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THE ADVANTAGES OF USING THE POSSIBILITIES OF INFOGRAPHICS IN THE WORK OF FUTURE INFORMATICS AND INFORMATION TECHNOLOGY TEACHERS

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Anotation:
This article is about the effective ways to use the opportunities of infographics in the work of future informatics and information technology teachers, the concept of infographics and its types are covered in detail, and the article also provides information about several of the most popular platforms in the field of infographics.

Keywords: Infographics, Dynamic Infographics, Statistical Infographics, Informational Infographics, Construction Infographics, Timeline, Geographical Infographics, Canva, Adobe Creative Cloud Express, Venngage.

How does information enter the human brain? 90% of the total amount of information enters the human brain by sight, 9% by hearing, and the remaining 1% by smell, taste and touch. In the human brain, images dedicated to visual functions are processed faster than text. The brain processes images at once, but processes text linearly, meaning that it takes a long time to get information from the text. One way to present information is infographics (information graphics).

Infographics is a graphic method of communicating information and knowledge, its task is to present complex information in a convenient and understandable way.

In foreign literature, the term "**infographics**" is understood as a combination of graphic design, illustrations and texts for the purpose of creating a single plot, not just data visualization.

It is important to quickly know what types of infographics you can make and choose the one that suits your current needs, i.e. how you want to convey information. Below are the types of infographics:

• **Dynamic infographics**. This is an infographic with animated elements. The main types of dynamic infographics are video infographics, animated images, presentations.

• **Statistical infographics**. It is a graphic product that displays certain statistical data. Statistics make you wonder about a problem or a solution. This allows the teacher to strongly stimulate students' thinking.

• **Information infographics.** It's perfect if you want to introduce new learning material or give an overview of a big topic coming up.

• **Construction infographics.** Shows the structure and components of an object or the mechanism of an event, sometimes - the chronology and causes of a historical event.

• **Time table.** This is a timeline of events drawn in chronological order. Most often, a timeline is a horizontal line with marks in years (or eras) that show what happened at a given time. Visual effects such as lines, icons, photos, and labels help emphasize and explain points in a timely manner.

• **Process.** An infographic of the process. Used to describe loops or sequences of steps in a process. Step numbering is required to follow the logic of the process.

• **Geographic infographics.** A method of presenting geographic information. In these infographics, maps are used as a base on which to place various types of data charts.

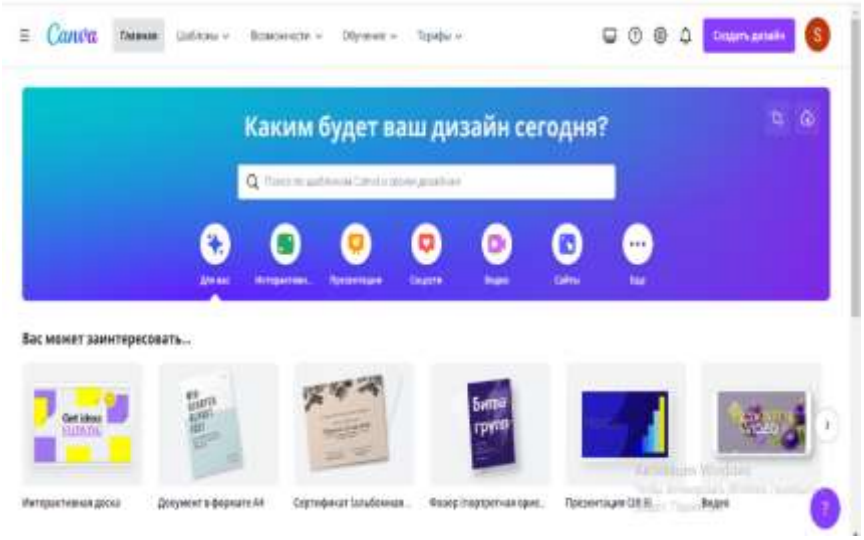
• **Comparative infographics.** This is a very effective infographic for comparing several options of events, events, persons. Students can make their own conclusions and give preferences.

• **List.** If you want to list the causes of an event or event, you can include a list of facts, examples.

Today, there are special platforms, programs and online services for creating infographics, through which we can create our own infographics online for free. These platforms include: Canva, Adobe Creative Cloud, Venngage, Snappa, Piktochart, Visme, Infogram, Easel.ly, DesignCup, Genially, Mind the Graph, Biteable, GoogleCharts, PicMonkey, Adioma, BeFunky, MURAL, Animaker, KartoGraph.

Below is a brief overview of the best infographic creation programs.

