

ANALYZING MULTIMODALITY IN SPECIALIZED DISCOURSES

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U.S. UNIVERSITY WEBSITES AS SPECIFIC MULTIMODAL TEXTS

Стаття спрямована на дослідження специфіки інтерфейсів сайтів університетів США як мультимодальних гетерогенних текстів, які синтезують елементи освітнього, наукового та рекламного дискурсів. Завданням задля досягнення поставленої *мети* полягали в наступному: виявити та схарактеризувати типи мультимодальних засобів на веб-сайті американського університету, які сприяють його жанровому змішуванню та жанровому вбудовуванню; встановити характер взаємодії вербальних, невербальних і паравербальних компонентів веб-сайтів університетів США як специфічних мультимодальних текстів та визначити їх прагматичні особливості.

Методологічною основою дослідження став комплекс таких *методів*: аналіз (для вивчення мультимодальних компонентів університетського вебсайту як специфічного мультимодального тексту), синтез (для виявлення особливостей інтегрування мультимодальних засобів вебсайтів американських університетів), спостереження (для відбору фрагментів із вербальними засобами, які актуалізують візуальний контент та відбору візуальних фрагментів для актуалізації вербального контенту), метод дискурс-аналізу (для виокремлення конкретних фрагментів вебсайтів, які викликають інтерес авторів цієї статті та мають смислове підґрунтя), структурний метод (для аналізу університетського вебсайту як цілісної структури), функційний метод (для з'ясування прагматичного потенціалу мультимодальних елементів університетського вебсайту, які є засобами комунікації університету з читачем його вебсайту). Дослідження також спиралося на системно-функційний та соціально-семіотичний підходи. Обрана методологія дозволила дослідити специфіку реалізації мультимодальності веб-сайтів університетів США, реалізовану як симбіоз вербальних, невербальних і паравербальних елементів. Мультимедійний корпус дослідження складають веб-сайти п'яти американських університетів (Массачусетського технологічного інституту, Гарвардського університету, Пенсільванського університету, Ельського університету та Принстонського університету).

Головний висновок отриманих результатів полягає в тому, що всі досліджувані університети використовують семіотичні ландшафти, які є в їхньому розпорядженні, задля зображення привабливих освітніх брендів на своїх веб-сайтах як специфічних мультимодальних текстах. Концепція мультимодальності веб-сайтів аналізованих університетів США проявляється у візуальному контенті через низку параграфемних та інфографічних елементів, синтез яких зумовлений поєднанням мовних засобів, візуального контенту та веб-технологій сучасної побудови веб-сайтів. Найпоширеніший візуальний контент, який використовують на веб-сайтах університетів США, охоплює: унікальні фотографії та модус кольору (фото університетів, їх студентів, аудиторій, лабораторій, подій

тощо), що допомагає чітко проілюструвати пропонувані освітні послуги та забезпечувати бажаний емоційний настрій; інфографіка та візуалізація даних, що є ефективним способом поєднання дизайну тексту з малюнками, таблицями, діаграмами тощо для подання складної інформації; відео інтерв'ю зі студентами, випускниками, відео про навчання в університеті. Встановлено, що використання відео є досить популярною формою візуального контенту. За допомогою відео університети не тільки урізноманітнюють контент своїх веб-сайтів, а й задовольняють певним чином потреби тих користувачів, які віддають перевагу візуальним образам. Зазначено, що на основі взаємодії різних семіотичних систем, створюється єдиний візуально-структурний і функційно завершений образ привабливого та популярного університету серед читачів певного вебсайту.

Ключові слова: вебсайт, гіпертекст, дискурс, елементи інфографіки, жанр, мультимодальність, мультимодальний аналіз, мультимодальний текст, параграфемічні елементи.

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Introduction

The modern communication environment is characterized by a variety of resources, and constant improvement of forms of communication, which is carried out thanks to the hyperactive development of information technology. Revolutionary innovations in this field have made possible what seemed completely impossible decades ago. As “digital technologies have given a majority access to the resources needed to produce and disseminate multimodal texts at relatively low cost. The new technologies now draw our attention to what had previously been possible to overlook” [Bezemer, Jewitt, 2018, p. 295]. The notion of “digitally-mediated communication” reflects the use of various digital technologies in the process of communication in general [Flanagin, 2020], and viewed as human-to-human interaction that is primarily text-based, mediated by networked computers, and provides a wealth of data about human behavior and language use [Herring, 2004; Herring, Stein, Virtanen, 2013].

The expansion of the horizons of linguistic research in the digital age is due to the activation of information technologies, which contributed to the transformation of traditional communicative trends and the generation of innovative ones, which are implemented thanks to the symbiosis of verbal, non-verbal and paraverbal means in the modern communicative environment. In this regard, a comprehensive study of modern multimodal communication, which is realized in the communicative environment of websites as a result of the convergence of various modes, becomes especially significant. Additionally, the relevance of the study is due to the increased interest of linguistics in the Internet discourse and the presentation of universities through the effective use of multimodal resources on the Internet, in particular on their websites. And for this study, it was of interest to investigate the realization of multimodality of the U.S. university websites as the synthesis of educational, scientific and advertising discourse.

