



Особенности познавательной деятельности современных детей, подростков и молодежи в контексте проблем образования

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Research article

Field dependence/independence of school students at different stages of society digitalization: A meta-analysis

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Abstract

Introduction. The beginning of the 21st century saw a rapid development of digital technology that radically changed the living environment of modern people. Digitalization entered—quickly and on a large scale—the life space of both adults and children, which subsequently had a significant impact not only on all spheres of human activity, but also on the processes of human development. The current trends in the digital transformation of the living environment affected the formation not only of the personal sphere of the younger generation, but also of the cognitive one. The article presents the results of a meta-analysis of changes in the level of field dependence/independence of school students of different ages at various stages of society digitalization.

Materials and Methods. The meta-analysis was performed in several stages: the sources were selected and assessed in terms of their relevance based on the inclusion and exclusion criteria, and then a qualitative and quantitative analysis of the data was carried out. 29 publications on school students' field dependence/independence were selected for the meta-analysis.

Results. The meta-analysis identified the main trends in changes in the level of field dependence/independence of school students at various stages of society digitalization. The study showed that the field independence of both elementary school age students and middle school age students grows with each stage of digitalization, while the field independence of high school age students remains approximately at the same level at all stages of digitalization.

Conclusions. It is concluded that the degree of digitalization of the school students' environment affects the indicators of field dependence/independence of school students mediated by the age-related changes of their cognitive and style characteristics. Future research could focus on more detailed study of changes in field dependence/independence and on other “digital transformations” of the cognitive potential of school students at various stages of society digitalization.

Keywords: meta-analysis, digitalization, digital technologies, cognitive style, field dependence, field independence, school age, school student

Научная статья

Метааналитическое исследование полезависимости — полenezависимости школьников на различных этапах цифровизации общества

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Аннотация

Введение. Начало двадцать первого века сопровождалось быстрым развитием цифровых технологий, кардинально изменивших жизненную среду современного человека. Процесс цифровизации стремительно и масштабно вошел в жизненное пространство как взрослых, так и детей, что впоследствии оказало значительное влияние не только на все сферы деятельности человека, но и на процессы его развития. Современные тенденции цифровой трансформации жизненной среды не могли не сказаться на характере формирования не только личностной, но и познавательной сферы подрастающего поколения. Целью исследования стало изучение характера изменений в уровне полезависимости — полenezависимости школьников разного возраста на различных этапах цифровизации общества.

Материалы и методы. Метааналитическое исследование было осуществлено в несколько этапов, в ходе которых проводился поиск источников, оценка их уместности на основе критериев включения и исключения, качественный и количественный анализ отобранных данных исследования. В результате для метааналитического исследования было отобрано 29 публикаций, выполненных на материале исследований полезависимости — полenezависимости учащихся школьного возраста.

Результаты. Определены основные тенденции изменений в уровне полезависимости — полenezависимости школьников разного возраста на различных этапах цифровизации общества. Исследование показало, что полenezависимость как младших школьников, так и младших подростков растет с каждым этапом цифровизации, в то время как полenezависимость старших подростков остается на всех этапах цифровизации примерно на одном и том же уровне.

Заключение. На основе полученных данных делается вывод, что влияние степени цифровизации жизненной среды на показатели полезависимости — полenezависимости школьников опосредуется возрастными закономерностями становления их когнитивно-стилевых характеристик. Перспективным продолжением исследования в рамках как зарубежной, так и отечественной психологической науки представляется изучение других «цифровых трансформаций» когнитивного потенциала школьников разного возраста на различных этапах цифровизации общества.

Ключевые слова: метаанализ, цифровизация, цифровые технологии, когнитивный стиль, полезависимость, полenezависимость, школьный возраст, школьники

Introduction

Early 21st century was characterized by a rapid development of digital technology, which caused a radical change in modern peoples' living environment. Digitalization entered—quickly and on a large scale—the life space of both adults and children,

which subsequently had a significant impact not only on all spheres of human activity, but also on the processes of human development.

Specifically, informatization and digitalization are being universally incorporated into the teaching and learning process at all stages of education. Today digital technology makes it possible to use

state-of-the-art tools and programs in order to improve educational practices—which, in turn, allows an instantaneous exchange of experience and knowledge (Ikonnikova et al. 2020).

Education digitalization has been studied from the perspective of various sciences all over the world since the mid-1990s (Barglow 1994; Negroponte 1995; Tapscott 1995). In the recent 20 years, researchers have identified the main features of both digitalization and the developing digital culture.

The available studies note both the advantages of using digital technology in education and the problems stemming from the transformed process of knowledge transfer and knowledge acquisition. The interest in various aspects of education digitalization has been growing in the recent years (Nikulina, Starichenko 2018; Tulchinsky 2017; Chebotareva et al. 2018), but there is a lack of research that offers a comprehensive analysis of the impact exerted by digital technology on the cognitive sphere of schoolchildren of various age groups.

The transformative effects of digital technology on cognitive processes are probably linked to such factors as the redistribution of sensory load on the body, language transformations, continuous increase of information volume, hyper-textuality and ambiguity of information, abundance of information sources and the need to verify them. The said trends of digital transformation of the living environment could not but affect the development of children's cognitive sphere. Hence the specific relevance of studying the impact of digitalization on schoolchildren's cognitive sphere in general and on their cognitive style in particular.

Field dependence/independence is one of the most discussed cognitive styles: “in a narrow sense, it is the ability to identify a simple detail in a complex figure, and in a broad sense, it is an indicator of the level of psychological differentiation (and, correspondingly, an indicator of the nature of a person's cognitive orientation)” (Kholodnaya 2004, 52). However, Russian psychology scholars has only recently started to focus on the changes in the level of field dependence/independence effected by global digitalization in schoolchildren and university students of various age groups (Bakanov, Sivash 2017; Bogacheva 2015; Valieva, Shakirova 2021; Galchenko et al. 2020; Ermakov et al. 2022). Some researchers argue that active use of internet resources may generate new ways of information processing and, as a result, change the structure of cognitive abilities (Cheremoshkina 2013). At the current stage of information technology distribution, the assumptions regarding the impact of digitalization on the values of field dependence/independence may only be tested using a meta-analysis.

H.A. Witkin and his followers revealed that one of the poles of the ‘field dependence/independence’ cognitive style tends to become more prominent as a person grows (Witkin et al. 1967). According to M.A. Kholodnaya, “[a] little child tends to perceive the events in a field dependent way, but, as the child grows, his or her perception becomes increasingly field independent” (Kholodnaya 2004, 24). This means that a research of field dependence/independence should also take into account the age of the participants.

This study focuses on the changes in the degree of field dependence/independence in schoolchildren of various age groups at different stages of society digitalization. The study employs the method of meta-analysis that makes it possible to synthesize the results of a number of researches into a coherent picture describing the phenomenon in question and providing a closer reflection of statistical population. (Borokhovski, Bernard 2013).

As digital technology evolved through a number of stages characterized by a different nature of interaction between human and technology, the program of the meta-analytical study was based on the periodization of Web technology development (Prokhorov, Konik 2019). Specifically, three stages of digitalization of living environment are distinguished in this study: 1. ensuring access to information and involvement of users in the creation of digital content (prior to 2011); 2) development of mobile internet (2011–2017); and 3) expansion of digitalization into everyday life (2017 till present).

The analysis of the sources allowed to formulate the following research question: how did the mean values of field dependence/independence changed in schoolchildren of various age groups at different stages of society digitalization?

Materials and Methods

The meta-analysis was performed in several stages: the sources were selected and assessed in terms of their relevance based on the inclusion and exclusion criteria, and then a qualitative and quantitative analysis of the published data was carried out. The relevant publications were searched for using Google Scholar, Elibrary and Scopus databases. For the meta-analysis, only empirical studies were selected which focused on schoolchildren's cognitive style, employed quantitative research methods and were published from 1970 to 2022 in peer-reviewed journals.

