

UDC 811

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DATA JOURNALISM EDUCATION: PROBLEMS AND PERSPECTIVES IN AZERBAIJAN

Due to the development of technology as well as global web space, new trends and directions in the field of journalism are emerging as the nature and form of the media change. One of them is data journalism, which is already widely used in Western developed countries. Data journalism is an increasing form of investigative journalism. However, its implementation to the Azerbaijani media system is somewhat weak. At present, the traditional part of the Azerbaijani media rarely uses data applications. In contrast, new media organizations are increasingly using data journalism. Since the development of each field depends on its education, this article will discuss the nature of data journalism education in universities and the education level of data journalism in Azerbaijan, more precisely problems and perspectives. Generally, as a crucial field of media data journalism education appears to be a very young discipline in our country. Even in the journalism faculties of many universities, data journalism is not included in the curriculum. So far, digital journalism has been included in the curriculum of only two universities in Azerbaijan, namely ADA University and Baku State University. Although the audience is interested in this field, data journalism is not even taught as an elective in the other two educational institutions. In different years, different courses and organizations have conducted trainings and seminars on the promotion of data journalism. For instance, The Eurasian Cooperation Foundation and the Caucasus Research Resource Center and USA Embassy, Data Hub LLC with the financial support of the US Embassy in Baku, the Eurasian Cooperation Foundation and the Caucasus Research and Resource Center, also Mingachevir Media Center, Anadolu Agency and TIKA (Turkish Cooperation and Coordination Agency) and other organizations organized distance and offline trainings on Data Journalism. In June and July 2021, GIPA and the US Embassy in Azerbaijan jointly organized distance data journalism training for journalists. Naturally, these measures are in the minority for such a difficult and necessary area. However, for the development of this field, it is planned to include data journalism in higher education institutions in the curriculum of both bachelor's and master's degrees in the near future.

Key words: data, media, journalism, internet, digitalism, education, curriculum, infographics, perspectives.

Introduction. Nowadays people's trust in the media is gradually declining. In this case data journalism and its related policies are much more reliable regarding transparency and freedom of speech. Therefore as a future unique trustworthy realm, data driven journalism is considered potentially comprehensive as well as vital.

The perfect development of each field goes mainly through the education system. Data journalism, digital media or in other word computer assisted journalism require special training because it combines writing skills and technical knowledge altogether. Therefore, in addition to journalistic skills, those who want to work in this field of journalism must be well versed in computer programs that are important for data collection, filtering and visualization process. Generally one of the major goals of the journalism is education and education in turn aids development. Because journalism education provides the theoretical basis, research methods, and training for effective and responsible journalism practice.

Lamentably saying, data journalism as a very young discipline in various universities and educa-

tional centers in some parts of the world is in a low level. There are not enough academically trained instructors with the skills of data analysis, coding and data visualization to conduct these interdisciplinary programs in the higher education sector in some countries. However, this area has already begun to develop.

Conceptualization. One of the main directions of new media is data journalism. "If we look deeper into journalism, everything we do - photos, videos, audios, texts and other units and zeros - consists of. The number of murders, diseases, corruption, political success. The success of everything is shown by its statistics, i.e. figures" [Bashirli, Izzatli, Javadova, 2017, p. 48].

According to Paul Bradshaw, both 'data' and 'journalism' are troublesome terms. Some people think of 'data' as any collection of numbers, most likely gathered on a spreadsheet. 20 years ago, that was pretty much the only sort of data that journalists dealt with. But we live in a digital world now, a world in which almost anything can be-and almost everything is described with numbers [3]. Simply put, data journalism is the use of data in journalistic analysis and

reportage. This is not a new concept as journalists have used data such as statistics and incorporated graphs to support reportage for many years. Data journalism is digital storytelling that is very rich in content and, when delivered in the online environment enables readers to explore the story interactively [4].

In addition to preserving the principles of traditional journalism, it provides additional reporting capabilities, such as the ability to collect and structure information, find links between thousands of documents, and create infographics.

The momentum for data journalism is being driven by two major factors: the exponential growth of online access to datasets, particularly through open government data initiatives, and the development of powerful tools and technologies that enable the mining of data and information, and its subsequent visualization [4].

