survey concerning the main trends of the distance model of socialization in virtual reality suggest the following conclusion:

- The virtual reality of the internet is the most popular source of information among the youth of Kazakhstan and cyber-communication addiction is beginning to spread. Previous studies indicate that social networks rank first in terms of traffic among young people [8].
- The second characteristic is the constant expansion of the informational and living spaces of young people in Kazakhstan. Due to the open and overarching nature of information on the internet, youth have become less dependent on adults in terms of acquiring knowledge and information of interest to them [10].

- Thirdly, the virtual reality of the Internet has changed the structure of the informational space for Kazakhstani youth. In search of information, young people use a wide range of communication sources and mechanisms that form a certain media environment. Existing media such as television are being devalued in the minds of young people [8]. Furthermore, the internet is starting to absorb and integrate other information channels into a single media system [15]. It should be noted that young people often land not on the original sources of information but on the fragments that are interesting to them. Often, this results not in the integrity and depth of perception of information but in the so-called clip thinking [12].
- Fourthly, the structure of interaction changes in the virtual space. Specifically, interaction becomes multicontact in nature. Another change is that one focuses oneself and not on others. Self-presentation begins to play a prominent role [19].

Speaking of the risks of the distance model of socialization, it should be pointed out that the crisis of the family has long been a topic of study for many scholars (the process of nuclearization, egalitarianization, disintegration of the family structure, etc.). The most alarming of its forms is the consumer deformation is normal family where both parents are present, there is no overt antisociality (which does not imply the lack of a hidden one) and the child is taken care of. This care is reduced mainly to the material side of life (clothes, food, toys, prestigious kindergarten, school and university) while parent-child intimacy is lacking and communication is minimal with the parents. Thus, the family members are together physically but each of them is in their own virtual space. This implies major risks of loneliness and the development of dependence on social networks. Such a situation prevents the development of interaction with adults who could become significant in a young person's life with whom they could share problems, discuss interesting topics and whose opinions could be important to them. Therefore, when the need for parent-child interaction is not developed, adolescents tend to find role models among the leaders of teenage groups or "idols" who are actively promoted on the internet.

The modern family upbringing system often fails to introduce adolescents to productive leisure activities (sports, clubs, and active leisure). This results in a certain dependence among young people on passive activities such as watching movies, listening to music, playing video games and aimlessly interacting with peers on social media. Studies on the problems of modern youth emphasize that aimless pastimes in the company of peers are a powerful factor in delinquency among adolescents and young adults [19, 20].

Finally, the majority of the risks are associated with the normative inversion of mainstream culture. The cultural risks are related primarily to the information technology revolution. The key consequences of this revolution concerning child socialization are changes in the communicative practices of children, teachers and parents (the phenomenon of social networks), the practices of everyday behavior and the sphere of mainstream art and the respective aesthetic standards and practices.

In modern society, the type of information media has changed. The virtual reality of the internet has become the modern medium of information which has brought the following psychopathological consequences:

- Impairment of attention and ability to concentrate because unlike reading, looking at a computer or smartphone screen easily becomes a background activity and can be paired with other activities.
- A decrease in intellectual mobilization and comprehension abilities due to being accustomed easy to understand audiovisual information (unlike video technology, a book requires concentration and intellectual effort).
- The formation of mosaic memory and mosaic consciousness in the audience occurs frequently as they views information on their computer or smartphone which is also often fragmentary.

The perception of information through printed-verbal channels requires fairly strenuous work of the mind and imagination, an intellectual effort, whereas emotionally charged audiovisual images are much more perceptible, relying more on the subconscious than on the conscious mechanisms of the psyche.