The presence of the following words or collocations in the title, abstract or keywords was the main criterium for inclusion of the articles in the meta-analysis: field dependence, field independence,

children, schoolchildren, adolescents, students. The following criteria were also used when deciding if an article should be included in the meta-analysis:

- the article has empirical data;
- the article provides a description of the sample (over 20 respondents aged 6-18);
- the respondents do not have a psychiatric condition;
- the article uses reliable methods known to researchers (the Embedded Figures Test by K. Gottschaldt or H.A. Witkin and its modifications)

- the language of the article is English or Russian.

The initial search returned 2114 publications, most of which did not meet the above criteria (see Table 1; some articles did not meet several criteria)

As a result, the final list of publications for the meta-analysis contained as few as 29 items (Table 2). As these publications contain data obtained using different versions of H.A. Witkin's Embedded Figures Test—specifically, the Group Embedded Figures Test (GEFT) and the Children's Embedded Figures

Table 1. Data exclusion criteria and number of excluded articles

| Data exclusion criteria | Number of excluded articles | Percentage of total articles |
|---|-----------------------------|------------------------------|
| Lack of open access to the publication | 689 | 32.6% |
| The publication is not an article published in peer-reviewed journals and is a thesis, dissertation or conference proceedings | 505 | 23.9% |
| Lack of empirical data | 281 | 13.3% |
| The publication sample does not match the search query | 256 | 12.1% |
| Publications that include a keyword but do not match the search query | 199 | 9.4% |
| Reviews, lack of empirical research | 125 | 5.9% |
| Publications in a foreign language other than English | 95 | 4.5% |
| Publications in which the test name is not indicated | 68 | 3.2% |
| Publications in which the sample has psychiatric diagnoses | 16 | 0.8% |
| Publications with a sample size of less than 10 people | 11 | 0.5% |
| Adaptations of tests or training programs | 7 | 0.3% |

Табл. 1. Критерии исключения данных и количество соответствующих статей

| Критерии исключения данных | Количество исключенных статей | Процент от общего числа статей |
|--|-------------------------------|--------------------------------|
| Отсутствие открытого доступа к публикации | 689 | 32,6% |
| Публикация не является статьей, опубликованной в рецензируемых журналах: ВКР, диссертация, материалы конференции | 505 | 23,9% |
| Отсутствие эмпирических данных | 281 | 13,3% |
| Выборка публикации не соответствует поисковому запросу | 256 | 12,1% |
| Публикации, включающие ключевое слово, но не соответствующие поисковому запросу | 199 | 9,4% |
| Обзорный характер публикации, отсутствие эмпирического исследования | 125 | 5,9% |
| Публикации, выполненные на иностранном языке, исключая английский | 95 | 4,5% |
| Публикации, в которых не указана методика | 68 | 3,2% |
| Публикации, где у выборки присутствует наличие психиатрических диагнозов | 16 | 0,8% |
| Публикации, где выборка меньше 10 человек | 11 | 0,5% |
| Адаптация методик или программ обучения | 7 | 0,3% |

Table 2. Information about the publications included in the sample for the meta-analysis

| Digitalization stages | Publications | Test | Number of studies and total sample size | | | Total |
|--------------------------------|--|------|---|-------------------|------------------|------------------|
| | | | Elementary school age | Middle school age | High school age | |
| First stage (prior to 2011) | Alevriadou et al. 2004; Dinges, Hollenbeck 1978 Gargiulo 1982; Guisande et al. 2007; Lockheed et al. 1977; Mebane, Johnson 1970; Venkata Rao 2007; Villalobos et al. 2010 | CEFT | 8 (n = 827) | — | — | 8 (n = 827) |
| | Fritz et al. 2002; Horino 2008; Maghsudi 2007; Osborne 2000; Weymer 2002 | GEFT | — | 1 (n = 142) | 4 (n = 661) | 5 (n = 803) |
| Second stage (2011–2017) | Guisande et al. 2012 | CEFT | 1 (n = 149) | — | — | 1 (n = 149) |
| | Adegoke 2011; Daneshamooz et al. 2012; Farsi et al. 2014; Lin et al. 2014; Mousavi et al. 2012; Mutlu, Temiz 2013; Rezaeian 2012; Saadatmanesh 2014; Thomson et al. 2014 | GEFT | 1 (n = 61) | 2 (n = 313) | 6 (n = 1383) | 9 (n = 1757) |
| Third stage (from 2017) | Sirait et al. 2017 | CEFT | 1 (n = 46) | — | — | 1 (n = 46) |
| | Aydın Ceran, Ates 2020; Dey 2017; Ifelunni et al. 2022; Şahin, Ateş 2020; Yaghoobi et al. 2019 | GEFT | 2 (n = 600) | 2 (n = 903) | 1 (n = 368) | 5 (n = 1871) |
| Total | | | 13 (n = 1683) | 5 (n = 1358) | 11 (n = 2412) | 29 (n = 5453) |

Табл. 2. Сведения о публикациях, вошедших в выборку метааналитического исследования

| Этапы цифровизации | Источники | Методика | Количество исследований / суммарное количество респондентов | | | Итого |
|-------------------------|--|----------|---|----------------------|----------------------|------------------|
| | | | Младший школьный | Младший подростковый | Старший подростковый | |
| Первый этап (до 2011) | Alevriadou et al. 2004; Dinges, Hollenbeck 1978; Gargiulo 1982; Guisande et al. 2007; Lockheed et al. 1977; Mebane, Johnson 1970; Venkata Rao 2007; Villalobos et al. 2010 | CEFT | 8 (n = 827) | — | — | 8 (n = 827) |
| | Fritz et al. 2002; Horino 2008; Maghsudi 2007; Osborne 2000; Weymer 2002 | GEFT | — | 1 (n = 142) | 4 (n = 661) | 5 (n = 803) |
| Второй этап (2011–2017) | Guisande et al. 2012 | CEFT | 1 (n = 149) | — | — | 1 (n = 149) |
| | Adegoke 2011; Daneshamooz et al. 2012; Farsi et al. 2014; Lin et al. 2014; Mousavi et al. 2012; Mutlu, Temiz 2013; Rezaeian 2012; Saadatmanesh 2014; Thomson et al. 2014; | GEFT | 1 (n = 61) | 2 (n = 313) | 6 (n = 1383) | 9 (n = 1757) |
| Третий этап (с 2017) | Sirait et al. 2017 | CEFT | 1 (n = 46) | — | — | 1 (n = 46) |
| | Aydın Ceran, Ates 2020; Dey 2017; Ifelunni et al. 2022; Şahin, Ateş 2020; Yaghoobi et al. 2019 | GEFT | 2 (n = 600) | 2 (n = 903) | 1 (n = 368) | 5 (n = 1871) |
| Итого | | | 13 (n = 1683) | 5 (n = 1358) | 11 (n = 2412) | 29 (n = 5453) |

Test (CEFT), the values provided in such publications were converted to rank scales which were then used as a basis for statistical calculations. The results were statistically processed using the Statistica 12.0 software package. Statistical processing involved calculation of descriptive statistics and the Kruskal-Wallis test.

Results

Based in the obtained data, the mean unranked values of field dependence/independence were calculated according to H.A. Witkin's Group Embedded Figures Test and Children's Embedded Figures Test simultaneously for each age group of schoolchildren and each stage of digitalization. The results are contained in Figs. 1-2.

At the first stage of digitalization, high school students show the highest mean values of field independence according to the Group Embedded Figures Test (GEFT). This finding allows a conclusion that at the first stage of digitalization the influence of age-related changes on the degree of field independence is higher than the influence of the expansion of digital technology into the living environment. However, such a conclusion should be drawn with caution, because no data about the mean values of field dependence/independence in

elementary school students was found using this method for the first stage of digitalization—i.e., the difference in the mean values can be observed only between middle school students and high school students. However, elementary school students show the highest mean values of field dependence/independence already at the second stage of digitalization. This allows an assumption that the specifics of the second stage of digitalization made a significant impact on their degree of field dependence/independence. As regards the third stage of digitalization, elementary school students and high school students exhibit more or less identical mean values of field dependence/independence. This makes it possible to put forward a hypothesis that the mean values of field dependence/independence in schoolchildren are impacted not only by age-related changes, but also by the degree of living environment digitalization.