Canva. Canva is one of the most popular apps for designers today. It's an easy-to-use yet powerful tool for any creative design project, from presentations to brochures and more. It provides users with thousands of professional templates, images, and other high-quality elements to bring all the best ideas to life. Canva has complete instructions for creating your first infographic. Using this software, you will be able to complete your work in a few minutes and get a result that will help you promote your brand, because all the information will be well organized and consumers will need to get to know your company better. They learn everything.



Picture 1. Canva program work window

Table 1. Features of Canva

Advantages	A powerful tool with thousands of free infographic templates and 100+ design types. The ability to invite and collaborate with members on your team and 5 GB of cloud storage
Disadvantages	Works online only
Cost	There is a free option. Paid option: Canva Pro $12.99 per month or $119.99 per year (free trial available)

Adobe Creative Cloud Express. If you need to create infographics for social networks easily and quickly, Adobe Creative Cloud Express (formerly Adobe Spark) is one of the most suitable applications. This infographic maker gives you thousands of free resources with over 10,000 templates to choose the best one for your design. There's a free plan, but you'll need a premium subscription (which has a 30-

day free trial) to unlock all available features. Creative Cloud Express is very easy to use because it has a drag and drop editor, which is quite simple even for newbies in design.

Picture 2. Adobe Creative Cloud Express program window

Table 2. Features of Adobe Creative Cloud Express software

Advantages	Easy to use online graphics maker. Availability of 7500+ professionally designed infographic templates. Availability of the ability to download and share prepared infographics or invite the team to collaborate.
Disadvantages	Lack of fonts. Many features are only available with paid subscriptions.
Cost	A free option is available. Paid option: -Premium $16/month; - Business $39 per month; Enterprise $499 per month

Venngage. Venngage is one of the most popular infographic maker apps preferred by many designers. The reason for their choice is that with a wide range of over 7,500 creative templates, it allows users to create anything they can imagine. It's also easy to use and has a handy image search feature, which lets you save valuable time finding images and adding them to your infographic. There is a large amount of free features such as font loading and exporting in Powerpoint and PDF.

Picture 3. Working window of Venngage program

Table 3. Venngage software features

Advantages	Easy to use online graphics maker. 7500+ professionally designed infographic templates. The ability to download and share your infographic or invite your team to collaborate.
Disadvantages	Multiple fonts. Many features only come with paid subscriptions.
Cost	A free option is available. Paid option: Premium $16/month; Business $39 per month; Enterprise $499 per month.

The following cloud services can also be used to create infographics:
Google Charts is a service that allows you to quickly create various graphs and charts.
Piktochart is an easy-to-use infographic creation service, its basic version is free and includes many templates for creating your own infographics.
Visual.ly is a service that includes free templates for creating infographics, as well as ready-made works collected from around the world.
Infogr.am is a cloud service for creating interactive infographics.

References:

1. Muydinovich, R. I., Valentinovna, M. S., & Xabibjonqizi, M. D. (2022). THE ROLE OF INFORMATION TECHNOLOGY IN MODERN METHODS IN THE SYSTEM OF HIGHER EDUCATION. International Journal of Early Childhood Special Education, 14(7).
2. Muydinovich, R. I. (2022). The Role of Digital Technologies in Growing Secondary School Students to the Profession. Eurasian Scientific Herald, 6, 137-142.
3. MUYDINOVICH, R. I. (2020). Problems and Solutions of Online Education in Tertiary Institutions. International Journal of Innovations in Engineering Research and Technology, 7(11), 58-60.
4. Muydinovich, R. I. (2021). Innovative approach to ensuring the continuity of teaching computer science in the system of continuous education of the New Uzbekistan. ACADEMICIA: An International Multidisciplinary Research Journal, 11(4), 1622-1629.
5. РАСУЛОВ, И. М., & ТОЛИПОВ, У. К. (2018). РАЗВИТИЯ КУЛЬТУРЫ ПРОЕКТИРОВАНИЯ СТУДЕНТОВ ПОСРЕДСТВОМ КОМПЬЮТЕРНЫХ ТЕХНОЛОГИЙ. In Высшее и среднее профессиональное образование России в начале 21-го века: состояние, проблемы, перспективы развития (pp. 198-203).
6. Muydinovich, R. I. (2022). Methodology of using the google classroom mobile application in teaching informatics and information technologies for secondary school students. European Journal of Interdisciplinary Research and Development, 3, 158-162.
7. Muydinovich, R. I. (2021). Strategic Conditions for the Modernization of the Educational System in the 3-Renaissance. Central Asian Journal of Theoretical and Applied Science, 2(6), 85-92.
8. Расулов, И. (2014). Формирование понятий и навыков у учеников при создании ребусов при помощи компьютерных технологий. Актуальные проблемы современной науки, (3), 84-88.