Aims and objectives

The article aims to study the specificity of the interfaces of the U.S. university websites as multimodal heterogeneous texts that synthesize elements of educational, scientific and advertising discourses. The overall objectives to achieve the established goal were as follows: 1) to identify and distinguish the types of multimodal means on the U.S. university website, which contribute to its genre mixing and genre embedding; 2) to establish the nature of the interaction of verbal, non-verbal and para-verbal components of the U.S. university websites, and to determine their pragmatic features.

Methodology

The methodological basis of the research is a complex of the following methods: analysis (to study multimodal components of the university website as a specific multimodal text), synthesis (to identify the features of the integration of multimodal means of the websites of American universities), observation (for the selection of fragments with verbal means that

actualize the visual content and the selection of visual fragments to actualize the verbal content), the method of discourse analysis (to highlight specific fragments of websites that arouse the interest of the authors of this article and have a meaningful content), structural method (to analyze the university website as a whole structure, which is provided by separate means of cohesion), functional method (to clarify the pragmatic potential of multimodal elements of the university website, which are means of communication between the university and the reader of its website). The study was underpinned by the methodology of critical discourse analysis, first developed by S.C. Herring [2004] and the principles of multimodal analysis by L. Pauwels [2005; 2012], which were subsequently supplemented by M. Stack [2016]. As M. Stack notes, “web sites require new types of analysis in order to take into account their multimedia nature, which is the result of collective authorship” [Stack, 2016, p. 120]. According to Stack method involves recording first impressions of the site, inventorying the most significant topics and characteristics of the site, analyzing the content and hierarchy of information on the site (according to the degree of significance and accessibility), identifying “built-in” points of view and broadcast discourses, analyzing site navigation, as well as contextual analysis of the site to identify “cultural, technological and political hierarchies” [Stack, 2016, pp. 121–122].

The study employed: 1) the system functional approach, drawing on the provisions of linguistic metafunctions [Halliday, Ruqaiya, 1989], and focusing on the categories of the grammar of visual design introduced by Kress and van Leeuwen [2006]; 2) the socio-semiotic approach, grounding on the interrelationship of modes, their compatibility and social needs for which they serve, making meanings.

The chosen methodology made it possible to conduct a study of the multimodality of the websites of the U.S. universities, realized as a symbiosis of verbal, non-verbal and paraverbal resources.

The sample consists of the websites of the following five American universities: Massachusetts Institute of Technology (*MIT*) [Massachusetts, 2023], Harvard University [Harvard, 2023], University of Pennsylvania [Pennsylvania, 2023], Yale University [Yale, 2023], Princeton University [Princeton, 2023].

The choice of these universities was determined by the following criteria, according to which a higher education institution must: 1) be broadly specialized; 2) actively present themselves in the international media environment; 3) occupy a fairly high position in the world ranking (according to the international QS World University Rankings 2023, the selected universities are ranked 1, 5, 13, 14 and 20, respectively [Sowter, 2023]; 4) have a high-quality website.

Furthermore, the selection of the universities was substantiated by the desire to achieve relative compatibility of the data: even if it is practically impossible to avoid the significant variability of elements given in any selection, the universities in the corpus are at least similar in the long run due to their traditions and prestige as respected centers of research and education throughout the world. It is worth emphasizing that even if genres in general represent a dynamic field that is constantly evolving (manifested in trends of convergence, conventionalization, alternating with trends of divergence, individualization), web genres carried by the fluid environment of Internet communication are particularly susceptible to change. Therefore, it is important to note that the corpus data used for this analysis was obtained between August and October 2023.

Literature overview

The widespread use of the Internet has opened an incomparable environment for communication, which has become a densely populated set of more or less clear forms, more or less established genres. Genre is viewed as a social, cultural entity that reflects both historical development and contemporary needs of society [Bateman, 2008; Bach, 2011; Bhatia, 2004; Tárnýková, 2002; Tomášková, 2011], and as a part of a dynamic common repertoire subject of continuous evolution [Santini, Mehler, Sharoff, 2010], even more today within the framework of the latest technologies. The synchronic common repertoire always spans the gap between traditional and established genres on the one hand and new genres on the other, between emerging genres that gain positions in certain spheres of discourse and genres that sink down the path to extinction. University websites represent a new specific genre of institutional discourse.