At the same time, it should be noted that, according to the Children's Embedded Figures Test (CEFT), the mean values of field dependence/independence in elementary school children increase with each consecutive stage of digitalization. These findings allow an assumption that the higher the digitalization of elementary school children's living environment, the higher their level of field independence.

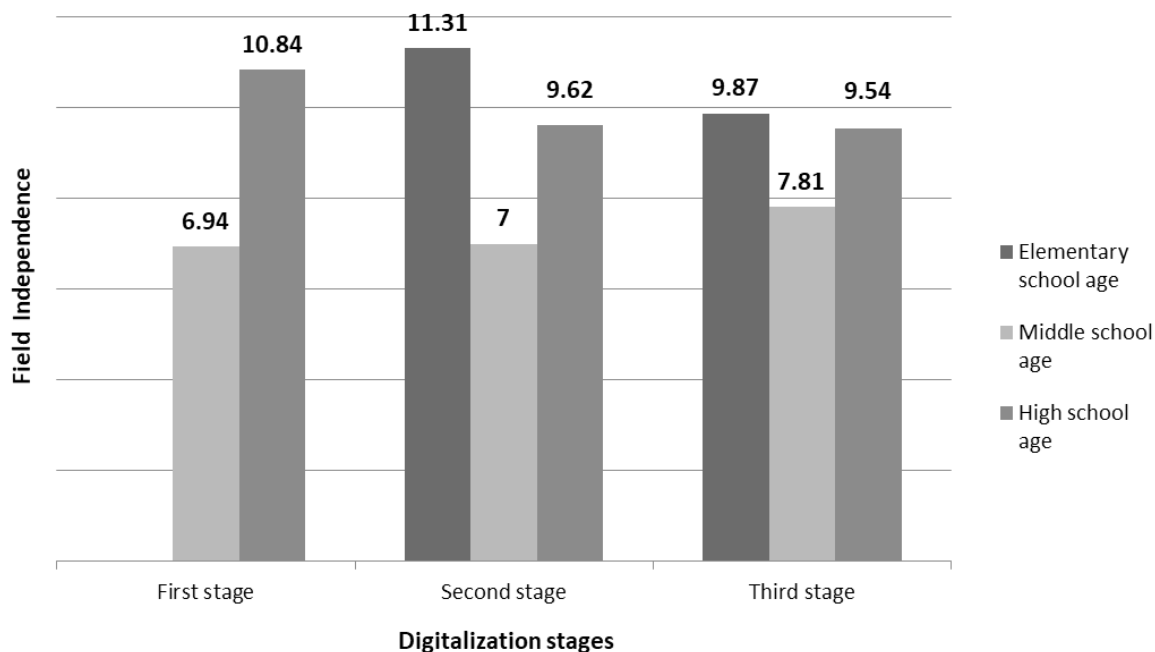


Fig. 1. Mean values of indicators of field dependence/independence of school students of different ages at different stages of digitalization (GEFT)

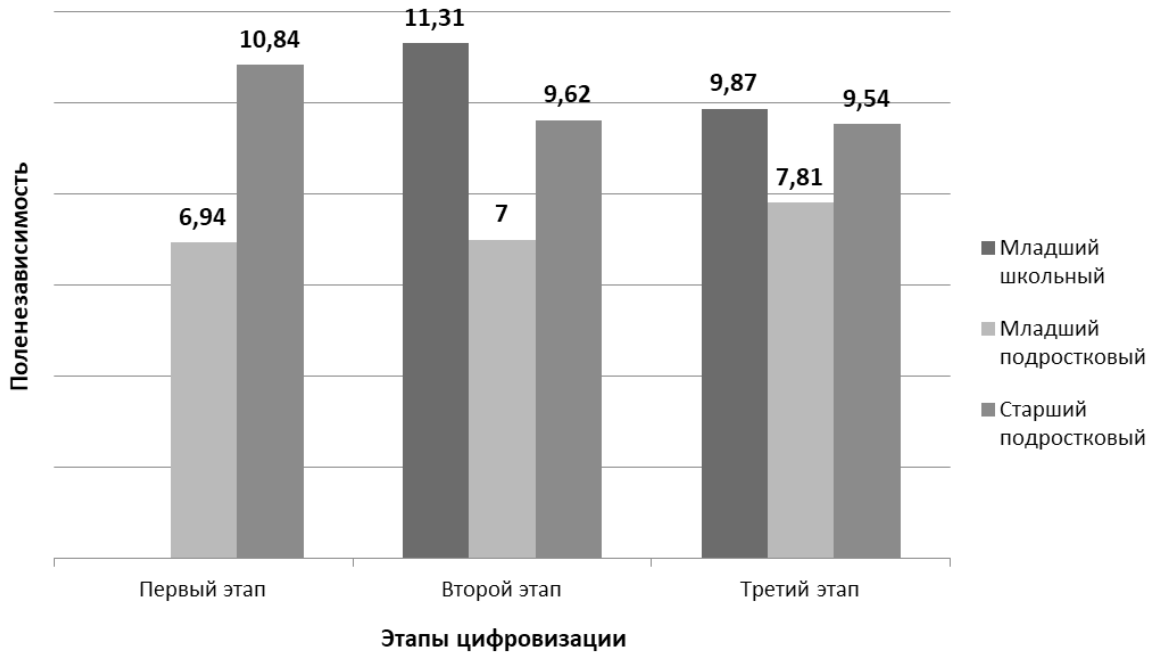


Рис. 1. Средние значения показателей полезависимости — полезависимости школьников разных возрастов на разных этапах цифровизации (по методике GEFT)

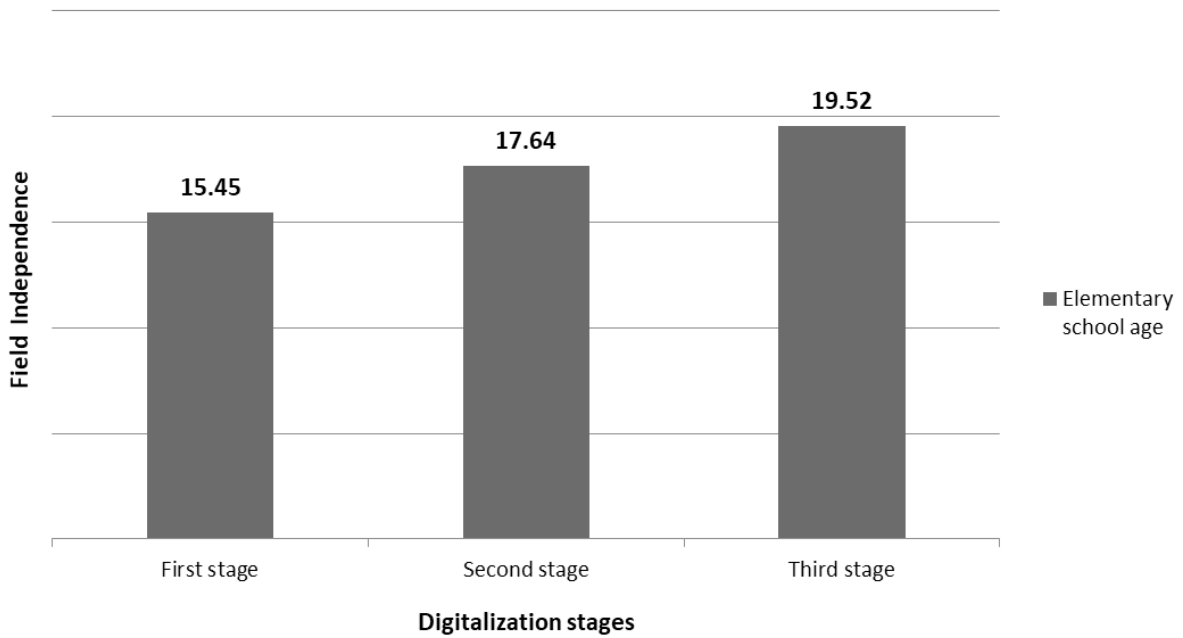


Fig. 2. Mean values of indicators of field dependence/independence of elementary school students of different ages at different stages of digitalization (CEFT)