9. Muydinovich, R. I. (2022). INFORMATIKA FANI YO ‘NALISHIDA ZAMONAVIY DASTURLASH TILLARINI O ‘RGANISHNING AHAMIYATI. In INTERNATIONAL SCIENTIFIC RESEARCH CONFERENCE (Vol. 1, No. 4, pp. 75-78).
10. Muydinovich, R. I. (2021). Problems and solutions of teaching in credit-module system in higher education institutions. The American Journal of Social Science and Education Innovations, 3(04), 721-727.
11. Muyidinovich, R. I. (2020). Advantage And Methodological Problems Of Teaching Computer Science In Modern Schools. The American Journal of Interdisciplinary Innovations and Research, 2(10), 13-16.
12. Rasulov, I. M. (2022). ADVANTAGE AND METHODOLOGICAL PROBLEMS OF TEACHING COMPUTER SCIENCE IN MODERN SCHOOLS. Ученый XXI века, 22.
13. Muydinovich, R. I. (2022). RAQAMLI TEXNOLOGIYALARNING RIVOJLANISHI TUFAYLI PAYDO BO'LGAN KASBLAR VA ULARNI O’RGANISH. PEDAGOGS jurnali, 13(1), 117-122.
14. Muydinovich, R. I. (2022, April). INTEGRITY AND CONTINUITY OF COMPUTER SCIENCE IN THE SYSTEM OF CONTINUING EDUCATION. In E Conference Zone (pp. 322-326).
15. Muydinovich, R. I. (2022). THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN PROVIDING INTERDISCIPLINARY INTEGRATION IN THE EDUCATIONAL PROCESS. Web of Scientist: International Scientific Research Journal, 3(12), 1281-1286.
16. Muydinovich, R. I. (2022). VOCATIONAL TRAINING OF SECONDARY SCHOOL STUDENTS BASED ON DIGITAL TECHNOLOGIES. Galaxy International Interdisciplinary Research Journal, 10(12), 209-216.
17. Meliboyev, T. T. (2022). ENVIRONMENTAL EMERGENCIES THEIR CLASSIFICATION AND DESCRIPTION. Protection MAKING EVENTS. INTERNATIONAL JOURNAL OF SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH ISSN: 2277-3630 Impact factor: 7.429, 11(12), 212-219.
18. Turg’unovich, M. T. (2022). ENVIRONMENTAL EMERGENCIES THEIR CLASSIFICATION AND DESCRIPTION. PROTECTION MEASURES. Open Access Repository, 9(11), 301-305.
19. Meliboyev, T. T. (2022). ENVIRONMENTAL EMERGENCIES THEIR CLASSIFICATION AND DESCRIPTION. Protection MAKING EVENTS. INTERNATIONAL JOURNAL OF SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH ISSN: 2277-3630 Impact factor: 7.429, 11(12), 212-219.
20. IE R., Yo S S., TT M. EMERGENCIES OF A SOCIAL COLOR //International Journal of Early Childhood Special Education. – 2022. – Т. 14. – №. 7.
21. IE, R., Yo S, S., & TT, M. (2022). EMERGENCIES OF A SOCIAL COLOR. International Journal of Early Childhood Special Education, 14(7).
22. Yokutkhon, S. (2022). HEALTHY LIFESTYLE. INTERNATIONAL JOURNAL OF SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH ISSN: 2277-3630 Impact factor: 7.429, 11(12), 254-259.
23. Yoqutxon, S. (2022). THE MAIN LAWS OF THE GROWTH AND DEVELOPMENT OF PRESCHOOL CHILDREN. Galaxy International Interdisciplinary Research Journal, 10(12), 194-197.
24. Jumakulov, X. Q., & Makhmudova, N. A. (2022). INDIVIDUAL RISK SOME ISSUES ABOUT THE MODEL. Open Access Repository, 8(12), 554-560.
25. Jumakulov, X. Q., & Makhmudova, N. A. (2022). SOLUTIONS OF SOME PROBLEMS ON RISK AND ITS INSURANCE OPPORTUNITIES IN ACTUARIAL MATHEMATICS. Conferencea, 37-41.