Research aim. The main purpose of the study is to provide information about the teaching of data journalism in the world education system and, in particular, to analyze the current state of teaching this subject in the Azerbaijani education system as well as future perspectives.

Research Methods. The article examines the information on the subject of Data Journalism in the universities of Media Education in Azerbaijan and the trainings and seminars held in various courses. The implementation of the data journalism curriculum both in the world and in Azerbaijan was monitored. One of the instructors from BSU was interviewed on the topic. At the same time, a survey regarding about the interest and future perspective of this subject was conducted with 24 second-year students of Journalism faculty in BSU as a focus group.

Literature review. There are plenty of theoretical resources regarding data driven journalism and its main stages. There are a large number of publications in this field in various languages across the world. "The Data Journalism Handbook" consisted of two books written by J. Gray, L. Bounegru and L. Chambers are the most widespread theoretical source for journalists and scientists. Seth C. Lewis from USA and Oscar Westland from Sweden have written epistemology about big data and journalism, also given economics and ethics of this issue. Carl V. Lewis from Mercer University researches tools and resources of data journalism. Eddy-Borges-Rey and Megan Knight study data journalism practice in British newsrooms nowadays. Juliette De Maeyer, François Heinderyckx, Florence Le Cam, Manon Libert and David Domingo are French-speaking Belgium scientists; they have given a quantitative assessment of the anecdotal take-up of data journalism in Belgium. Another vital source is "Ethics for digital journalism" edited by Lawrie Zion and David Graig includes in the best explanations about data journalism by P. Bradshaw. The main trends and streams in data journalism have been scrutinized by Turo I Uskali,

Heikki Kuutti and Tanja Aitamurto, Esa Sirkkunen, Pauliina Lehtonen from Finland University. Ester Appelgren and Gunnar Nigren which are considered to be the first to use the term data journalism are famous researchers in this area in Sweden. The majority of specialized research centers and universities (School of Data, Tow Center for Digital Journalism, Columbia University, Massachusetts University, Texas University, VCU) regarding to data journalism are mainly in USA and Great Britain. Pınar Dag from Turkey is one of the world's leading scientists in this field and her background is related to co-founderin of the Data Literacy Association (DLA) and practice on her web site Dag Media, which spreads data news very often. Apart from that the Turkish media environment including Anadolu Agency, is rich in professional data journalists.

Among the authors of fruitful literatures on data journalism can be also listed David Herzog, Brant Houston, David Leigh, Steve Weinberg Bedford, Alexander B. Howard C.W. Anderson, Alberto Cairo, Steve Doing, Jeff Kelly Lowenstein, Maureen Henninger and many other researchers.

The majority of Azerbaijani social media platforms including traditional media outlets are not passionate about using data journalistic materials. And this is a new and unexplored area in terms of science and education in Azerbaijan; also the journalists almost have very little use of data on social media. The only source of Data Journalism in Azerbaijani language is "The Data Journalism Handbook" by J. Gray, L. Bounegru and L. Chambers translated into Azerbaijani by Karim Aliyev from Mingachevir State University. And there is only one article called Data journalism written by Aynur Bashirli, Khanim Javadova, Sabina Izzatli in the book New Media Journalism published by Council of Europe within Programmatic Cooperation Framework for Azerbaijan, Armenia, Georgia, Republic of Moldova, Ukraine, and Belarus. [Journal of Awareness, Turkey, Volume 2, 2021, p.161-167].

Data journalism study in the world. For the matter of data journalism education, we can emphasize that there are more than hundred universities and institutions which universities provide data journalism education adequately. Most of them are provided by educational institutions located in the United States and United Kingdom. For instance, NYU, University of Southern California, University of Missouri, De Paul University, George Mason University, Northern Kentucky University, John F. Kennedy University, University of South Carolina, University of Nevada, Ohio University, The College of New Jersey, Columbia University, Kansas State University, Fordham University, Stanford University, Wesleyan University, Columbia University, University of Nebraska-Lincoln, University of California Berkeley etc. The majority of them implement under-

