Potential of students’ project work using the example of childfree phenomenon analysis

Tatiana Nam¹,*

¹Peter the Great St. Petersburg Polytechnic University (SPbPU), 29, Polytechnicheskaya, 195251, St. Petersburg, Russia

Abstract. Information and communication technologies create new educational opportunities, and the most obvious of which are related to e-learning. Nowadays Internet provides great opportunities for organizing a team project work. The article considers an example of quantitative and content analysis of authentic materials and relevant themes in social networks while studying English. The phenomenon of “childfree” is rather common trend among young people, analysis of which could serve as an incentive to motivate them in acquiring real practical knowledge and skills. The study revealed that statements on this topic are overwhelmingly made by women who can praise a childless lifestyle; that there are different problems related to having children and fears related to pregnancy, childbirth, etc. Photos (selfies, happy moments with pets, frames from travel, achievements in sport) in social networks exacerbate the situation by providing an attractive alternative to families with children, and extra evidence to verbalized rational reasons for supporting “childfree”. The studied example shows that such kind of project work fosters developing critical thinking, language, intercultural, and analytical skills.

1 Introduction

Information and communication technologies have varied the life of modern people. All areas of social life have undergone tremendous changes [1–4]. Moreover, it can be stated that the changes are not just about communication practices, but about the essence of social institutions and processes [5–7]. The example of education clearly shows that the transfer of social practice to the Internet area has led to changes in the structure of social relations, social roles, means and methods of training [8–12]; new ways of academic dishonesty have emerged [13,14], the system of students’ motivation is also evolving [15], the required responsibility of the student is growing [15,16] and internationalization is also experiencing the same processes [16]. An interesting fact is that Information and communication technologies are being introduced into more and more unexpected areas such as art [18], religion, pets [19], and others.

Opportunities for spreading and transferring ideas, social practices, and behavioral patterns are greatly modifying. The enormous possibilities of Information and
communication technologies, social networks and messengers have brought the process of information dissemination to a qualitatively new level.

One of the ways that helps to cope with the unstructured nature of a large flow of information is the use of hashtags, which allow each individual user of the network to be a co-author of a megatext consisting of a huge amount of multimedia information.

This phenomenon can be used both for educational and for research and development purposes. Interdisciplinary study, including knowledge of English and initial skills of sociological science, produced in the Internet environment, significantly improve the practical and analytical skills of students.

While teaching a foreign language, the motivation is enhanced by professionally directed and authentic content of the learning material with access to Internet resources in search of relevant information, as well as the solution of real practical cases that represent valuable results which are in the sphere of interests of certain focus groups. Due to the widespread influence and penetration of social networks in the higher education system, it becomes important to use this resource in order to improve the search, analytical and language skills of students. It should also be noted that the possibility of forming sociocultural competence is of great importance when teaching a foreign language. In the context of our research, this competence is defined as the ability to relate national and cultural values, to accept the presence of social and cultural differences, moral and other norms of international communication.

The use of various types of social interaction, intercultural communication and interactive forms of learning allows students to be actively engaged in the educational and cognitive process with the possibility of opening the creative potential, which simultaneously contributes to the increase of positive motivation to get the final product or result of activity and the development of critical thinking in students as a whole.

So, there could be considered the example of teaching students of economic specialties in a program of the discipline "Foreign language: professionally-oriented course", when the study of learning topics "Information technologies and communications" and "Society and modern trends" is recommended to perform by implementing different kinds of student’s project work, in which it can be proposed to analyze social trends with the help of social networking on the basis of such a widespread phenomenon among the youth as "childfree".

At this point in time, childfree is perceived as a certain way of self-identification and life priorities, although initially the idea meant a way to prevent overpopulation of the Earth [17].

The phenomenon of childfree attracts the attention of specialists in various fields: psychoanalysis [21], communication [22], human ecology [23], literature [24], occupational therapy [25], psychology [26], etc. The researchers note that this phenomenon is more apparent in the Internet space than in other movements.

There are a lot of groups in social networks, where people are united by interests. If we look at the dynamics, we can state that the number of groups in social networks on this issue has increased significantly even over the past few years. Moreover, it can be also marked as the increasing trend in recent times, even over the past year [18]. Therefore, it is interesting to consider this phenomenon in the context of social networks.