Nowadays, university websites, like other institutional websites, are characterized as colony texts [Dontcheva-Navratilova, 2006; Tárnyková, 2002; Tomášková, 2011]. The term “colony text” was coined by M. Hoey [1986] to refer to the specific type of text “the components of which do not derive their meaning from the sequence in which they are placed, and in which the reader chooses the selection and order of elements to be accessed” [Dontcheva-Navratilova, 2006, p. 2]. These discursive colonies presuppose discontinuous structures built from a series of constituent texts of various subgenres, united by a common communicative goal – the presentation of the institution and its promotion. The complex composition of the web colony is further enriched by elements of genres other than the institutional discourses that permeate the homepage as well as the ranking of levels of the hypertext. As for the latter, the term was coined by Ted Nelson in the 1960s and is one of the key concepts that makes the Internet work [Nielsen, 1995]. Without hypertext, following a link on a topic to a related article on that topic – one of the primary means of navigating the Web – would be impossible [Dontcheva-Navratilova, 2006; Nielsen, 1995].

Being heterogeneous in nature, the genre of university websites is a hybridized genre [Bhatia, 2004], formed by both key mechanisms of hybridization – genre mixing and genre embedding. The discourse of a university website lies in the interweaving and interaction within its framework of various types of discourse, which are refracted through the prism of the hypertext of the university website, acquiring new properties. Since elements of educational, scientific and advertising discourses are introduced into the discourse of university websites as marketing communication instruments, both at the level of their content and at the level of their form [Braddy, Wuensch, 2003; Caglar, Mentis, 2012; Jan, Ammari, 2016].

Thus, a unifying communicative goal of the hybridized genre of university websites is realized through three main features – hypertextuality, interactivity and multimodality, which are the result of the interaction of verbal and non-verbal elements.

A number of studies have shed light on the research into university websites, in particular: their web design and correlation between the visual resources with written texts and messages presented on the websites (e.g., A. Baldry and K. O’Halloran [2019], L.M. Cerdá Suárez [2016], N. Fairclough [1993], Y. Zhang and K. O’Halloran [2013] and others); analyzing websites as cultural expressions (e.g., S. Bernardini, A. Ferraresi and F. Gaspari [2010], L. Mafofo and F. Banda [2014], L. Pauwels [2012]). University websites, as an essential type of “cultural expression” [Pauwels, 2012, p. 247], are considered multimodal texts that construct discursive representations of educational practices in a specific geographic and sociocultural environment of the modern world. In turn, M. Thelwall [2005] has analyzed and contrasted the textual peculiarities of university websites.

Some authors (e.g., Tomášková [2015], Nasti, Venuti and Zollo [2017]) have given an insight into the ways how universities use multimodal elements to advertise their academic and research experience, thus attracting will-be students. As R. Tomášková notes, various images contribute to “the ideational, interpersonal and textual meanings conveyed by the websites to prospective students” [Tomášková, 2015, p. 77].

Although studies on multimodal features of university websites (in particular, they relate to the universities of Australia, the UK, New Zealand, North America and the Czech Republic) have been conducted by many authors, this issue is still insufficiently explored. In particular, to our knowledge, there is no research into the realization of multimodality in the communicative space of the U.S. university websites as heterogeneous blends of educational, scientific and advertising discourses.

Our choice of American universities is explained, firstly, by the aforementioned, and, secondly, by the fact that today, the USA has become the leader of the general globalization processes of social development as a result not only of its economic well-being and political power but also of progressive directions in the field of education, performing at the same time as an active producer and designer of multimodal university websites. Moreover, few studies have focussed on the complex of paragraphemic and infographic elements of the U.S. university websites in terms of their unique multimodal nature.

Results and discussions

The range of multimodal resources identified in the modern communicative space of the websites of American universities under study, based on common features, is combined into a single composition of several groups, namely: paragraphemics (text segmentation, graphic effects, font, color, images) and infographics (diagrams, tables, maps). Let us consider them in detail.

Paragraphemic elements

It should be noted that there is now a special interest in paragraphemics in connection with the development of visual culture in society, against the backdrop of new technologies. Paragraphemic analysis allows considering the functions of color, font, signature, compositional and spatial elements, created using paralinguistic means [Kunanets, Karp, Yaremchuk, 2021].

Regarding the paragraphemic elements, the information presented on the websites of American universities under study is placed inextricably with animated videos (Flash animation technology), static images, slider images, interactive paragraphemic elements, as well as interactive text links, when you hover the cursor over which appears site context menu. All these paragraphemic elements are characteristics of the representation of electronic hypertexts of universities, attract readers and, of course, provide a more convenient form of obtaining information about a promising place of study and scientific activity. Additionally, representation of an American university on the Internet is, of course, impossible without web content of social media, which are a factor in enhancing the visual impact on the Internet user: hyperlinks to well-known interactive multimodal platforms Facebook, Twitter, LinkedIn, Instagram, and YouTube.

The text segmentation and graphic effects group consist of text placement on the page, line spacing, text width, its positioning, corrections, underlining, highlighting. In most cases a verbal text has a classic linear placement on the page or is divided into several columns (Fig. 1). On the basis of the factual material under study, we can assert that there are no clearly defined rules and criteria for text placement on the U.S. university websites. It is obvious that the vast majority of the material is presented linearly evenly with the same interval, sometimes it is positioned in columns.