graduate and few of them postgraduate programs and modules. City University London, Kings College London and Cardiff University offer undergraduate and postgraduate modules and programs in Great Britain [5]. Australia, Sweden, Kyrgyzstan, Albania, Hong Kong, Greece, Russia, Italy, Sudan and other countries' universities also suggest data journalism and areas related to it. For instance, Aristotle University of Thessaloniki gives postgraduate program of Data Journalism | EUJ 209 for students. Students gain data journalism literacy undergraduate modules at University of Khartoum and Ahfad University in Sudan. University of Amsterdam and University of Zurich give undergraduate program of Data Journalism and postgraduate program of Media Witnessing and Political Data journalism. Columbia University and Birmingham City University suggest M.S. and M.A. Data journalism programs [5].

Apart from official studies the journalistic organizations as well as transnational media outlets conduct various courses related to data driven journalism for journalists and students across the world. One of the famous researchers Pinar Dag works as a lecturer in the new media department of Kadir Has University in Turkey. She is the founder and president of the Data Literacy Association (DLA). She has been working in the fields of data literacy, open data, data visualization and data journalism. Since 2012 she has been organizing lots of workshops for journalists on these issues. Simultaneously and Anatolian News Agency and Turkish Cooperation and Coordination Agency have organized many international trainings on data journalism so far.

There are many valuable blogs or websites which provide the society with appropriate information including theoretical and practical materials regarding data driven journalism in the world: the Guardian.com, The Pro Publica Nerd Blog, Simon Rogers, Data Journalism/Global Investigative Journalism Network, Data Journalism.com, Visual and data journalism, Data Is Plural, Daily Briefings – Pew Research Center's Journalism Project blogs and many others [6].

Data journalism education in Azerbaijan. Three higher state education institutions in Azerbaijan have been teaching journalism for a long time and despite the high demand for this field only one of them presents Data Journalism subject for students. The subject of TV Journalism and Data Analysis is taught for 45 hours in the second year at the bachelor's level. At the same time, Data analytical methods for journalists are conducted at BSU in the specialty of Broadcasting Management of the Master's degree. The course lasts 30 hours in the second semester of the first year [7].

ADA University, which specializes in international relations and diplomacy in Azerbaijan, has announced bachelor enrollment for Art in Communication and Digital Media for the 2021/22 academic year at the

school of Public and International Affairs. One of the main subjects of this course is digital journalism. This new qualification provides detailed knowledge and skills in building and implementing a proper communication strategy, especially in the use of digital media. The main specialties here are related to digital media or digital content creation, data interpretation, research analysis, and marketing. Program duration and credits are 4 years and 240 ECTS.

Thus, only two of the four universities providing media education in Azerbaijan teach data journalism at ADA University and Baku State University. At the Azerbaijan University of Languages and Baku Slavic University, the subject is not included in the curriculum at any level.

According to the instructor of the subjects "TV journalism and data analysis" and "Data analytical methods for journalists" in Baku State University, Professor Khulu Maharramli, the subject of data journalism should be taught at the undergraduate level as part of a general journalism course, more precisely in 3rd or 4th year. Today, the possibilities of the Internet and new media help us to speak the language of numbers and teach students. Although he is satisfied with the conditions at the university, he is dissatisfied with the lack of scientific base covered philosophical and practical aspects in his native language. It is easy to get data from different areas, i.e. data from the statistical office. However, analyzing this information and constructing a story should be based on the professionalism and critical thinking of the journalist, which we teach students in this course. Asked about the students' interest in the subject, the interviewee said that it depends on the practical skills, personal qualities and teaching methods of the teacher who teaches the subject. If the teacher is able to capture the audience and make the lesson interesting, the interest in the subject increases. In this sense, the interest of our university students in the subject of data journalism can be highly appreciated. We also need to find more interesting and useful forms for teaching this subject to increase the interest of the audience. To increase the role and opportunities of science-related data in journalism, it is necessary to use new international tools and examples from the experience of foreign media. First of all, it is necessary to increase the research ability of students, the quality of thinking broadly and give them a great incentive to arouse their interest.