Thus, the communicative space of the internet particularly social media serves as a critical mechanism of socialization in modern society. In the virtual space, a person enters numerous elementary groups and communicates with different online conversation partners who support a dialogue with each other and spark new meanings. Thus, an individual assimilates the behavioral patterns, cultural norms and values of a particular online community. This kind of socialization can be defined as "distance socialization" the socialization of a personality in the virtual space. Distance socialization is a process of qualitative change in the structure of a person's self-consciousness and the sphere of their motives and needs that occurs under the influence and as a result of the person's use of modern information, communications and computer technology [2]. Notably, a specific feature of the distance socialization of youth is the concurrent development of socialization and resocialization processes, i.e. the assimilation of new skills, norms and values that are associated with the transition to a new communicative environment.

The distance model of socialization is a construct, an ideal space that is superimposed over the real but has become an integral factor in human existence. This model is a space of socialization produced by a human due to the presence of flaws in the actual world that prevent a person from going through the traditional process of socialization. Personality as a product of such complex socializing interactions often strikes a balance between the life positions embodied in active social transformation and a disregard for actual reality in favor of virtual reality.

The value of the virtual and actual realities emerges: a person evaluates the present and virtual realities and develops a notion of what is right. This is the way the distance model of socialization is launched. A person begins to live in the virtual space and socialize acquiring their social essence in it. The distance model of socialization based on virtual social space absorbs social reality, transforms it and reflects it giving a person a different perspective and vision of the real world around them. Virtual social reality can be created by people themselves at a distance because of the imperfection of real

society and the presence of profound social flaws that force a person to resort to virtual worlds in the processes of socialization and self-identification.

In contrast to socialization in real space, in the distance model of socialization, on its virtual platform, great importance is acquired by personal activity as an intrinsic subjective factor of socialization. Nevertheless, none of the psychological mechanisms of personality socialization (copying, identification, imitation, social facilitation, conformity) fully account for the internal activity of the personality. From our point of view, in the distance model of socialization, the personality manifests its activity in relation to action or deed through the mechanism of self-expression. This mechanism is also present in real space, yet in the distance model of socialization, it acquires particular importance and becomes the leading one. This mechanism is essential for the user's virtual identity and social space. The user presents themselves in the internet space, establishes their connection with the virtual environment, chooses the directions of activity in it, creates their own story and chooses their name. Thus, the user becomes a more active subject which promotes the formation of a personal system of personal meanings and social identity for the individual and expands the boundaries of the user's social experience. We suggest that the entry into the social environment in the distant model of socialization occurs through the mechanism of inclusion, particularly its subjective component which is realized in the active engagement of the personality with the internet.

The motivational component of the distance model of socialization is characterized by three groups of motives: motives inherent in the real and internet spaces, for example, business, cognitive, self-actualization, and recreational. Motives that are difficult to satisfy outside of the internet space, motives characteristic of the individual only in the internet space.

In the distance model of socialization, a person acts not only as a consumer but also as a producer of information, entertainment and services, and it is in this model that the individual develops their virtual identity. The emergence of a virtual identity occurs as a result of the motivation to replicate oneself in new images and the need to live more than one life. There arise the effects of multiplicity: a person can be in many places at once and have different images while creating different virtual identities. This point of view allows viewing the virtual personality as one that not only has its own activity but also initiates the activity of the user, taking it beyond the object. A person on the internet has many choices for constructing not only their personal space but also themselves. We define "virtual identity" as the desired image of the subject that does not have a physical embodiment but constitutes a person's self-presentation in the internet space through which they establish connections with the virtual environment and expand their social experience. The characteristics of a virtual identity are the priority of the virtual over the real, the desire to replicate one's image on the internet or embody the role and a sense of belonging to an online subculture.

Expansion of the person's social experience in the course of internet socialization within the distance socialization model is promoted by cognitive attitudes, the view of the world and the essence of personality which constitute the foundation of a worldview. The possibility of virtual death and a new virtual birth alter the user's perception of the value of human life.

Thus, in the distance model of socialization, the process of expanding the social experience of the individual in the socio-cultural space of the internet leads to the construction of social space by the subject and in some cases, the development of a virtual identity.