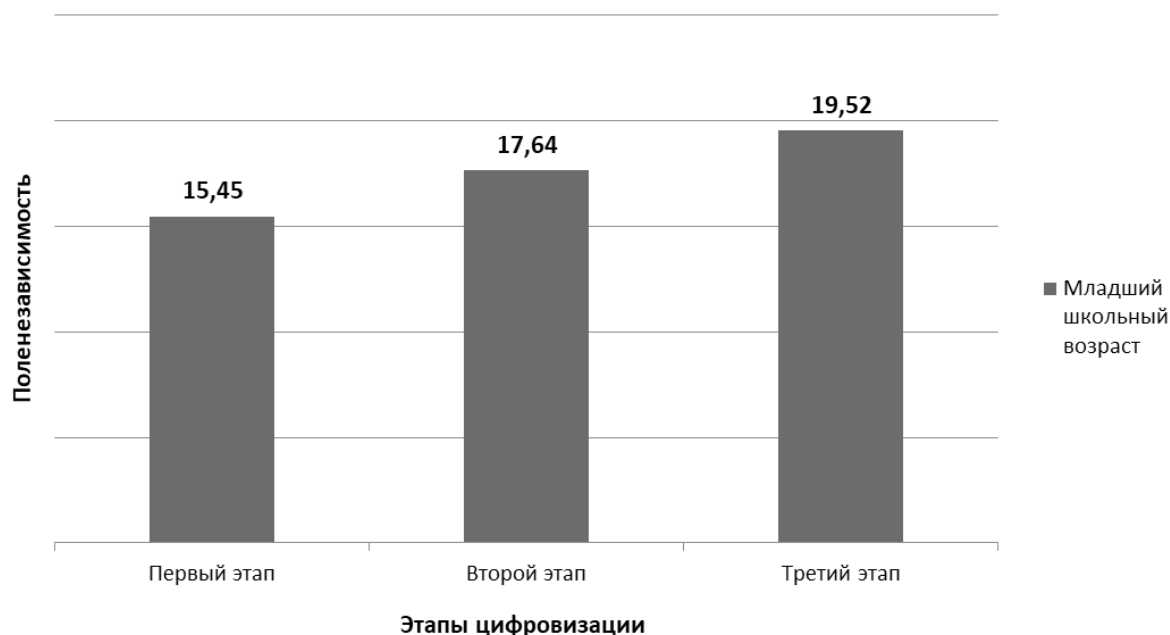


Рис. 2. Средние значения показателей полезависимости — полезависимости младших школьников на разных этапах цифровизации (по методике CEFT)

Then ranking was performed, and the data obtained by the GEFT and the CEFT was combined using a coefficient (Fig. 3).

The application of the Kruskal–Wallis test to analyze the differences in the values of field dependence/independence of schoolchildren of each age group across different stages of society digitalization revealed that such differences are not homogeneous for all the age groups: for elementary school students $H = 4.05$ with $p = 0.13$, for middle school students $H = 1.35$ with $p = 0.50$, and for high school students $H = 0.18$ with $p = 0.91$. Therefore, it can be said that, on the trend level, there are differences in the values of field dependence/independence of elementary school children between various stages of society digitalization, while the values for middle school and high school students have no statistically significant differences between stages.

It should be noted that, at the first stage of digitalization, the mean values of field dependence/independence in elementary school children are significantly lower than at the second and third stages—this indicates that digitalization has made a significant contribution to the increase of field independence of elementary school children in the recent years. The same trend is observed for middle school students: at the first stage of digitalization,

their mean values of field dependence/independence are lower compared to the second stage, and at the second stage the values are lower than at the third one. These findings are also an evidence of the probable impact of the specifics of different digitalization stages on the values of field dependence/independence: the higher the digitalization of schoolchildren's living environment, the higher the degree of their field independence. At the same time, the mean values of field dependence/independence in high school students show a significantly different picture: at all three stages of digitalization, the mean values are virtually identical—this probably indicates that field dependence/independence of high school students is much more strongly impacted by age-related specifics than by the degree of living environment digitalization.

It should also be noted that at the first stage of digitalization high school students show the highest mean values of field dependence/independence, while at the second stage the highest values are demonstrated by elementary school children. This might mean that cognitive style features were impacted more by the specifics of the second stage of digitalization than by age-related changes. The same trend is observed at the third stage of digitalization: elementary school students remain more field independent than middle school

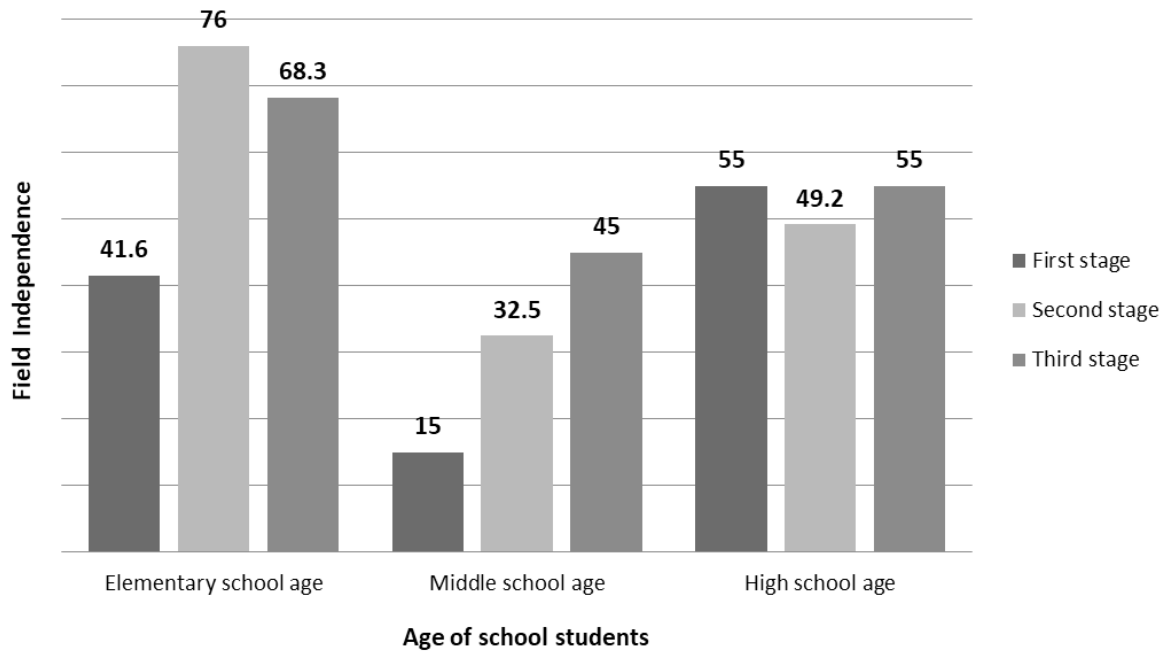


Fig. 3. Mean values of indicators of field dependence/independence of school students of different ages at different stages of digitalization (CEFT and GEFT)