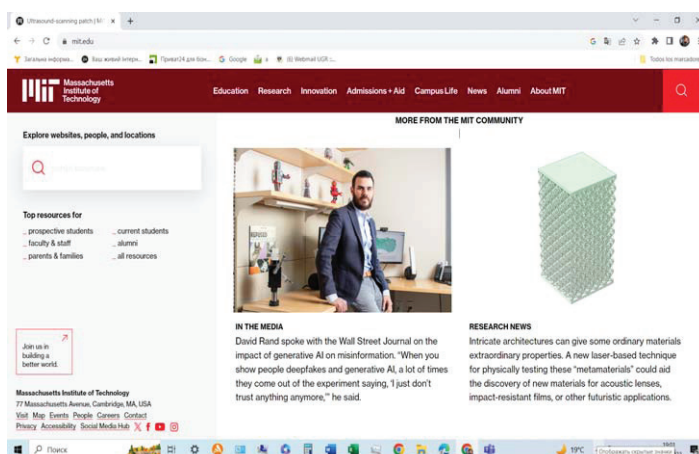


Fig. 1. MIT Community [Massachusetts, 2023]

The font variations presuppose italics, capitalization, bold, simultaneous use of several typefaces and font sizes. Basic fonts are the most common for the websites of the U.S. universities. These fonts are designed to make the process of perception as fast as possible for the reader. The university websites under scrutiny mostly utilize traditional fonts and avoid decorative ones that can make the process of reading information difficult. It has been established that the importance of information directly depends on the size of the font. The larger its size, the more important the information, the smaller, the less important the message (Fig. 2).

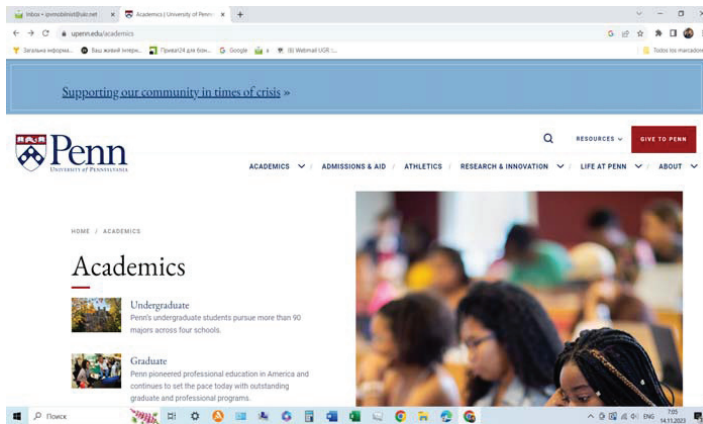


Fig. 2. Academics (University of Pennsylvania) [Pennsylvania, 2023]

Along with writing in italics, capitalization, bold, simultaneous use of several typefaces and font sizes, it is necessary to pay attention to the color of the font, which mostly plays its full role against the background of verbal (font objects) or non-verbal objects, coloring them.

The selection and combination of visual elements provided on the university websites under study are wholly formed by their twofold communicative purpose: to provide an all-round, many-sided view of the higher education institution and to promote it. The websites paint a picture of the diverse environment these universities offer, presenting a wide array of activities and happenings, their localizations or contexts, and most essentially, their participants. The images are mostly photos with students in a central and prominent place, sometimes showing students and teachers together (Fig. 3).



Fig. 3. Education at MIT [Massachusetts, 2023]

If teachers still appear in the frame, they are either in the background or positioned as interacting facilitators in a two-way action with students (Fig. 4–5).

In photographs where the vector emanates unidirectionally from the students to the absent target, the teachers are often imaginary rather than present, and again this setting helps the viewer to make the image meaningful, albeit elliptical (Fig. 3 (above) and Fig. 6). Photographs featuring only faculty appear only on the main pages of the university current events and achievements sections, and not on the applicant-oriented sections of the websites.



Fig. 4. Undergraduate liberal arts concentration from Harvard College [Harvard, 2023]



Fig. 5. Collaboration at MIT [Massachusetts, 2023]



Fig. 6. Undergraduate education at University of Pennsylvania [Pennsylvania, 2023]

As mentioned above, students are almost always at the center of attention. And everything that the university offers comes to the viewer through the images of narrative structures in which students are mostly agents of action.

Dynamic narrative processes (Fig. 7) greatly outnumber static conceptual structures – that is, structures that do not have an activity distinguished by a trajectory, but instead represent an object or objects classified into sets, exhibiting or suggesting certain qualities.



Fig. 7. Commencement at Harvard University [Harvard, 2023]

Concept images are typically used on university websites, associated with headlines and opening paragraphs of news articles reporting current happenings and accomplishments. They are representational in nature, indicating certain qualities rather than demonstrating them, and they create an atmosphere of a bright, but harmonious educational environment: all the universities analyzed take care to present how they nurture historical legacy and at the same time keep up to date with innovative technologies. Conceptual images, as a rule, show the subjects of the study as aesthetically attractive and worthy objects in terms of education (Fig. 8).