2 Methods

To analyze the educational potential of the childfree phenomenon, a pilot study was conducted on two popular social networks in Russia. The childfree phenomenon was considered in the Russian social network Vkontakte, where can be found a lot of long text posts, as well as in the Instagram network using the tags #childfreebychoice and #childfreetime, where the main content is visual.
Quantitative, comparative, and content analysis was performed, and conclusions were made about the educational potential of Internet research for the development of intercultural, communicative, and analytical competencies

3 Result and discussion

Most of the Instagram posts under the tag #childfreebychoice are in the United States (77%) and Western Europe (17%). The rest are distributed in a small number among other countries (e.g. Russia – 3%), and there are no publications on the African continent for example. The absolute majority of web users using the hashtag under study are women (96%). The age of the majority of authors of the studied posts varied in the range from 25 to 40 years (87%).

The most widely shared content of posts can be divided into several main topics: admiring a childless lifestyle (33%), potential problems associated with having children in life (45%), and negative emotions associated with pregnancy, breastfeeding, and young children (21%). In 27% of accounts that contain posts with this tag, it is emphasized that the need to announce their position on this issue is related to social pressure (the reasons could be such arguments as the desire to avoid unnecessary questions from strangers concerning children, pity about childlessness, etc.).

In addition, some messages reach out to subscribers seeking support for their views on the social network. Requesting support for the childfree views on the Internet is a studied trend [28]. Instagram often has positive comments from like-minded people - 61% of all reviewed posts, negative ones - much less, and in the United States there are no negative comments in accounts at all.

From the point of view of the visual component, selfies are the most popular posts - 41%; on the second place are photos with pets - 27%; nature, travel-15%; various kinds of sport - 12%, images illustrating problems with children - 5% (fig. 1).

![Fig. 1. Content of the visual information for the tag #childfreebychoice in Instagram.](image)

In contrast to the above tag, the tag #childfreetime is widely used in many countries, including Russia. It is also mostly frequently used by women (95%) aged 25 to 40 years (81%). Photos with this tag most often show the leisure of mothers or spouses without
children, free time spending on nature or during a trip - (55%), a pastime in cafes or restaurants (12%), selfies in an undefined place (10%), it can also be pictures of children who are without parents (for example, in a camp) – 15%. Also 4% of the posts were made by users who do not have children, but they are not childfree. They explain the absence of children by the fact that they do not have yet the ability to support them, and 2% of the photos were put up by the users who declare themselves as childfree; their publications depict the leisure free of children. And there are comments about their position under such kinds of posts.

The peculiar features of the childfree tag in the Russian social network Vkontakte are that posts criticizing this concept as well as jokes on this topic. For example, the statement of belonging to the group of people with the commitment to "childfree" ideology increases the chances of being hired for interviewed women of a reproductive age.

![Verbal information about childfree in social net](image)

**Fig. 2.** The content of verbal information in the Russian social network Vkontakte.

Posts dedicated to the childfree issue in thematic groups on this issue in the social network Vkontakte belonged to women (93%). The content analysis of the messages revealed six main reasons for childfree phenomenon (fig. 2): the so called "living for yourself", avoiding responsibility, fear, poverty, a bad situation and avoiding household inconveniences. The most common given reason is responsibility. 28% of posts contain the idea that raising children is too much responsibility: "I can't keep watch the child", "I can't bring him up properly", "I can't love my child" and "I can't create a genius". 23% of posts are somehow related to fear, primarily, a pain associated with childbirth or death, or adverse physiological consequences such as increased weight, stretch marks, etc. On the third place in popularity is the reason for insufficient financial opportunities to support children -15%: "the child is the reason for constant financial investments", "paying alimony to a child", "in the age of economic crisis, it is not necessary to aggravate poverty". This is the category where the majority of statements from not numerous male part of the audience are placed. 12% of posts indicate global problems in the country and in the world. These reasons include (from political instability up to the problem of overpopulation): "our planet is too small to breed", "an environmental disaster is coming from overpopulation", "I am afraid for the life of my child in the age of terror". 10% of the posts emphasize the value of comfort, cleanliness in the house and peace of mind, which according to the authors would be destroyed with the advent of children: "there will be a constant mess in the
apartment because of the children", "I have a favorite dog, and children will offend her". 3% of the posts from the youngest part of the audience, both girls and boys (married) contain a desire to live for themselves, indicated "unprepared for surprises of adult life", "I like to have fun with friends, how can I think about children?", "the birth of a child is an equivalent to the end of parental custody of me". And in 9% of posts, the reason is not disclosed at all, the statement is formulated in the form: "I just don't want a child and that's it."