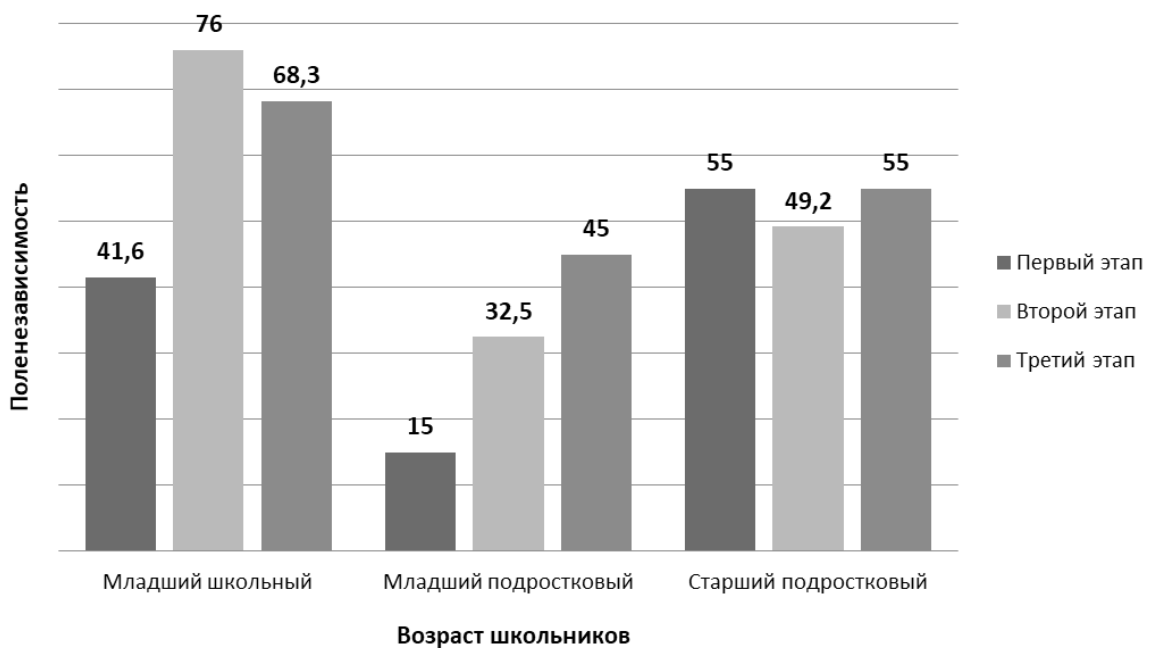


Рис. 3. Средние значения показателей полезназисимости — полезназисимости школьников разных возрастов на разных этапах цифровизации по методикам GEFT и CEFT

and high school students. At the same time, field independence of elementary school children and middle school students grows with each stage of digitalization, while field independence of high school students remains at approximately the same level throughout all the stages. Therefore, it can be assumed that the values of field dependence/independence in schoolchildren are impacted by both age-related changes and the degree of living environment digitalization. The younger the schoolchildren, the higher the impact of the degree of digitalization on their field dependence/independence, while the role of age-related regularities in the formation of cognitive style increases together with the increase of age.

Conclusions

Today digitalization of education is considered to be inevitable. This means that it is extremely relevant and important to study the impact of digitalization on learning—in particular, on schoolchildren's cognitive potential (Zherebnenko et al. 2018). This article offers a meta-analysis of research published in the period covering over 50 years back from now to explore the changes of the degree of field dependence/independence in schoolchildren of various age groups at different stages of society digitalization. The findings show that schoolchildren's field dependence/independence at all three stages of society digitalization is presumably impacted by both age-related changes and the degree of living environment digitalization. Specifically, the study revealed that field independence of elementary school children and middle school students grows with each stage of digitalization, while field independence of high school students

remains approximately the same throughout all three stages. Based on the findings, a conclusion was made: the younger the age of schoolchildren, the more prominent the impact of the degree of society digitalization on their field dependence/independence (i.e., the more field independent they become), while as children grow, the age-related specifics of cognitive potential development acquire the predominant importance.

The meta-analysis presented in this article has some limitations that should be noted. First, the analyzed publications—and, consequently, their samples—are unevenly distributed across the digitalization stages. Second, the samples may be qualitatively different, and this factor is impossible to reduce, as there is not enough information about the social and demographic characteristics of the schoolchildren surveyed. Third, scholars study the field dependent/independent cognitive style using different methods and their modifications, which makes the results obtained by such methods difficult to compare and reduced the number of publications included in the final list for the meta-analysis. These limitations may to a certain degree affect the reliability of the results presented in this article. Still, the study of the changes in schoolchildren's field dependence/independence as well as of other indicators of the 'digital transformation' of the cognitive potential of schoolchildren of various age groups at different stages of digitalization is a promising sphere in the research of the 'digital transformations' of human cognitive potential.

Conflict of Interest

The author declares that there is no conflict of interest, either existing or potential.

Литература

- Баканов, А. С., Сиваш, О. Н. (2017) Взаимосвязь когнитивного стиля и профессиональной успешности при взаимодействии с информационными системами. *Институт психологии Российской академии наук. Организационная психология и психология труда*, т. 2, № 1, с. 161–174. EDN: [YIRIVL](#)
- Богачева, Н. В. (2015) *Индивидуально-стилевые особенности взрослых игроков (на материале компьютерных игр). Диссертация на соискание степени кандидата психологических наук*. М., МГУ им. М. В. Ломоносова, 199 с.
- Бороховский, Е. Ф., Бернарда, Р. М. (2013) Количественные синтезы в социальных науках: методология и практика мета-анализа. Часть 1. *Психология. Экономика. Право*, № 2, с. 6–15. EDN: [RBMQPD](#)
- Валиева, А. А., Шакирова, Г. Ф. (2021) Взаимосвязь когнитивного стиля «полезависимость/полenezависимость» и клипового мышления у одаренных подростков. В кн.: Р. А. Валеева (ред.). *Педагогическое образование: новые вызовы и цели. VII Международный форум по педагогическому образованию: сборник научных трудов. Ч. IV*. Казань: Изд-во Казанского университета, с. 74–83.
- Гальченко, А. С., Григорьев, П. Е., Поскотинова, Л. В. (2020) Взаимосвязь интернет-зависимости с когнитивно-стилевыми особенностями обучающихся. *Вестник Мининского университета*, т. 8, № 3, с. 7–12. <https://doi.org/10.26795/2307-1281-2020-8-3-7>
- Ермаков, П. Н., Денисова, Е. Г., Куприянов, И. В., Коленова, А. С. (2022) Психологические предикторы конструктивных и деструктивных форм информационного поведения молодежи. *Российский психологический журнал*, т. 19, № 2, с. 21–34. <https://doi.org/10.21702/rpj.2022.2.2>