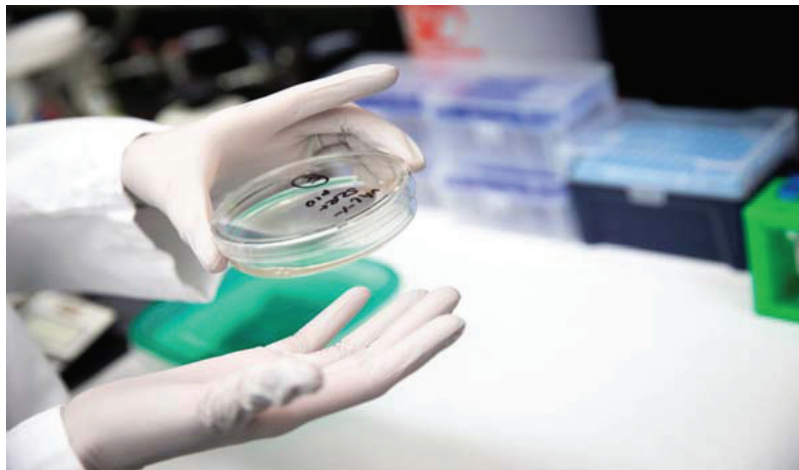


Fig. 8. Sciences at Harvard University [Harvard, 2023]

In general, on each university website under study, the collection of photos provides a diverse and colorful atmosphere: campuses, laboratories, sports centers, etc. In addition to university premises, photographs often depict the life of students in its various manifestations and places – sports events, research, excursions, etc. At the same time, the atmosphere is given prominence (through perspective, camera angle and colors), and this makes students naturally blend in with the environment (Fig. 9–10).



Fig. 9. Sports life at Princeton University [Princeton, 2023]



Fig. 10. Friendships & Memories to Last a Lifetime at Princeton University [Princeton, 2023]

The photographs depict students in a variety of settings: students appear either in groups or as independent individuals representing a wide range of social variables (they are of different ages, nationalities, races, identities and backgrounds; they express their interests in different areas of life). The diversity of the mixed community is united by the active role that individuals play in the narrative processes, their facial expressions indicating interest and motivation in education (Fig. 10–11). Additionally, the diversity of students' portraits reflects the desired diversity of prospective students – the target audience of the analyzed websites and provides a rich selection of images with which they can identify themselves (Fig. 10–12).



Fig. 11. School of Humanities, Arts, and Social Sciences MIT [Massachusetts, 2023]



Fig. 12. Students' life (Harvard University) [Harvard, 2023]

It has been established that by far the most popular ways in terms of visual content on the university websites are student-centred images and photos on campus landscape themes (both exterior and interior). Along with the positive and energetic atmosphere that those photos create, the images contribute significantly to the promotional goals of website presentations. The images represent the features and values provided in the texts, thus confirming what the texts illustrate: an animated, gaily atmosphere, an experiential learning, a friendly academic community of diverse personalities, and a multicultural university environment.

Also, the most popular option is statement, often set against a campus landscape (Fig. 13). The image in Fig. 13 is supported by a tagline, perhaps echoing the brand's current messaging.

Moreover, it is worth noting that the corporate identity (color logo) is an important element of the university's positioning in the educational market. The main task of a corporate identity is to form client associations with a specific brand of a higher education institution. The mode of color is directly related to this. Since, each website under study has one or more prevailing colors. This is because historically, the colors of institutions of higher education in the United States have been used as a way to clearly differentiate between them, especially when meeting at sporting events [Gentleman, 2017]. These colors are completely different for each university and in cases where one color is the same, the additional mandatory colors will be different. MIT's

official colors are cardinal red (an intense tone that sends strong emotions) and grey (acts as a soothing, understated tone against the backdrop of bold red) (Fig. 14–15).

The college colors for Harvard University are crimson and black (Fig. 16). The college colors of Princeton are orange and black (Fig. 17). *Red and blue are the traditional colors for the University of Pennsylvania* (Fig. 18). Blue is the Yale's identifying color. Additional colors (e.g., grey and yellow on the website of Yale) may be used as long as they complement, rather than clash with, the colors in the primary color palette (Fig. 19).

In addition to the corporate color, the logo image plays a special role on the website of each American university. The U.S. university websites place the institution's logo or identifying mark of a corresponding color at the top left-hand side (Fig. 14–19).