The results, first of all, showed that the childfree problem has a clear gender – it is female. This could be explained by the fact that "defining female identity primarily in terms of their childbearing capacity is prevalent across cultures" [19] as well as social pressure on women who deny the value of motherhood. Experienced and anticipated stigma it forces women to comprehend and express their attitude to motherhood, while male identification does not require an expression of attitude to this problem, male statements are often an addition to the opinion of their spouse. It is relevant to address the topic of “childfree” even for women with children, who demonstrate their time spent without ones, and devote more time to themselves (tag #childfreetime).

The manifestation of gender identity as such leads to a rather tough question about voluntary childlessness, for example, in cases where women who have a biological ability to become pregnant [29] identify themselves with motherhood more difficult. In general, it is worth noting that traditionally researches in the field of "childfree" usually related to married, white and heterosexual middle-class women [30,31]. But today the problem of “childfree” is analyzed for heterosexual, lesbian, bisexual, queer women [32-34] and African women [35]. There is the difference in verbal rationalizations and visual content on the topic of “childfree”. For example, the topic "pet parenthood" [36] is practically absent in rational text explanations in the Russian social networks. There are only a couple of statements referred to the topic in the section "avoiding household inconveniences", but its importance is visible in the visual presentation, where animals appear in almost a third of posts, which reflects the trend of a growing number of pet owners who identify themselves as "pet parents" [37]. It is also interesting how selfies can be interpreted in the context of expressing the idea of childfree. Without going into the possible interpretations of the selfie phenomenon in a narcissistic or epistemological sense, we can see here the emphasis on childfree as a type of self-identification that does not require additional or any more explanations.

At the same time, changes in public attitudes in the area of increasing tolerance (a trend that is slowly moving from Western countries to Russia, where “childfree” appeared in 2004 as a virtual community [38]) influences both the emotional color of messages (which can be simply divided into "protection" and "attack") and the dissemination as well as the emotional response to these messages in social networks. Variations in the popularity and emotional color of messages on this topic are observed both in time and in place, but it is necessary to develop special tools that allow tracking these trends. Possible solutions lie in the area of big data processing, which will allow further analysis of trends in the distribution of social views, as well as the relationship of related ideas. Although serious cause-and-effect relationships require considerable preparatory theoretical and practical work, even the simple ability to track the number and emotional intensity of messages with specific tags can provide additional information to researchers and expand the ability to predict social trends.

Today the study of the tags is intensely conducted for marketing purposes (for example, [39]), but more complex technologies are actively developing in social networks such as text analysis, which allow clustering (hierarchical, partitional, semantic) and classification predicated on ontology-based and machine learning-based methods [40], as well as the determination the semantic type of tags [41]. The analysis of the emotional color of
messages and visual content is a more complex task that will take the ability to analyze social trends to a new level.

The considered analysis shows the rich empirical material that social networks offer for students' analytical work, which allows them to develop language skills, cross-cultural competencies, and various sociological methods that develop analytical skills.