- Жеребненко, О. А., Кузнецова, Л. Б., Москаленко, С. В., Балыков, В. В. (2018) Исследование отношения младших школьников к современным цифровым технологиям посредством зоометафор. *Современные исследования социальных проблем*, т. 9, № 2-1, с. 37–54. <https://doi.org/10.12731/2218-7405-2018-2-37-54>
- Иконникова, Г. Ю., Лисовская, Н. Б., Тужикова, Е. С. (2020) Проблема цифровизации в современном образовании (на примере РГПУ им. А. И. Герцена). *Психология человека в образовании*, т. 2, № 2, с. 150–156. <https://doi.org/10.33910/2686-9527-2020-2-2-150-156>
- Никулина, Т. В., Стариченко, Е. Б. (2018) Информатизация и цифровизация образования: понятия, технологии, управление. *Педагогическое образование в России*, № 8, с. 107–113. <http://dx.doi.org/10.26170/по18-08-15>
- Прохоров, А., Коник, Л. (2019) *Цифровая трансформация. Анализ, тренды, мировой опыт*. 2-е изд., испр. и доп. М.: КомНьюс Групп, 368 с.
- Тульчинский, Г. Л. (2017) Цифровая трансформация образования: вызовы высшей школе. *Философские науки*, № 6, с. 121–136.
- Холодная, М. А. (2004) *Когнитивные стили. О природе индивидуального ума*. 2-е изд. СПб.: Питер, 384 с.
- Чеботарева, А. А., Чеботарев, В. Е., Розанов, А. С. и др. (2018) Информационное общество и информатизация образовательного пространства: проблемы и перспективы. В кн.: С. В. Иванова (ред.). *Образовательное пространство в информационную эпоху*. М.: Институт стратегии развития образования РАО, с. 157–166.
- Черемошкина, Л. В. (2013) Интернет-активность как фактор влияния на когнитивные способности старших школьников. *Вестник Московского университета. Серия 20: Педагогическое образование*, № 1, с. 94–113. <https://doi.org/10.51314/2073-2635-2013-1-94-113>
- Adegoke, B. A. (2011) Effect of direct and indirect teacher influence on dependent-prone students' learning outcomes in secondary school mathematics. *Electronic Journal of Research in Educational Psychology*, vol. 9, no. 23, pp. 283–308. <https://doi.org/10.25115/ejrep.v9i23.1438>
- Alevriadou, A., Tsakiridou, H., Hatzinikolaou, K., Grouios, G. (2004) Field dependence-independence of normally developing and mentally retarded boys of low and upper/middle socioeconomic status. *Perceptual and Motor Skills*, vol. 99, no. 3, pp. 913–923. <https://doi.org/10.2466/pms.99.3.913-923>
- Aydın Ceran, S., Ates, S. (2020) Conceptual understanding levels of students with different cognitive styles: An evaluation in terms of different measurement techniques. *Eurasian Journal of Educational Research*, vol. 20, no. 88, pp. 149–178.
- Barglow, R. (1994) *The crisis of the self in the age of information: Computers, dolphins and dreams*. London; New York: Routledge, 227 p.
- Daneshamooz, S., Radmehr, F., Alamolhodaei, H., Mohajer, M. (2012) The effects of sleep duration on predictive factors of mathematical performance. *ARPN Journal of Science and Technology*, vol. 2, no. 4, pp. 283–291.
- Dey, A. (2017) A study on the impact of social subdivisions (Hindus and Muslims) on children's human figure drawing and cognitive style: An attempt to find the difference between the two social subdivisions. *International Journal of Home Science*, vol. 3, no. 1, pp. 206–209.
- Dinges, N. G., Hollenbeck, A. R. (1978) Field dependence-independence in Navajo children. *International Journal of Psychology*, vol. 13, no. 3, pp. 215–220. <https://doi.org/10.1080/00207597808246626>
- Farsi, M., Bagheri, M. S., Sharif, M., Nematollahi, F. (2014) Relationship between field dependence/independence and language proficiency of female EFL students. *International Journal of Language Learning and Applied Linguistics World*, vol. 6, no. 3, pp. 208–220.
- Fritz, R. L., Stewart, B., Norwood, M. (2002) A Comparison of field-dependence cognitive styles of professionals in purchasing and consumer service and secondary marketing education students, with implications for workforce development. *Journal of Career and Technical Education*, vol. 18, no. 2, pp. 66–78. <https://doi.org/10.21061/jcte.v18i2.610>
- Gargiulo, R. M. (1982) Reflection/impulsivity and field dependence/independence in retarded and nonretarded children of equal mental age. *Bulletin of the Psychonomic Society*, vol. 19, no. 2, pp. 74–77. <https://doi.org/10.3758/BF03330044>
- Guisande, M. A., Páramo, M. F., Tinajero, C., Almeida, L. S. (2007) Field dependence-independence (FDI) cognitive style: An analysis of attentional functioning. *Psicothema*, vol. 19, no. 4, pp. 572–577. PMID: 17959109
- Guisande, M. A., Tinajero, C., Cadaveira, F., Páramo, M. F. (2012) Attention and visuospatial abilities: A neuropsychological approach in field-dependent and field-independent schoolchildren. *Studia Psychologica*, vol. 54, no. 2, pp. 83–94.
- Horino, H. (2008) Cognitive styles of elite and non-elite female soccer players. In: T. Reilly, F. Korkusuz (eds.). *Science and Football VI. The Proceedings of the Sixth World Congress on Science and Football*. London: Routledge Publ., pp. 430–433.
- Ifelunni, C. O., Ezema, R. F., Victor, S. et al. (2022) Cognitive styles as a correlate of pupils' academic achievement in South-East, Nigeria. *International Journal of Social Science and Human Research*, vol. 5, no. 1, pp. 159–166. <https://doi.org/10.47191/ijssshr/v5-i1-24>
- Lin, H.-C. K., Su, S.-H., Hsieh, Y.-C., Tsai, S.-C. (2014) Impacts of affective tutoring system on the academic achievement of primary school students with different cognitive styles—an example of marine education. *The New Educational Review*, vol. 38, no. 4, pp. 248–259. <https://doi.org/10.15804/tner.14.38.4.19>

- Lockheed, M. E., Harris, A. M., Stone, M. K., Fitzgerald, M. L. (1977) Validation of a children's group embedded figures test. *Perceptual and Motor Skills*, vol. 44, no. 3, pp. 1259–1263. <https://doi.org/10.2466/pms.1977.44.3c.1259>
- Maghsudi, M. (2007) The interaction between field dependent/independent learning styles and learners' linguality in third language acquisition. *Language in India*, vol. 7, no. 5, pp. 1–23.
- Mebane, D., Johnson, D. J. (1970) A comparison of the performance of Mexican boys and girls on Witkin's cognitive tasks. *Interamerican Journal of Psychology*, vol. 4, no. 3–4, pp. 227–239.
- Mousavi, S., Radmehr, F., Alamolhodaei, H. (2012) The role of mathematical homework and prior knowledge on the relationship between students' mathematical performance, cognitive style and working memory capacity. *Electronic Journal of Research in Educational Psychology*, vol. 10, no. 28, pp. 1223–1248. <https://doi.org/10.25115/ejrep.v10i28.1532>
- Mutlu, M., Temiz, B. K. (2013) Science process skills of students having field dependent and field independent cognitive styles. *Educational Research and Reviews*, vol. 8, no. 11, pp. 766–776.
- Negroponte, N. (1995) *Being digital*. New York: Alfred A. Knopf Publ., 255 p.
- Osborne, E. W. (2000) Effects of level of openness in agriscience experiments on student achievement and science process skill development. *Journal of Southern Agricultural Education Research*, vol. 50, no. 1, pp. 75–81.
- Rezaeian, M. (2012) An investigation into the relationship between field dependence/independence, sex, and age, towards EFL proficiency in Iranian language learners. *The Iranian EFL Journal*, vol. 8, no. 5, pp. 82–98.
- Saadatmanesh, S. (2014) The correlation between EFL learners' multiple intelligences and their English achievement abilities regarding their learning styles. *Merit Research Journal of Education and Review*, vol. 2, no. 3, pp. 62–73.
- Şahin, F., Ateş, S. (2020) Examination of the relationship between seventh-grade students' scientific literacy among certain cognitive variables. *Education and Science*, vol. 45, no. 203, pp. 63–89. <https://doi.org/10.15390/EB.2020.8552>
- Sirait, R. L., Sibuea, A. M., Murad, A. (2017) The effect of learning models and cognitive style on mathematics learning outcomes of grade 5 students. In: *Proceedings of the 2nd Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2017)*. Vol. 104. Amsterdam: Atlantis Press, pp. 150–153. <https://doi.org/10.2991/aisteel-17.2017.32>
- Tapscott, D. (1995) *The digital economy: Promise and peril in the age of networked intelligence*. New York: McGraw-Hill Publ., 368 p.
- Thomson, K., Watt, A., Liukkonen, J. (2014) Developmental and cultural aspects of field-dependence in 11 and 12 years old Estonian and Finnish students. *Trames. A Journal of the Humanities and Social Sciences*, vol. 18, no. 1, pp. 89–101. <https://doi.org/10.3176/tr.2014.1.06>
- Venkata Rao, B. (2007) Study of academic achievements in mathematics in relation to cognitive style and attitude towards mathematics. *Global Journal for Research Analysis*, vol. 3, no. 1, pp. 7–8.
- Villalobos, J. A. L., Pintado, I. S., de Llano, J. M. A. et al. (2010) Utilidad del children's embedded figures test en el trastorno por déficit de atención con hiperactividad. *Clínica y Salud*, vol. 21, no. 1, pp. 93–103. <https://doi.org/10.5093/cl2010v21n1a8>
- Weymer, R. A. (2002) Factors affecting students' performance in sixth grade modular technology education. *Journal of Technology Education*, vol. 13, no. 2, pp. 34–47. <https://doi.org/10.21061/jte.v13i2.a.3>
- Witkin, H. A., Goodenough, D. R., Karp, S. A. (1967) Stability of cognitive styles from childhood to young adulthood. *Journal of Personality and Social Psychology*, vol. 7, no. 3-1, pp. 291–300. <https://doi.org/10.1037/h0025070>
- Yaghoobi, A., Mokhtaran, M., Mohammadzadeh, S. (2019) Cognitive styles and psychological resilience as predictors of academic burnout. *Iranian Evolutionary and Educational Psychology Journal*, vol. 1, no. 1, pp. 1–7. <http://dx.doi.org/10.29252/IEEPJ.1.1.1>