26. Kodiralievich, Z. K., Ahmadhuzhaevich, E. A., & Kumushbibi, A. (2022). TEACHING THE SUBJECT" PROBABILITY THEORY" IN KSPI TAKING INTO ACCOUNT THE MODERN EDUCATIONAL CONDITIONS OF THE REPUBLIC OF UZBEKISTAN. Open Access Repository, 8(12), 262-267.
27. Ergashev, A. A., & Jumakulov, H. Q. (2022). INNOVATIVE AND INFORMATION TECHNOLOGIES FORMATION OF STUDENTS'KNOWLEDGE, SKILLS AND ABILITIES. Galaxy International Interdisciplinary Research Journal, 10(12), 162-168.
28. Хонбобоев, Х. О., Полатов, Ф. У., & Икромов, М. А. Х. (2016). Tasviriy san'atni oqitishda interfaol metodlardan foydalanish. Молодой ученый, (3-1), 22-23.
29. Ikromovich, H. X. (2022). THEORETICAL AND PRACTICAL ISSUES OF USING INDUSTRIAL ROBOTS IN SECTORS OF THE ECONOMY. Galaxy International Interdisciplinary Research Journal, 10(12), 181-184.
30. Turdaliev, A., Usmonova, M., & Matholiqov, R. (2022). ОЛИЙ ТАЪЛИМ ТИЗИМИДА ЎҚИТУВЧИНИНГ МЕТОДИК КОМПЕТЕНТЛИГИНИ МОҲИЯТИ. Science and innovation, 1(B6), 450-455.
31. Qizi, U. M. S., & Yuldashevna, U. X. (2022). O'smirlar uchun kelajak kasbini tanlashda individual mayllarini aniqlash. Ta'lim fidoyilari, (19), 481-487.
32. MS, U., & Abdibannonjva, N. M. (2022). Use of Modular Teaching Technology in Biology Education. INTERNATIONAL JOURNAL OF INCLUSIVE AND SUSTAINABLE EDUCATION, 1(5), 272-274.
33. Safarov, N., & Mirsultonov, I. (2022, November). Development of mathematical model of drying the raw cotton during transportation in pipeline by hot air flow. In AIP Conference Proceedings (Vol. 2647, No. 1, p. 030034). AIP Publishing LLC.
34. Yuldashev, O., & Mirsultonov, M. (2019). Insurance of financial risks: problems and solutions. International Finance and Accounting, 2019(2), 29.
35. Safarov, N., Majidov, A., & Mirsultonov, I. (2022, December). Calculation of change of stock moisture content of the drying agent in the process of drying raw cotton in solar drying equipment. In IOP Conference Series: Earth and Environmental Science (Vol. 1112, No. 1, p. 012125). IOP Publishing.
36. Mirsultanov, I. M. (2022). CALCULATION OF THE COEFFICIENTA OF HEAT AND MOISTURE EXCHANGE OF DRYING OF RAW COTTON IN SOLAR-DRYING PLANTS. Galaxy International Interdisciplinary Research Journal, 10(12), 1201-1204.
37. Shuxratovich, Shirinov Feruzjon. "Technology for Working with Graphic Programs." Open Access Repository 9.12 (2022): 99-102.
38. Shuxratovich, Shirinov Feruzjon, and Botirov Muzaffarjon Mansurovich. "PROBLEMS WORKING WITH COMPUTER GRAPHICS APPLICATIONS IN THE LEARNING PROCESS." Open Access Repository 8.1 (2022): 92-95.
39. Marufovich, Aripov Masud, and Shirinov Feruzjon Shuxratovich. "DEVELOPING THE COMPETENCE OF FUTURE INFORMATICS TEACHERS TO WORK WITH GRAPHICAL INFORMATION." ONLINE SCIENTIFIC JOURNAL OF EDUCATION AND DEVELOPMENT ANALYSIS 2 (2022): 183-187.
40. Shirinov, F., & Mamasoliyev, A. (2021, March). AN INTELLIGENT COMPUTER NETWORK-BASED LEARNING PROCESS MANAGEMENT SYSTEM. In Euro-Asia Conferences (Vol. 3, No. 1, pp. 55-57).
41. Ikromovich, H. X., Meliqo'ziyevich, S. I., Mo'ydinovich, I. R., & Shuxratovich, S. F. (2022). MATHEMATICAL MODEL OF CHECKING THE BEHAVIOR OF AN INDUSTRIAL ROBOT IN THE

STRUCTURE OF A TECHNOLOGICAL MODULE FOR STAGNATION. International Journal of Early Childhood Special Education, 14(7).

