The gap between university studies and labour market in journalism: opening educational community example in China

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ABSTRACT
With the rapid development of information and communication technology, conventional news production practices have been disrupted and have evolved to meet the needs of new media era. The labor market also puts forward new requirements for journalism education. This article aimed to investigate the contradiction between supply and demand of journalism talent training and how to cope with it. Universities curricula and labor market demands was examined by the method of online survey, content analysis and interviewing students.

Findings show that companies are increasingly keen to employ the people who have new media skills, video production/data analysis skills, previous experience, good communication ability and the ability to work under pressure. Despite difference that existed, some universities offer burgeoning practical and interdisciplinary courses. There is still a gap between the universities curricula and market demand. Finally, this study proposes the concept of “Opening educational community” to cope with the changes of media labor market and bridge the gap between them.

1. Introduction

The earliest form of journalism in China can be traced back to something called ‘bao’ or ‘report’ in the Tang Dynasty from 618 A.D. to 907 A.D. Modern journalism education in China originated in the 1920s, when modern newspapers and universities began to emerge in big cities of China. In the following 100 years, journalism education in China has experienced several different stages of development. Influenced by the United States, the early journalism education (from 1920s to 1940s) mainly employed American journalism professors to teach students in English according to the American journalism curricula and courses design. The influence of English-medium based international journalism tradition thus continues even today. After the founding of the People’s Republic of China in 1949, journalism education was influenced by the former Soviet Union and reconstructed according to marxism-Leninism theory (Ding, 1997). In the 1960s, journalism education curricula favored courses on theories and cultures, its goal is to cultivate journalism teaching and research personnel, and this model is more suitable for China’s national conditions at that time (Ding, 1997; Xiaoming and Xiaoge, 1997). After 1978, China experienced rapid economic growth and dramatic social change attributed to the implementation of the reform and opening-up policy, which has given a significant boost to the media development and proposed a great demand for qualified reporters and editors. The journalism universities began to restore the four-year undergraduate course of journalism education, and gradually enrolled Master’s and Doctor’s degree in journalism.

The year 2000 is when the Internet era began (Kandampully, 2003). Especially after 2010, with the rapid development of mobile Internet (Zou et al., 2010), intelligent internet (R.M et al., 2020), artificial intelligence technology (Broussard et al., 2019; Marconi, 2020), modern society has entered the era of digital and online journalism which impact the traditional journalism industry fiercely. The proportion of traditional journalism media is decreasing and a large number of employees are dismissed. At the same time, new forms of journalism and media keep emerging, such as data journalism (Xuya and Xiaorui, 2019), we media (Peng et al., 2015; Wright and Nolan, 2021), social media (Thomala, 2021), convergence media (Li et al., 2020; Yin and Liu, 2014), omni-media (Kang, 2017). Industrial companies also provided some new positions and fields including data editor, social media editor, community manager, hypertext writer, web page editor, multimedia editor, user-generated content editor, media executive, interactivity manager, web video editor, mobile journalism, communication consulting and internet journalism research (Vivar, 2013). This puts forward a higher demand to the ability of journalism practitioners, such as information

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retrieval, data mining and data statistical analysis, new equipment usage and so on.

In the field of education, curriculum is the basis for achieving educational goals (Zhang and Chen, 2020). Under this context, how to innovate journalism curricula provided by universities becomes a hot topic among academics, educational experts and journalists. This study will analyze the following research questions:

RQ1. Whether the curricula provided by universities can meet the needs of professional qualities and skills of journalism labor market required?

RQ2. What efforts can we do to bridge the gap between journalism education and labor market needs if it is really existed?

2. Methods

This study was approved by the Ethic Committee of Huzhou University and the informed consent of the students involved in the interview was obtained.

2.1. Design, setting and sample

Content analysis is an observational analysis method used to identify words, themes, and concepts in qualitative data and convert them into quantitative data (White and Marsh, 2006). As Laurence Bardin notes, content analysis seeks to "obtain indicators (quantitative or otherwise) by systematic and objective procedures for describing the content of the messages, allowing the inference of knowledge relative to the social context of these messages" (Bardin, 1979). Therefore, quantitative content analysis has been chosen for job offers found on human resource websites and curricula synopses published on university’s websites.

Three most commonly used human resource websites in China, including 51job, liepin.com and landing.zhaopin.com, were systematically searched using keywords and their combination like "community manager", "digital journalism", "journalism", "multimedia journalist" and "copywriter" to identify job offers published in 2021. Job offers were included in this study based on the following criteria as a minimum requisite: (1) which contained a bachelor’s degree in journalism; (2) in the case of internships/grants; (3) current studies in journalism. All the information provided in the job offers was organized into two categories: professional news media or company and others. Due to the diversity of companies offering jobs to journalism graduates, we have divided companies into two categories: professional news media or company (n = 124, 17.1%) and others (n = 600, 82.9%).