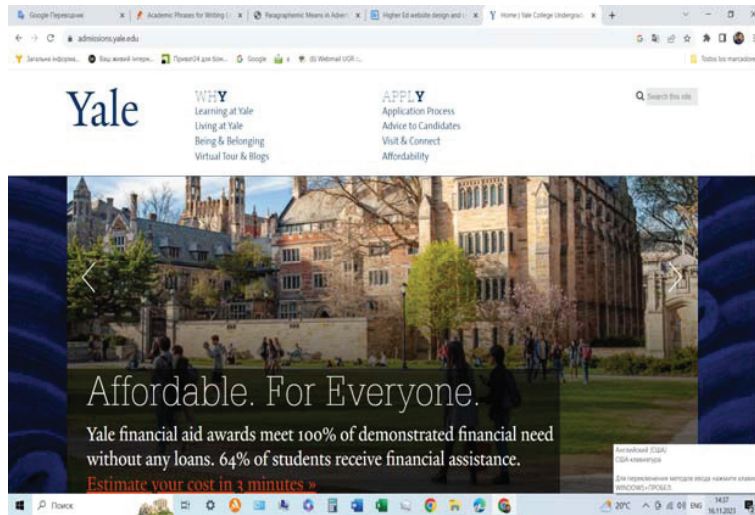


Fig. 13. Yale University [Yale, 2023]



Fig. 14. Massachusetts Institute of Technology (MIT) [Massachusetts, 2023]

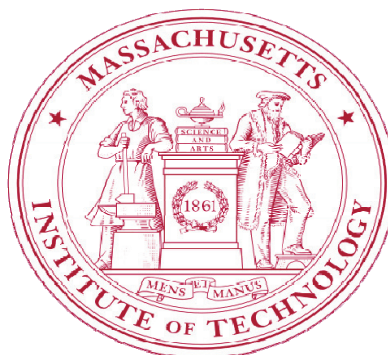


Fig. 15. The coat of arms (MIT) [Massachusetts, 2023]

HARVARD
UNIVERSITY



Fig. 16. Harvard University [Harvard, 2023]



PRINCETON
UNIVERSITY

Fig. 17. Princeton University [Princeton, 2023]



Fig. 18. Pennsylvania University [Pennsylvania, 2023]



Fig. 19. Yale University [Yale, 2023]

It is well-known that older American universities usually have a coat of arms on their logo. E.g., Yale has it in blue, which is the official color of the university. The coat of arms of Yale features the Hebrew words “Urim v’Thummim,” which translates to “Light and Truth.” The same words are written at the bottom of the coat of arms in Latin – “Lux et Veritas” (Fig. 19).

Princeton was once a theological seminary, which is why the university’s motto, as depicted on its coat of arms, is “*Dei sub numine viget*” (translated to “Thrives under the power of God”) (Fig. 17). The orange and black colors of the coat of arms also reflect the main colors of the university.

The Massachusetts Institute of Technology logo is presented in the form of an abbreviation – MIT, directly deciphering the name of the university (Fig. 14). It is noteworthy that this university also has a coat of arms depicting a craftsman and a scientist. The pedestal on which both rest symbolizes the unity of science and labor (Fig. 15).

The Harvard University logo features a shield with the word *veritas*, which translates to “truth.” The shield served as the symbol of Harvard for over 200 years before it became the official logo. It is also worth noting that the Harvard logo uses the Garamond font. This font is characterized by moderate contrast, large letters, the intersection of round elements with vertical ones is made at a slight angle, which makes the internal space of the characters light and light (Fig. 16). The font is easy to read in small sizes.

Being the most important way to ensure fast and effective communication of educational institutions with their target audience, the discourse of university websites has a pronounced pragmatic orientation. The purpose of the analyzed type of heterogeneous discourse is to create an image of an “ideal” educational institution, attract potential students, researchers, sponsors, and disseminate the latest achievements in the field of science and education.

In terms of goal setting, the texts of university websites are very close to advertising discourse, the goal of which is to sell a product or service. However, functioning in this context, the features of advertising discourse undergo some changes. Thus, the goals of advertising discourse are influenced by educational discourse. The goal of the latter is the socialization of the individual, the orientation of a person towards acquiring knowledge. Therefore, socially significant factors take first place in realizing the goal of the discourse of a university website. For example, the university guarantees its high competitiveness in the labor market and promises to provide students with the necessary amount of knowledge for this (Fig. 20); promises to give students the opportunity to discover their abilities (Fig. 21), which brings this discourse closer to social advertising.



Fig. 20. Education at MIT [Massachusetts, 2023]



Fig. 21. MIT's theatre [Massachusetts, 2023]

On the main page of the website of each American university under study, there is a link to an article about the successes of scientists or students of this educational institution. There is also a link to events related to the university and the discoveries of its scientists (e.g., Harvard Gazette (official news from Harvard University covering innovation in teaching, learning, and research – <https://news.harvard.edu/gazette/>; MIT News – <https://news.mit.edu/>). Such university media play several roles at once:

- attracting additional audience to the main website;
- increasing the loyalty of applicants to the university;
- assistance to students who have not yet decided on the topic of their future research;
- additional channel for PR.

Infographic elements

Among the identified multimodal tools that function in the modern communicative space of the websites of American universities, a separate group is made up of infographics, which include various diagrams, schemes, tables and maps. These graphic objects have different shapes, sizes, and therefore structure. Infographic elements are a modern type of fast and accessible information transfer on websites. It is well-known that Internet users are lazy, and they are not interested in reading a long text, no matter how beautifully and structured it is. That is why the graphical method of presenting some complex information to the user is more preferable [Jaleniauskiene, Kasperuniene, 2023].