As for survey and discussion related to the issue in question made with one focus group in BSU, the second-year students' approaches were different. The questions related to the teaching of data journalism addressed to 24 students of JK – 059 a group at the faculty of journalism in BSU were as follows:

1. Your interest in digital media?
2. At what level of education and in what course should the subject be taught?

3. Do you consider the existing scientific and practical base for teaching the subject sufficient?

4. In what areas do you think you can apply the subject of digital media in the future?

5. Are you satisfied with the digital presentations of the Azerbaijani Internet media?

6. What is needed to develop this field in the future?

7. Would you like to work in this field in the future?

19 of them have excellent passion and interest in data journalism. The opinion of 5 could be assessed as good and average. 21 out of 24 students believe that data year-related media should be obtained in the 3-4th year of the bachelor's degree. 3 students emphasize that this subject should be studied in the 2nd year as well. The majority of the students, more precisely, 24 out of 24 answered "no" for the question "Do you consider the existing scientific and practical base for teaching the subject sufficient in your university?"

16 of them thought that media would be the best working place regarding data analysis for the question "In what areas do you think you can apply the subject of digital media in the future?" and all areas, precisely, media and public relations would be appropriate for 7 of the students. And only one student considered that education could be relevant sphere related to data journalism. 22 out of 24 students are not satisfied with the digital presentations in the Azerbaijani Internet media, and only 2 of them are satisfied.

The majority of them, actually 20 of them answered that improving the theoretical material base and the quality of education would be able to lead to the further development of data journalism. 4 of them thought that the availability of professional staff could lead to progress in this area. 19 people answered "yes" to the last interesting question "Would you like to work in this field in the future?" 5 people said they did not intend to work in the field of data journalism at all.

Data journalism is no longer a new concept. It is common practice for the media to use data to reach a wide audience, and professional journalists use the

data on a daily basis to enrich their work. As far as data journalism trainings are concerned, the first free Data Journalism Course consisted of six workshops on the importance of data literacy has been held with supporting of The Eurasian Cooperation Foundation and the Caucasus Research Resource Center and USA Embassy. The seminars have been held once a month from December 2017 to May 2018. The course covered the following topics: the role of data in news, the skills needed for data journalism, the collection and purification of relevant data, methods of data analysis to identify topics, and the presentation of data. The workshops will be conducted by local trainers in Azerbaijani and by international trainers who translate into Azerbaijani simultaneously.

The next Data Journalism Course has been held for students and graduates of the Faculty of Journalism from May 4 to July 23 in 2019. The course, consisting of 13 (thirteen) sessions, was organized by Data Hub LLC with the financial support of the US Embassy in Baku, the Eurasian Cooperation Foundation and the Caucasus Research and Resource Center. The trainings lasted for 7 weeks, including weekends.

In order to promote data journalism in Azerbaijan, both of these courses covered theoretical and practical knowledge of data journalism, data collection, data cleaning and reporting, and work with required programs. The trainings were conducted by local and foreign expert trainers. During the trainings, participants were informed about international experience in this field and were provided with practical skills so that they could use data successfully during their professional activities [8].

Apart from main courses listed above, there have been conducted various seminars, trainings and competitions for journalists in the regions of Azerbaijan. For instance, one of them has been organized by local experts trained in Europe at the Mingachevir Media Center in late March of 2018 [9].

On September 14-15, 2020, Anadolu Agency and TIKK (Turkish Cooperation and Coordination Agency) organized distance training on Data Journalism.

Table 1

Questions	Weak	Average	Good	Very good
Your interest in digital media?		3	2	19
At what level of education and in what course should the subject be taught?	I – 0	II – 3 students	III – 2 students	IV – 19 students
Do you consider the existing scientific and practical base for teaching the subject sufficient?	22			2
	Data Analysis	Media	Education	Public Relations
In what areas do you think you can apply the subject of digital media in the future?	16	4	1	3
Are you satisfied with the digital presentations of the Azerbaijani Internet media?	22	0	0	2
	Theoretical base	Education	Material base	Professionalism
What is needed to develop this field in the future?	1	10	0	4
Would you like to work in this field in the future?	5 (no)	0	0	19 (yes)

In June and July 2021, GIPA and the US Embassy in Azerbaijan jointly organized distance data journalism training for journalists.