The novelty and originality of our study are evident in the fact that in contrast to the studies conducted by [Ardeshiri \[24\]](#); [Shavaliyeva, et al. \[25\]](#); [Boccio, et al. \[26\]](#); [Dlimbetova, et al. \[27\]](#); [Sangwan, et al. \[28\]](#) and [Mambetalina \[29\]](#), we provide substantiation of the distance model of socialization in the following provisions:

- The socializing grounds of virtual reality as a space of socialization are revealed by presenting this phenomenon as a distance model of socialization parallel to actual reality.
- The personality in the distant model of socialization as a result of a social movement from actual reality to virtual reality can present itself as an active subject of social relations, a personality that realizes the values of virtual reality but disregards actual reality in favor of virtual reality.
- The distant model of socialization provides a motivational framework that allows a distinction between a virtual reality that transforms a person into a mere member of some subculture and a virtual reality that forms an active subject of social transformation. The latter is possible only with a value-based approach to actual reality.
- The distance model of socialization creates the conditions for a developing personality to express its social activity concerning social action, inaction or social deeds through the mechanism of social expression. This distance mechanism is also present in the real social space, yet in the distance model of socialization, on the web, it becomes predominantly relevant, dominates and becomes the leading one.

The distance model of socialization is a process of qualitative change in the personal needs and motivational sphere as well as in the structure of a person's self-consciousness that occurs under the influence of and as a result of a person's use of virtual reality in the context of their life activities [\[30, 31\]](#).

The utilization of the distance model of socialization as part of the process of personality socialization ensures the assimilation and acquisition of social experience, knowledge, skills and abilities which greatly facilitate the real social adaptation of the individual [\[32\]](#). The use of information dissemination modeling can provide insight into the mechanisms of the spread of socializing information in social networks.

6. Conclusion

Virtual reality affects social processes. Human socialization in the virtual reality of the web is realized by virtue of the individual's belonging to some online community through the virtual reconstruction of their real status or the active and

free construction of a virtual self and personal identity. In the virtual space along with the processes of socialization, there occurs resocialization, i.e. the assimilation of new values, models of behavior etc by individuals and social groups arising from interaction with a different environment. Thus, the distance model of personality socialization in the virtual space proceeds as an interrelation of two processes namely: the transfer of certain norms and rules of social space and the assimilation of norms and rules that exist in the virtual space overall and in online communities and groups. The distance model of socialization establishes that exclusive existence in virtual reality does not provide complete socialization. Instead, socialization results from the perpetual movement of a person from the present world to the virtual world and back again.

In the distance socialization model, virtual reality is considered a process of expansion of the user's social experience when entering the socio-cultural environment of the internet which presents an inherent part of the personality socialization process. Socializing influences on personality that come from virtual reality can be balanced with the impact of other socializing institutions that contribute to the formation of new forms of interaction between subjects in the internet environment. The virtual environment is structured on different grounds than the social environment. This applies first and foremost to online communities where an individual builds a system of values, preferences and hierarchical relationships that expand their personal experience, social circle and opportunities for self-expression. In this environment, social structures arise that would be impossible in a real society. Thus, the virtual space becomes an integral attribute of modern society changing socio-cultural life through the intensification of social interactions, the increase in the volume of information, the expansion of the range of behavioral models, the emergence of new means for retranslating social experience and so on.

A prospect of further research could be a more specific step-by-step construction of the distance socialization model. A limitation of the present study is that the expert sample is limited to academic researchers. In further research, it is advisable to include parents and teachers.