References

- Adegoke, B. A. (2011) Effect of direct and indirect teacher influence on dependent-prone students' learning outcomes in secondary school mathematics. *Electronic Journal of Research in Educational Psychology*, vol. 9, no. 23, pp. 283–308. <https://doi.org/10.25115/ejrep.v9i23.1438> (In English)
- Alevriadou, A., Tsakiridou, H., Hatzinikolaou, K., Grouios, G. (2004) Field dependence-independence of normally developing and mentally retarded boys of low and upper/middle socioeconomic status. *Perceptual and Motor Skills*, vol. 99, no. 3, pp. 913–923. <https://doi.org/10.2466/pms.99.3.913-923> (In English)
- Aydın Ceran, S., Ates, S. (2020) Conceptual understanding levels of students with different cognitive styles: An evaluation in terms of different measurement techniques. *Eurasian Journal of Educational Research*, vol. 20, no. 88, pp. 149–178. (In English)
- Bakanov, A. S., Sivash, O. N. (2017) Vzaimosvyaz' kognitivnogo stilya i professional'noj uspešnosti pri vzaimodejstvii s informatsionnymi sistemami [The relationship between cognitive style and professional success in the interaction with the information system]. *Institut psikhologii Rossiyskoj akademii nauk. Organizatsionnaya psikhologiya i psikhologiya truda — Institute of Psychology Russian Academy of Sciences. Organizational Psychology and Labor Psychology*, vol. 2, no. 1, pp. 161–174. EDN: [YIRIVL](https://doi.org/10.29252/IEEPJ.1.1.1) (In Russian)

- Barglow, R. (1994) *The crisis of the self in the age of information: Computers, dolphins and dreams*. London; New York: Routledge, 227 p. (In English)
- Bogacheva, N. V. (2015) *Individual'no-stilevye osobennosti vzroslykh igrokov (na materiale komp'yuternykh igr) [Individual-style features of adult players (on the material of computer games)]*. PhD dissertation (Psychology). Moscow, Lomonosov Moscow State University, 199 p. (In Russian)
- Borokhovskii, E. F., Bernard, R. M. (2013) Kolichestvennye sintezy v sotsial'nykh naukakh: metodologiya i praktika meta-analiza. Chast' 1 [Qualitative syntheses in social sciences: Methodology and practice of meta-analysis. Part 1]. *Psikhologiya. Ekonomika. Pravo*, no. 2, pp. 6–15. EDN: RBMQPD (In Russian)
- Chebotareva, A. A., Chebotarev, V. E., Rozanov, A. S. et al. (2018) Informatsionnoe obshchestvo i informatizatsiya obrazovatel'nogo prostranstva: problemy i perspektivy [The information society and the informatization of the educational space: Problems and prospects]. In: S. V. Ivanova (ed.). *Obrazovatel'noe prostranstvo v informatsionnuyu epokhu [Education environment for the information age]*. Moscow: Institute for Strategy of Education Development of the Russian Academy of Education Publ., pp. 157–166. (In Russian)
- Cheremoshkina, L. V. (2013) Internet-aktivnost' kak faktor vliyaniya na kognitivnye sposobnosti starshikh shkol'nikov [Active internet usage as an impact on cognitive abilities of high-school children]. *Vestnik Moskovskogo universiteta. Seriya 20: Pedagogicheskoye obrazovaniye — Moscow University Pedagogical Education Bulletin*, no. 1, pp. 94–114. <https://doi.org/10.51314/2073-2635-2013-1-94-113> (In Russian)
- Daneshamooz, S., Radmehr, F., Alamolhodaei, H., Mohajer, M. (2012) The effects of sleep duration on predictive factors of mathematical performance. *ARNP Journal of Science and Technology*, vol. 2, no. 4, pp. 283–291. (In English)
- Dey, A. (2017) A study on the impact of social subdivisions (Hindus and Muslims) on children's human figure drawing and cognitive style: An attempt to find the difference between the two social subdivisions. *International Journal of Home Science*, vol. 3, no. 1, pp. 206–209. (In English)
- Dinges, N. G., Hollenbeck, A. R. (1978) Field dependence-independence in Navajo children. *International Journal of Psychology*, vol. 13, no. 3, pp. 215–220. <https://doi.org/10.1080/00207597808246626> (In English)
- Ermakov, P. N., Denisova, E. G., Kupriyanov, I. V., Kolenova, A. S. (2022) Psikhologicheskie prediktory konstruktivnykh i destruktivnykh form informatsionnogo povedeniya molodezhi [Psychological predictors of constructive and destructive forms of youth informational behavior]. *Rossiiskiy psikhologicheskij zhurnal — Russian Psychological Journal*, vol. 19, no. 2, p. 21–34. <https://doi.org/10.21702/rpj.2022.2.2> (In Russian)
- Farsi, M., Bagheri, M. S., Sharif, M., Nematollahi, F. (2014) Relationship between field dependence/independence and language proficiency of female EFL students. *International Journal of Language Learning and Applied Linguistics World*, vol. 6, no. 3, pp. 208–220. (In English)
- Fritz, R. L., Stewart, B., Norwood, M. (2002) A Comparison of field-dependence cognitive styles of professionals in purchasing and consumer service and secondary marketing education students, with implications for workforce development. *Journal of Career and Technical Education*, vol. 18, no. 2, pp. 66–78. <https://doi.org/10.21061/jcte.v18i2.610> (In English)
- Galchenko, A. S., Grigoriev, P. E., Poskotinova, L. V. (2020) Vzaimosvyaz' internet-zavisimosti s kognitivno-stilevymi osobennostyami obuchayushchikhsya [Correlation between internet-addiction and the cognitive-stylistic features of students]. *Vestnik Mininskogo universiteta — Vestnik of Minin University*, vol. 8, no. 3, pp. 7–12. <https://doi.org/10.26795/2307-1281-2020-8-3-7> (In Russian)
- Gargiulo, R. M. (1982) Reflection/impulsivity and field dependence/independence in retarded and nonretarded children of equal mental age. *Bulletin of the Psychonomic Society*, vol. 19, no. 2, pp. 74–77. <https://doi.org/10.3758/BF03330044> (In English)
- Guisande, M. A., Páramo, M. F., Tinajero, C., Almeida, L. S. (2007) Field dependence-independence (FDI) cognitive style: An analysis of attentional functioning. *Psicothema*, vol. 19, no. 4, pp. 572–577. PMID: 17959109 (In English)
- Guisande, M. A., Tinajero, C., Cadaveira, F., Páramo, M. F. (2012) Attention and visuospatial abilities: A neuropsychological approach in field-dependent and field-independent schoolchildren. *Studia Psychologica*, vol. 54, no. 2, pp. 83–94. (In English)
- Horino, H. (2008) Cognitive styles of elite and non-elite female soccer players. In: T. Reilly, F. Korkusuz (eds.). *Science and Football VI. The Proceedings of the Sixth World Congress on Science and Football*. London: Routledge Publ., pp. 430–433. (In English)
- Ifelunni, C. O., Ezema, R. F., Victor, S. et al. (2022) Cognitive styles as a correlate of pupils' academic achievement in South-East, Nigeria. *International Journal of Social Science and Human Research*, vol. 5, no. 1, pp. 159–166. <https://doi.org/10.47191/ijsshr/v5-i1-24> (In English)
- Ikonnikova, G. Yu., Lisovskaya, N. B., Tuzhikova, E. S. (2020) Problema tsifrovizatsii v sovremennom obrazovanii (na primere RGPU im. A. I. Gertsena) [Digitalization in modern education (case study of Herzen State Pedagogical University of Russia)]. *Psikhologiya cheloveka v obrazovanii — Psychology in Education*, vol. 2, no. 2, pp. 150–156. <https://doi.org/10.33910/2686-9527-2020-2-2-150-156> (In Russian)
- Kholodnaya, M. A. (2004) *Kognitivnye stili. O prirode individual'nogo uma [Cognitive styles. About the nature of the individual mind]*. 2nd ed. Saint Petersburg: Piter Publ., 384 p. (In Russian)