An infographic on the U.S. university websites under study is a picture that displays certain information using text and graphics. As a rule, an information graphic is a brief description of the text of an article that focuses attention on its main points. Infographics do not always completely replace the text (Fig. 22); more often it is its addition.

Thus, the research corpus makes it possible to assert that there are several possible ways of combining verbal and non-verbal infographic elements:

- a verbal text that has a classic linear placement on the page or is divided into several columns, accompanied by a diagram, scheme, table, etc. (Fig. 22);
- a map illustrating part of the presented material in a verbal way (reference in the text to the infographic, or its absence) (Fig. 23).

Using infographic elements, you can visually present complex information, or clearly delineate the stages of a multi-stage process, such as admission to a university.

It should also be noted that a tabular presentation of information related to one topic or problem facilitates its quick comparison. Schemes primarily structure information. Their use is appropriate when any other means of illustration fail to represent something. Therefore, they can be considered one of the most successful means that can show the audience the necessary information in detail and step by step. Diagrams (circular, columnar, linear) clearly represent statistical data and their relationship. There are cases when this makes verbal information difficult. Consequently, it is appropriate to use them when alternative ways of displaying data cannot be found.

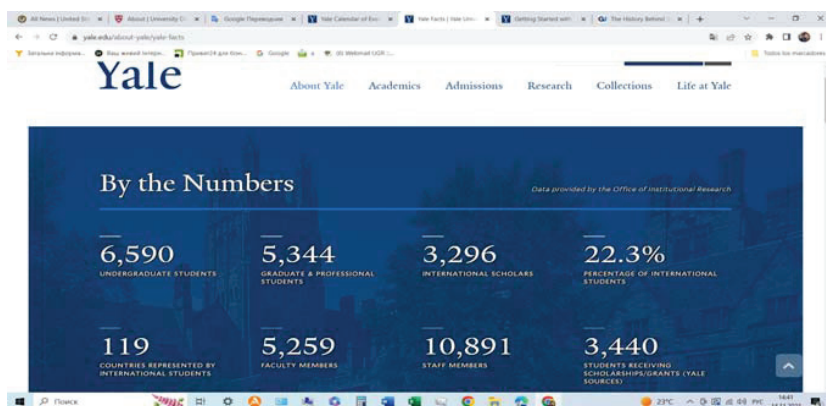


Fig. 22. Yale in numbers [Yale, 2023]

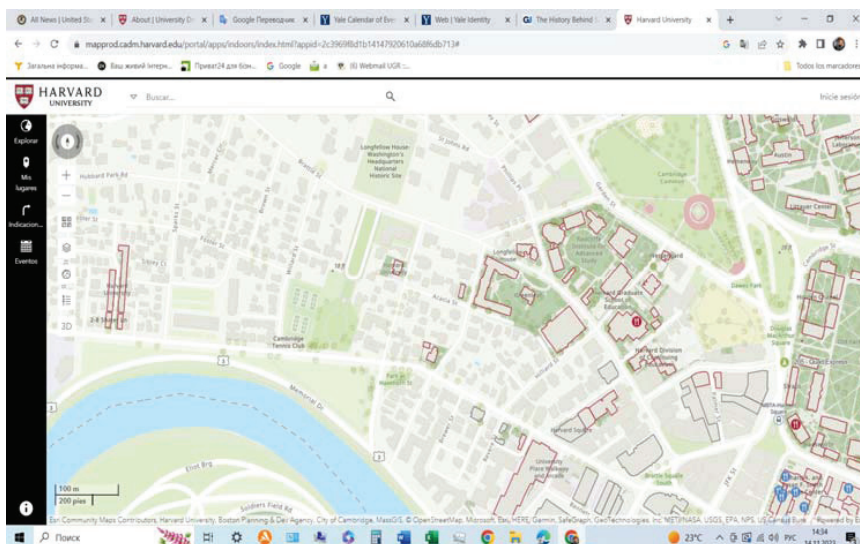


Fig. 23. Harvard campus [Harvard, 2023]

All mentioned above demonstrates how multisemiotic modes can be made to coexist and complement each other as forms of meaning-making on the U.S. university website as the synthesis of educational, scientific and advertising discourses.

Conclusions

The main conclusion that can be drawn is that the complex discursive nature of the websites under study is determined by the features inherent in advertising (the benefits of services to influence the choice of the recipient), educational (the talk about the educational process and educational services) and scientific (information of a scientific nature is provided) discourses. All universities under study employ semiotic landscapes at their disposal to portray attractive brands on their websites. Being the most important way to ensure fast and effective communication of educational institutions with their target audience, the discourse of university websites has a pronounced pragmatic orientation. The purpose of the analyzed type of heterogeneous discourse is to create an image of an “ideal” educational institution, attract potential students, researchers, sponsors, and disseminate the latest achievements in the field of science and education.