References

1. D.S. Bylieva, V.V Lobatyuk, T.A. Nam, IOP Conf. Ser. Earth Environ. Sci. 337, 012048 (2019)
2. O. Shipunova, L. Evseeva, E. Pozdeeva, V.V. Evseev, I. Zhabenko, E3S Web Conf. 110, 02011 (2019)
3. O.D. Shipunova, I.P. Berezovskaya, L.M. Mureyko, L.I. Evseeva, V.V. Evseev, Espacios 39, 15 (2018)
4. N.N. Pokrovskaya, S.O. Snisarenko, Int. Conf. "Quality Manag. Inf. Secur. Inf. Technol. (IEEE, 2017), 16–18 (2017)
5. D.S. Bylieva, V.V Lobatyuk, A.V Rubtsova, IOP Conf. Ser. Earth Environ. Sci. 337, 012054 (2019)
6. D. Bylieva, V. Lobatyuk, A. Safoiva, Humanit. Soc. Sci. Rev. 7, 332 (2019)
7. N. Almazova, D. Bylieva, V. Lobatyuk, and A. Rubtsova, SPBPU IDE’19 Proc. Peter Gt. St. Petersbg. Polytech. Univ. Int. Sci. Conf. Innov. Digit. Econ. (ACM, Saint – Petersburg, 2019)
8. E. Razinkina, L. Pankova, I. Trostinskaya, E. Pozdeeva, L. Evseeva, A. Tanova, E3S Web Conf. 110, 02097 (2019)
9. N. Almazova, D. Barinova, O. Ipatov, Ann. DAAAM Proc. Int. DAAAM Symp. 29(1), 0587–0593 (Danube Adria Association for Automation and Manufacturing, DAAAM, Croatia, 2018)
10. N. Almazova, M. Kogan, Springer Verlag 8524, 248–257 (2014)
11. N.N. Pokrovskaya, M.Y. Ababkova, D.A. Fedorov, Educ. Sci. 9, 183 (2019)
12. D.S. Bylieva, V.V Lobatyuk, T.A. Nam, Proc. 33rd Int. Bus. Inf. Manag. Assoc. Conf. IBIMA 2019 Educ. Excell. Innov. Manag. through Vis. 2020 (2019)
13. D. Bylieva, V. Lobatyuk, S. Tolpygin, A. Rubtsova, Adv. Intell. Syst. Comput. WorldCIST’20 (Springer, 2020)
14. E. Razinkina, L. Pankova, I. Trostinskaya, E. Pozdeeva, L. Evseeva, A. Tanova, E3S Web Conf. 33, 03043 (2018)
15. D. Bylieva, V. Lobatyuk, A. Safoiva, A. Rubtsova, Educ. Sci. 9, 167 (2019)
16. E.G. Pozdeeva, O.D. Shipunova, L.I. Evseeva, IOP Conf. Ser. Earth Environ. Sci., 012049 (2019)
17. A. Rubtsova, IOP Conf. Ser. Mater. Sci. Eng. 497, 012059 (2019)
18. D. Bylieva, V. Lobatyuk, N. Ershova, Proc. Commun. Strateg. Inf. Soc. (ACM, Saint – Petersburg, 2019)
19. D. Bylieva, N. Almazova, V. Lobatyuk, A. Rubtsova, Adv. Intell. Syst. Comput. 1114 AISC, 545–554 (Springer, 2020)
20. R. Grossman, Conservation (Springer International Publishing, Cham, 2020)
21. R. Harrington, Stud. Gend. Sex. 20, 22 (2019)
22. E.A. Hintz, C.L. Brown, Women’s Reprod. Heal. 6, 62 (2019)
23. I.M. Ilina, N.V. Osipova, E.Y. Mazhuga, A.A. Terenichenko, A.V. Losyakov, N.V. Antonova, V.D. Melgunov, Eurasian J. Biosci. 13, 1607 (2019)
24. S. Venkatesan, C. Murali, J. Graph. Nov. Comics (2019)
25. G. Wells, R. Coll. Occup. Ther. Conf. 2019 (ICC, Birmingham, 2019)
26. L. Ashburn-Nardo, Sex Roles 76, 393 (2017)
27. S.M. Vildanova, A.A. Granichnaya, A.R. Mingalieva, Monit. Public Opin. Econ. Chang. (2017)
28. D. Yeshua-Katz, Mass Commun. Soc. 22, 117 (2019)
29. C.I. MacLeod, T. Feltham-King, J.M.-J.J. Mavuso, T. Morison, Intersect. Mothering (Routledge, 2020)
30. I. Lynch, T. Morison, C. I. Macleod, M. Mijas, R. du Toit, S. Seemanthini, Volunt. Involuntary Childlessness Joys Otherhood? (Emerald Publishing Limited, Bingley, UK, 2018)
31. L.J. Ross, R. Solinger, Reproductive Justice: An Introduction (California University Press, Oakland, 2017)
32. N. Hayfield, G. Terry, V. Clarke, S. Ellis, Psychol. Women Q. 43, 526 (2019)
33. V. Clarke, N. Hayfield, S. J. Ellis, G. Terry, J. Fam. Issues 39, 4133 (2018)
34. K.A. Simon, S.L. Tornello, H.M.W. Bos, J. Lesbian Stud. 23, 476 (2019)
35. P.Z.J. Bimha, R. Chadwick, J. Psychol. Africa 26, 449 (2016)
36. E.A. Hintz, C.L. Brown, Commun. Monogr. 1 (2019)
37. S. Volsche, Anthrozoos 31, 367 (2018)
38. M. Bicharova, I. Lebedeva, P. Karabushchenko, Procedia - Soc. Behav. Sci. 214, 925 (2015)
39. X. Gong, Y. Zhu, R. Ali, R. Guo, Sustainability 11, 1529 (2019)
40. S. Jaffâli, S. Jamoussi, N. Khelifi, A. Ben Hamadou, Innov. Community Serv. (Springer Nature, 2020)
41. Y. Wang, Y. Tai, Y. Yang, Knowl. Organ. 45, 653 (2018)