- Lin, H.-C. K., Su, S.-H., Hsieh, Y.-C., Tsai, S.-C. (2014) Impacts of affective tutoring system on the academic achievement of primary school students with different cognitive styles—an example of marine education. *The New Educational Review*, vol. 38, no. 4, pp. 248–259. <https://doi.org/10.15804/tner.14.38.4.19> (In English)
- Lockheed, M. E., Harris, A. M., Stone, M. K., Fitzgerald, M. L. (1977) Validation of a children's group embedded figures test. *Perceptual and Motor Skills*, vol. 44, no. 3, pp. 1259–1263. <https://doi.org/10.2466/pms.1977.44.3c.1259> (In English)
- Maghsudi, M. (2007) The interaction between field dependent/independent learning styles and learners' linguality in third language acquisition. *Language in India*, vol. 7, no. 5, pp. 1–23. (In English)
- Mebane, D., Johnson, D. J. (1970) A comparison of the performance of Mexican boys and girls on Witkin's cognitive tasks. *Interamerican Journal of Psychology*, vol. 4, no. 3–4, pp. 227–239. (In English)
- Mousavi, S., Radmehr, F., Alamolhodaei, H. (2012) The role of mathematical homework and prior knowledge on the relationship between students' mathematical performance, cognitive style and working memory capacity. *Electronic Journal of Research in Educational Psychology*, vol. 10, no. 28, pp. 1223–1248. <https://doi.org/10.25115/ejrep.v10i28.1532> (In English)
- Mutlu, M., Temiz, B. K. (2013) Science process skills of students having field dependent and field independent cognitive styles. *Educational Research and Reviews*, vol. 8, no. 11, pp. 766–776. (In English)
- Negroponte, N. (1995) *Being digital*. New York: Alfred A. Knopf Publ., 255 p. (In English)
- Nikulina, T. V., Starichenko, E. B. (2018) Informatizatsiya i tsifrovizatsiya obrazovaniya: ponyatiya, tekhnologii, upravlenie [Information and digital technologies in education: Concepts, technologies, management]. *Pedagogicheskoye obrazovaniye v Rossii — Pedagogical Education in Russia*, no. 8, pp. 107–113. <http://dx.doi.org/10.26170/po18-08-15> (In Russian)
- Osborne, E. W. (2000) Effects of level of openness in agriscience experiments on student achievement and science process skill development. *Journal of Southern Agricultural Education Research*, vol. 50, no. 1, pp. 75–81. (In English)
- Prokhorov, A., Konik, L. (2019) *Tsifrovaya transformatsiya. Analiz, trendy, mirovoj opyt [Digital transformation. Analysis, trends, world experience]*. 2nd ed., comp. Moscow: ComNews Group Publ., 368 p. (In Russian)
- Rezaeian, M. (2012) An investigation into the relationship between field dependence/independence, sex, and age, towards EFL proficiency in Iranian language learners. *The Iranian EFL Journal*, vol. 8, no. 5, pp. 82–98. (In English)
- Saadatmanesh, S. (2014) The correlation between EFL learners' multiple intelligences and their English achievement abilities regarding their learning styles. *Merit Research Journal of Education and Review*, vol. 2, no. 3, pp. 62–73. (In English)
- Şahin, F., Ateş, S. (2020) Examination of the relationship between seventh-grade students' scientific literacy among certain cognitive variables. *Education and Science*, vol. 45, no. 203, pp. 63–89. <https://doi.org/10.15390/EB.2020.8552> (In English)
- Sirait, R. L., Sibuea, A. M., Murad, A. (2017) The effect of learning models and cognitive style on mathematics learning outcomes of grade 5 students. In: *Proceedings of the 2nd Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2017)*. Vol. 104. Amsterdam: Atlantis Press, pp. 150–153. <https://doi.org/10.2991/aisteel-17.2017.32> (In English)
- Tapscott, D. (1995) *The digital economy: Promise and peril in the age of networked intelligence*. New York: McGraw-Hill Publ., 368 p. (In English)
- Thomson, K., Watt, A., Liukkonen, J. (2014) Developmental and cultural aspects of field-dependence in 11 and 12 years old Estonian and Finnish students. *Trames. A Journal of the Humanities and Social Sciences*, vol. 18, no. 1, pp. 89–101. <https://doi.org/10.3176/tr.2014.1.06> (In English)
- Tulchinsky, G. L. (2017) Tsifrovaya transformatsiya obrazovaniya: vyzovy vysshej shkole [Digital transformation of education: Challenges for higher school]. *Filosofskie nauki — Russian Journal of Philosophical Sciences*, no. 6, pp. 121–136. (In Russian)
- Valieva, A. A., Shakirova, G. F. (2021) Vzaimosvyaz' kognitivnogo stilya "polezavisimost'/polenezavisimost'" i klipovogo myshleniya u odarenykh podrostkov [The correlation between cognitive style "field-dependence/-independence" and clip thinking among gifted teenagers]. In: R. A. Valeeva (ed.). *Pedagogicheskoe obrazovanie: novye vyzovy i tseli. VII Mezhdunarodnyj forum po pedagogicheskomu obrazovaniyu: sbornik nauchnykh trudov [Pedagogical education: New challenges and goals. VII International Forum on Teacher Education: A collection of scientific papers]*. Pt. IV. Kazan: Kazan University Publ., p. 74–83. (In Russian)
- Venkata Rao, B. (2007) Study of academic achievements in mathematics in relation to cognitive style and attitude towards mathematics. *Global Journal for Research Analysis*, vol. 3, no. 1, pp. 7–8. (In English)
- Villalobos, J. A. L., Pintado, I. S., de Llano, J. M. A. et al. (2010) Utilidad del children's embedded figures test en el trastorno por déficit de atención con hiperactividad [Utility of Children's embedded figures tests in attention deficit hyperactivity disorder]. *Clinica y Salud — Clinical and Health*, vol. 21, no. 1, pp. 93–103. <https://doi.org/10.5093/cl2010v21n1a8> (In Spanish)
- Weymer, R. A. (2002) Factors affecting students' performance in sixth grade modular technology education. *Journal of Technology Education*, vol. 13, no. 2, pp. 34–47. <https://doi.org/10.21061/jte.v13i2.a.3> (In English)

- Witkin, H. A., Goodenough, D. R., Karp, S. A. (1967) Stability of cognitive styles from childhood to young adulthood. *Journal of Personality and Social Psychology*, vol. 7, no. 3-1, pp. 291–300. <https://doi.org/10.1037/h0025070> (In English)
- Yaghoobi, A., Mokhtaran, M., Mohammadzadeh, S. (2019) Cognitive styles and psychological resilience as predictors of academic burnout. *Iranian Evolutionary and Educational Psychology Journal*, vol. 1, no. 1, pp. 1–7. <http://dx.doi.org/10.29252/IEEPJ.1.1.1> (In English)
- Zherebnenko, O. A., Kuznetsova, L. B., Moskalenko, S. V., Balykov, V. V. (2018) Issledovanie otnosheniya mladshikh shkol'nikov k sovremennym tsifrovym tekhnologiyam posredstvom zoometafor [The research of the attitude of primary school students to modern digital technologies by means of zoometaphors]. *Sovremennye issledovaniya sotsial'nykh problem — Russian Journal of Education and Psychology*, vol. 9, no. 2, pp. 37–54. <https://doi.org/10.12731/2218-7405-2018-2-37-54> (In Russian)