As can be seen, data journalism has been studied in Azerbaijan since 2017, both scientifically and practically. During this period, the trainings and seminars related to Data Journalism almost consisted of the above.

Conclusion. Although there are many sources on data journalism in the developed countries of the world, and its study as a scientific field is widely used, this process is less developed in Azerbaijan, although various international organizations hold trainings and seminars on data journalism for journalists and students in our country. Media experts and the majority of focus group's students associate this problem with the lack of financial resources and a lack of specialists with rich technical knowledge. Software and teaching aids related to digital media are being developed at journalism faculties of higher education institutions of Azerbaijan. Currently, research and development is underway in this area in Azerbaijan.

References:

1. Aynur Bashirli, Khanim Javadova, Sabina İzzatli. New Media journalism. *Council of Europe*. 2017, page 66
2. Journal of Awareness, Turkey, Volume 2, 2021, 167, p.161-167
3. Paul Bradshaw. What is data journalism? <https://datajournalism.com/read/handbook/one/introduction/what-is-data-journalism>. Retrieved from 15.10.2021
4. DoorCyrineBeune. Datajournalistiekennepnieuws, een bronnenonderzoek. https://opus.lib.uts.edu.au/bitstream/10453/30904/7/Data-driven%20journalism_Challenge%20and%20change_Chapter%207.pdf. Retrieved from 21.12.2021
5. Data-journalism-courses. <https://github.com/jwyg/data-journalism-courses/blob/master/data-journalism-university-courses.csv>. Retrieved from 14.01.2022
6. The Best blogs and websites. <https://feedly.com/top/data-journalism-blogs>. 20.01.2022
7. BSU. Journalism Faculty. http://journalism.bsu.edu/az/content/televiziya_v_radio_jurnalistikasi_kafedra_355). 5.02.2022
8. Caucasus Research Resource Center. <http://crrc.az/2019/07/09/data-journalism-course-in-baku/?lang=az>. Retrieved from 16.02.2022
9. Mi.News.Az. <https://mi-news.az/regiondaki-jurnalistl-r-ucun-data-jurnalistika-t-limi-v-musabiq/>. Retrieved from 23.02.2022

Іскендерова В. Викладання журналістики даних: проблеми та перспективи у Азербайджані

У статті автор аналізує сучасний стан навчальної програми з викладання журналістики даних у вищих навчальних закладах за фахом журналістика, що є частиною системи освіти Азербайджану. Для цього було розглянуто навчальні плани чотирьох навчальних закладів, розглянуто їх тематичні плани. Журналістика, керована даними, як абсолютно нова сфера в різних університетах та освітніх центрах в одних частинах світу, знаходиться на високому рівні, в інших – на низькому. У деяких країнах не вистачає викладачів з академічною підготовкою, які мають навички аналізу даних, кодування та візуалізації даних для проведення цих міждисциплінарних програм у секторі вищої освіти. Проте цей напрямок уже почав розвиватися. На початку статті роз'яснюється сутність журналістики даних загалом, уточнюються галузі її застосування. Паралельно було проаналізовано рівень викладання журналістики даних у багатьох відомих університетах світу. Як метод аналізу були проведені бесіди зі студентами 3 курсу Бакинського державного університету, а також проведено опитування цієї групи. При цьому було представлено інтерв'ю з професором кафедри мультимедіа, який викладає журналістику даних у БДУ з актуальної проблеми. Було зроблено висновок, що журналістика даних погано застосовується як у системі освіти, і у системі ЗМІ в Азербайджані. Таким чином, в азербайджанських інтернет-ЗМІ використовується певна візуалізація даних. Однак у традиційних ЗМІ він, як і раніше, слабо представлений. Крім того, лише два з чотирьох вищих навчальних закладів, що спеціалізуються на журналістиці, викладають журналістику даних на рівні бакалаврату та магістратури як обов'язковий предмет. В інших школах журналістика даних також не викладається як факультативний предмет. Однак найближчим часом у рамках журналістських розслідувань планується розширити як викладання цього напряму, так і його застосування у ЗМІ.

Ключові слова: дані, медіа, журналістика, інтернет, цифровізація, освіта, навчальна програма, інфографіка, перспективи.