References

- [1] R. Kensinger, "Virtual social influencer," *Project: A Biopsychosocial Paradigm*, Mount Aloysius College, 2021. <http://dx.doi.org/10.13140/RG.2.2.17777.61280>
- [2] Nezhebitskaya, "The impact of virtual reality on teenagers," *Young Scientist*, vol. 51, no. 185, pp. 259-262, 2017.
- [3] Rajeswari and A. Madhuri, "Binge-watching and virtual socialization during the pandemic," in *Proceedings of the International E-Conference - the New Normal Psychological Perspectives. India*, 2021.
- [4] D. Z. Sakenov, B. M. Zhaparova, T. B. Kenzhebayeva, and A. S. Mambetalina, "Model of socialization in an orphanage," *European Journal of Contemporary Education*, vol. 11, no. 2, pp. 483-490, 2022. <https://doi.org/10.13187/ejced.2022.2.483>
- [5] G. B. Pronchev, N. G. Proncheva, and E. V. Shisharina, "Social inequality in virtual social media (objective constraints)," *Political Science Issues*, vol. 10, no. 4, pp. 405-415, 2020.
- [6] E. Adilova, L. Aimaganbetova, L. Kassymova, Z. Sadvakassova, M. Ryskulova, and T. Sagnayeva, "Value orientations of modern Kazakhstanis," *The Open Psychology Journal*, vol. 14, pp. 50-162, 2021. <https://doi.org/10.2174/1874350102114010150>
- [7] D. Z. Sakenov, Y. V. Kushnir, D. Z. Abdulkhamidova, and Y. Shnaider, "Ethnic traditions as a means of formation of moral beliefs of seniors," *World Applied Sciences Journal*, vol. 19, pp. 1443-1448, 2012.
- [8] Z. Suingariyev, D. Kunanbayeva, A. Kunanbayeva, and M. Molchanov, "The role of quality education in the mechanism of transparency State authorities," presented at the E3S Web of Conferences, 2020.
- [9] D. Aitbaev, G. Duisenbai, D. Y. Aikinbayeva, and A. Tuyakova, "Ancient ritual construction of saryarka and its interrelation with Kazakh ideology," *Anthropologist*, vol. 26, pp. 5-11, 2016. <http://dx.doi.org/10.1080/09720073.2016.11892122>
- [10] M. Bryła, R. Huk, and R. Kasprzyk, "Modeling information dissemination in virtual social networks," in *Proceedings of the 38th International Business Information Management Association (IBIMA), November 2021, Seville, Spain. IBIMA*, 2021.
- [11] W. Leal, C. Boccio, and D. Jackson, "The interplay between virtual socializing, unstructured socializing, and delinquency," *Crime & Delinquency*, 2022. <https://doi.org/10.1177/00111287221083898>
- [12] A. I. Luchinkina, "The specifics of the Internet as an institution of socialization," *Pedagogy and Psychology of Education*, vol. 5, no. 1, pp. 59-69, 2019. <https://doi.org/10.18413/2313-8971-2019-5-1-0-5>
- [13] A. Kurmanova, S. Kozhayeva, G. Ayupova, M. Aurenova, B. Baizhumanova, and Z. Aubakirova, "University students' relationship with technology: Psychological effects on students," *World Journal on Educational Technology: Current Issues*, vol. 14, pp. 1225-1233, 2022. <https://doi.org/10.18844/wjet.v14i4.7743>
- [14] L. Yu and Y. Li, "An empirical study of virtual social networks," *International Journal of Social Media and Online Communities*, vol. 13, no. 2, pp. 1-21, 2021. <https://doi.org/10.4018/ijsmoc.2021070101>
- [15] P. Lorentz, *Is there a virtual socialization by acting virtual identities?: Case study: The Sims®*. In N. Zagalo, L. Morgado, & A. Boa-Ventura (Eds.), *Virtual worlds and metaverse platforms: New communication and identity paradigms*. IGI Global, 2012.
- [16] J. Suler, "Human becomes electric: The basic psychological features of cyberspace. Flogiston. Retrieved from <http://www.flogiston.ru/articles/netpsy/electronic>," 1998.
- [17] Y. Sun and M. Gheisari, "Potentials of virtual social spaces for construction education," *EPiC Series in Built Environment*, vol. 2, pp. 469-477, 2021.
- [18] E. N. Rebihić and A. Smajović, "Socialization of youth in natural and virtual context," *Social and Humanistic Studies*, vol. 6, no. 3, pp. 457-480, 2021. <https://doi.org/10.51558/2490-3647.2021.6.3.457>
- [19] A. Shukurov, "Concept analysis: "Information", "informed society", "virtuality", "virtualization", "social virtualization," *Oriental Renaissance: Innovative, Educational, Natural and Social Sciences*, vol. 1, pp. 338-346, 2021.
- [20] S. Volobuyev, "Socially oriented business communities in the virtual social networks," *Field: Sociology, Psychology, Pedagogy*, vol. 6, pp. 46-52, 2021. <https://doi.org/10.24158/spp.2021.6.7>