The concept of multimodality of the analyzed U.S. university websites is manifested in visual content through a number of paragraphemic and infographic elements, the synthesis of which is due to the combination of language tools, visual content and web technologies of modern website construction. The most common visual content exploited on the U.S. university websites embraces: unique photographs and “color” mode (photos of the university and its students, classrooms, laboratories, events, etc.), which helps to clearly illustrate the educational services offered, and give the desired emotional mood; infographics and data visualization, which is an effective way to combine text, pictures and design to present complex information (infographics do not always completely replace the text, more often it is its addition or retelling); video interviews with students, graduates, videos about studying at a university are one of the means to convince potential students to make an admission decision. Using video is a fairly popular form of visual content. With the help of video, the universities can not only diversify the content of their websites, but also satisfy the needs of those users who prefer visual content. Placing various videos on website pages allows solving the problems of reinforcing textual content, strengthening the arguments “for” admission and attracting applicants to university educational programs. In such a way, on the basis of the interaction of different discourses (advertising, educational and scientific) and various semiotic systems, a single visual-structural and functionally complete image of an attractive and popular university is achieved among readers of its website.

Therefore, the implementation of multimodality of university websites contributes not only to the effective representation of their sociocultural events, but also acts as an appropriation of advertising, educational and scientific discourses due to various semiotic resources to create global competitive educational brands.

Future research might apply to a corpus-based method, which can be usefully exploited to validate the findings reported in this article.

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U.S. UNIVERSITY WEBSITES AS SPECIFIC MULTIMODAL TEXTS

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The aim of the article was to study the specifics of the interfaces of the U.S. university websites as multimodal heterogeneous texts that synthesize elements of educational, scientific and advertising discourses. The overall objectives to achieve the established goal were as follows: to identify and distinguish the types of multimodal means on the U.S. university website, which contribute to its genre mixing and genre embedding; to establish the nature of the interaction of verbal, non-verbal and para-verbal components of the U.S. university websites, and to determine their pragmatic features.

The methodological basis of the research was a complex of the following *methods*: analysis (to study multimodal components of the university website as a specific multimodal text), synthesis (to identify the features of the integration of multimodal means of the websites of American universities), observation (for the selection of fragments with verbal means that actualize the visual content and the selection of visual fragments to actualize the verbal content), the method of discourse analysis (to highlight specific fragments of websites that arouse the interest of the authors of this article and have a meaningful content), structural method (to analyze the university website as a whole structure, which is provided by separate means of cohesion), functional method (to clarify the pragmatic potential of multimodal elements of the university website, which are means of communication between the university and the reader of its website). It also employed the system functional (drawing on the provisions of linguistic metafunctions, and focusing on the categories of the grammar of visual design) and the socio-semiotic (grounding on the interrelationship of modes, their compatibility and social needs for which they serve, making meanings) approaches. The chosen methodology made it possible to conduct a study of the multimodality of the websites of the U.S. universities, realized as a symbiosis of verbal, non-verbal and paraverbal resources. The multimedia corpus of the research consists of the websites of five American universities (Massachusetts Institute of Technology, Harvard University, University of Pennsylvania, Yale University and Princeton University).

The main conclusion that can be drawn is that the complex discursive nature of the websites under study is determined by the features inherent in advertising (the benefits of services to influence the choice of the recipient), educational (the talk about the educational process and educational services) and scientific (information of a scientific nature is provided) discourses. All universities under study employ semiotic landscapes at their disposal to portray attractive brands on their websites. Being the most important way to ensure fast and effective communication of educational institutions with their target audience, the discourse of university websites has a pronounced pragmatic orientation. The purpose of the analyzed type of heterogeneous discourse is to create an image of an "ideal" educational institution, attract potential students, researchers, sponsors, and disseminate the latest achievements in the field of science and education. The concept of multimodality of the websites of the analyzed U.S. universities as specific multimodal texts is manifested in visual content through a number of paragraphemic and infographic elements, the synthesis of which is due to the combination of language tools, visual content and web technologies of modern website construction. The most common visual content exploited on the U.S. university websites embraces: unique photographs and "color" mode (photos of the university and its students, classrooms, laboratories, events, etc.), which helps to clearly illustrate the educational services offered, and give the desired emotional mood; infographics and data visualization, which is an effective way to combine text, pictures and design to present complex information (infographics do not always completely replace the text, more often it is its addition or retelling); video interviews with students, graduates, videos about studying at a university are one of the means to convince potential students to make an admission decision. Using video is a fairly popular form of visual content. With the help of video, the universities can not only diversify the content of their websites, but also satisfy the needs of those users who prefer visual content. Placing various videos on website pages allows solving the problems of reinforcing textual content, strengthening the arguments "for" admission and attracting applicants to university educational programs. In such a way, on the basis of the interaction of different discourses (advertising, educational and scientific) and various semiotic systems, a single visual-structural and functionally complete image of an attractive and popular university is achieved among readers of its website.

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