42. Muydinovich, R. I., Valentinovna, M. S., & Xabibjonqizi, M. D. (2022). THE ROLE OF INFORMATION TECHNOLOGY IN MODERN METHODS IN THE SYSTEM OF HIGHER EDUCATION. International Journal of Early Childhood Special Education, 14(7).
43. Makhkamova, D. X. (2023, January). IMPROVING THE METHODOLOGY OF USING SOFTWARE TOOLS FOR THE FUTURE INFORMATICS AND INFORMATION TECHNOLOGY TEACHER. In E Conference Zone (pp. 64-69).
44. To'lanboevna, M. M. (2023). YOSHLARNI RUHIY VA MA'NAVIY SOG'LOM TARBIYALASHDA OILANING O'RNI. ILMIY TADQIQOTLAR VA JAMIYAT MUAMMOLARI, 1(2), 3-11.
45. Tulanboevna, M. M. (2022). PRIORITY RESPONSIBILITIES OF THE MANAGER IN THE FIELD OF PERSONNEL MANAGEMENT AND DEVELOPMENT IN THE SYSTEM OF VOCATIONAL EDUCATION. Open Access Repository, 8(12), 561-565.
46. Khasanov, A. R. (2022). LEARNING IS A COMPETENCY-BASED APPROACH AS A CONTENT UPDATE STEP. Galaxy International Interdisciplinary Research Journal, 10(12), 217-223.
47. Khasanov, A. R. (2022). Development of information competence of future informatics teachers as a pedagogical problem. Open Access Repository, 9(12), 73-79.
48. Xasanov, A. R. (2021, May). USE OF MODERN PEDAGOGICAL TECHNOLOGIES AND INTERACTIVE METHODS IN TEACHING COMPUTER SCIENCE. In E-Conference Globe (pp. 198-199).
49. Maxmudovich, X. X. (2022). CULTURE OF THE USE OF INFORMATION TECHNOLOGY IN THE EDUCATIONAL SYSTEM. Galaxy International Interdisciplinary Research Journal, 10(12), 268-271.
50. Makhmudovich, K. K. (2022). Building Models of Their Functions According to Single-Valued and Multivalued Compatibility Truth Table of Cryptographic Accelerations. Open Access Repository, 9(12), 44-49.
51. Sharifovich, A. S., Maxmudovich, H. X., & Mansurovich, B. M. (2022). Application Of Information Compression to Create New Hash Functional Algorithms of Rectangal Matrix Introduction. Texas Journal of Multidisciplinary Studies, 9, 54-57.
52. Sharifovich, A. S., Maxmudovich, H. X., & Mansurovich, B. M. (2022). Protocol For Electronic Digital Signature of Asymmetric Encryption Algorithm, Based on Asymmetric Encryption Algorithm Based on the Complexity of Prime Decomposition of a Sufficiently Large Natural Number. Texas Journal of Multidisciplinary Studies, 7, 238-241.
53. Aripov, M. M., Axmadaliyev, S. S., Xasanov, X. M., & Botirov, M. M. (2022). IMPLEMENTING MINIMUM GRAPH COVERING IN PYTHON. Ann. For. Res, 65(1), 10016-10021.
54. Останов, К., & Ботиров, М. М. (2022). О НЕКОТОРЫХ ОСОБЕННОСТЯХ ИНТЕГРАТИВНОГО ПОДХОДА ПРИ ИЗУЧЕНИИ МАТЕМАТИКИ. Проблемы науки, (6 (74)), 5-7.
55. Mansurovich, B. M., & Ogli, Y. M. D. (2022). PHP DASTURLASH TILI VA UNING IMKONIYATLARI. Ta'lim fidoyilari, 18(5), 77-80.
56. Ботиров, М. (2017). Морфология твердой фазы биологических жидкостей, как метод диагностики в медицине. Журнал проблемы биологии и медицины, (4 (97)), 179-182.
57. БОТИРОВ, М. ў¤ ЗА-ўАЛЛА НАВБАТЛАБ ЭКИШДА ОРАЛИЈ МУДДАТДА БЕДА ПАРВАРИШЛАШ. ЧОРВАЧИЛИК. ВЕТЕРИНАРИЯ, 8.

58. Ботиров, М., Ураимов, Т., & Усмонхужаева, Г. Андижанской сельскохозяйственный институт, Республика Узбекистан ВЛИЯНИЕ ПОКРОВНОГО ПОСЕВА ЛЮЦЕРНЫ НА ПОЖНИВНЫЕ, КОРНЕВЫЕ ОСТАТКИ И ВОДОПРОЧНЫХ АГРЕГАТОВ В ПОЧВЕ. ІЗДЕНІСТЕР, № 2 ИССЛЕДОВАНИЯ, НӘТИЖЕЛЕР 2017 РЕЗУЛЬТАТЫ, 147.