- [21] P. H. Gvirtz, L. Ehrenfeld, and M. Sharma, "Virtual social interactions during the COVID-19 pandemic: The effect of interpersonal motor synchrony on social interactions in the virtual space," *Research Square*, pp. 1-19, 2022. <https://doi.org/10.21203/rs.3.rs-1989317/v1>
- [22] N. O. Khazieva, "Virtual reality as a socialization space: A sociophilosophical analysis of the problem," Candidate Dissertation: 09.00.11 - Social Philosophy, Kazan (Volga Region) Federal University, Kazan, 2014.
- [23] A. Lothary *et al.*, "Content development for a virtual social engagement intervention," *Innovation in Aging*, vol. 5, no. Suppl 1, pp. 426-427, 2021. <https://doi.org/10.1093/geroni/igab046.1647>
- [24] M. Ardeshiri, "The impact of virtual social networks on teaching and learning," *International Journal of Social Science and Human Research*, vol. 4, pp. 2023-2029, 2021. <https://doi.org/10.47191/ijsshr/v4-i8-09>
- [25] Z. Shavaliyeva, N. Bisembaeva, G. Utyupova, B. Nurmagambetova, Z. Zhumabaeva, and G. Ismailova, "Professional competencies of students: Formation of the entrepreneurial component," *Espacios*, vol. 40, no. 44, pp. 1-11, 2019.
- [26] C. M. Boccio, W. E. Leal, and D. B. Jackson, "The role of virtual socializing and unstructured socializing in adolescent vaping," *Drug and Alcohol Dependence*, vol. 235, p. 109446, 2022. <https://doi.org/10.1016/j.drugalcdep.2022.109446>
- [27] G. K. Dlimbetova, S. U. Abenova, A. R. Mandykayeva, N. M. Stukalenko, and K. S. Bakirova, "Environmentally-oriented training in the process of the professional programme for students," *Tche Quimica Periodical*, vol. 16, pp. 369-391, 2019. https://doi.org/10.52571/ptq.v16.n33.2019.384_periodico33_pgs_369_391.pdf
- [28] S. Sangwan, C. Guan, and J. A. Siguaw, "Virtual social networks: Toward a research agenda," *International Journal of Virtual Communities and Social Networking*, vol. 1, no. 1, pp. 1-13, 2009. <https://doi.org/10.4018/jvcsn.2009010101>
- [29] A. S. Mambetalina, "Formation of main components of students' cognitive activity in high school," *World Applied Sciences Journal*, vol. 20, pp. 67-72, 2012.
- [30] I. E. Korotaeva and D. M. Kapustina, "Specific features of the use of distance learning technologies in foreign language classes with postgraduate students," *International Journal of Emerging Technologies in Learning*, vol. 17, no. 20, pp. 20-33, 2022. <https://doi.org/10.3991/ijet.v17i20.30305>
- [31] A. N. Zadvornov and A. G. Hairullin, "Evolutionary foundations of human social behavior," *International Relations of the Current World Magazine*, vol. 2, no. 35, pp. 17-27, 2022. <http://dx.doi.org/10.21902/Revrima.v2i34.5694>
- [32] A. C. Chumaceiro Hernandez, J. J. Hernández García De Velazco, J. C. Velazco Hernández, Y. M. Lagusev, and A. P. Rogozhina, "The impact of sustainable development and social responsibility on quality education," *Journal of Environmental Management and Tourism*, vol. 13, no. 1, pp. 51-62, 2022.