The professional news media or company mainly include newspapers, radio and television, news websites, new media companies and other companies offering jobs to journalism graduates, we have divided companies into two categories: professional news media or company (n = 124, 17.1%) and others (n = 600, 82.9%).

The professional news media or company can mainly include newspapers, radio and television, news websites, new media companies and other companies specialized in news communication activities. For example, China Daily, CCTV, Today’s Headlines, Byte Dance, the Paper news APP, etc. In this category, 45.2% of job offers were for editors; 25.8% for journalist, 9.7% for video production, 9.7% for content operation and 9.6% for others.

Others category include companies which work in areas like the food industry, biomedicine, education, machinery, healthcare, networking, textile industry, pharmaceuticals, the chemical industry, the automobile industry, real estate and so on. In this category, 28.8% of job offers were for editors, 26.1% for video production; 35.8% for new media and 9.3% for others.

It is worth noting that for editors and journalists, there is an increasing trend of specialization, such as finance, sports, real estate, medicine, international news and so on, which requires journalism graduates to have interdisciplinary knowledge.

2.2. Data extraction and analysis

Two investigators independently searched and reviewed job offers and curriculum design. Disagreements were discussed and resolved by consensus. The following information was extracted from each eligible job offers when available: (1) Descriptions information, including company name, sector, position; (2) Profiles, including minimum studies required, minimum experience and field of employment; (3) Professional skills: job duties, knowledge of computer systems, knowledge of editing programs, knowledge of new media, other knowledge, languages. In addition, the curricula were retrieved from the official website of the selected universities and confirmed to be the latest version by the time we collect information. All data were analyzed using the SPSS statistical package (version 21, SPSS Inc., Chicago, IL, USA).

3. Results

3.1. Industry distribution of job offers

This study screened 724 job offers for students major in journalism. The 5 most sought-after positions were as followed: editor (n = 196), short video production (n = 176), journalist (n = 64), new media (n = 52), operation related positions (n = 48). Due to the diversity of companies offering jobs to journalism graduates, we have divided companies into two categories: professional news media or company (n = 124, 17.1%) and others (n = 600, 82.9%).

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3.2. Professional skills and qualities demanded

For the sake of their own economic interests, enterprises usually require applicants to have a variety of professional skills and qualities. Based on an analysis of the professional skills and qualities mentioned in 724 job offers, 10 skills and qualities were specified most often: previous experience (76.1%), working under pressure (52%), writing (51.6%), ability to communicate (43.5%), new media technology (42.4%), video/photo production (41.8%), team work (34.2%), professional software usage (32.6%), creativity (31%) and data analysis (23.9%), as shown in Figure 1.

Among the professional skills, writing ability is one of the most basic skills in journalism, whether it is traditional media or new media. For new media technology, companies often require journalism graduates to have the ability to cross multiple platforms, such as public account operation, microblog, community operation, short video platform. For software applications, companies often give priority to the applicants who are skilled in using professional software in job offer. Software here includes not only word processing software, but especially video/audio editing, special effects making software and data processing and statistical software, such as Premiere, Edius, After Effect, Audition, C4D, SPSS, R software. These professional software skills can only be mastered through a lot of practice and cross-disciplinary learning.

For professional qualities, companies pay more attention to candidates’ previous experience, ability to communicate, ability to work under pressure and creativity. In addition, companies highlight others like international experiences, abroad experience, and interest in the internet and new technologies. They also look for people who have good news sensibility, industry resources needed, self-learning ability and marketing ability.

On the basis of the Keywords that the companies publish and the area the candidates will work in, we find that almost half of the offers contain professional functions that would be performed in the area of corporate communication (45%), followed by marketing and advertising (30%)
and journalism and editing (25%), as shown in Figure 2. This also proves that job offers are mostly provided by non-professional media enterprises, which are more often influenced by e-commerce and their own external publicity factors.

Matching with new media positions, some new job titles in job offers, such as Digital Content Manager, Content Specialist, Community Manager, Communication Specialist and Marketing Specialist, are some of the most used descriptors in English. The traditional positions (journalist and editor) account for 25.1% of the offers, while the new positions (community manager, digital content manager, marketing specialist, social media manager, content specialist, communication specialist and "others") account for almost half (48%), which indicated that new media will be the mainstream form of future media.

3.3. Journalism curriculum design

The 120 universities selected were divided into three categories: "Double First Class" University (n = 32, 26.7%), "985" or "211" universities (n = 40, 33%); others (n = 48, 40%). In terms of geographical distribution and economic development, there are 15 universities in first-tier cities, such as Beijing, Shanghai, Guangzhou and Shenzhen; 55 universities in economically developed cities in eastern China, 27 universities in developing cities in central and western China and 23 universities in economically underdeveloped regions such as Inner Mongolia, Guizhou, Tibet, Gansu, Qinghai, Ningxia and Xinjiang, as shown in Figure 3.

According to the survey, Chinese universities have carried out curriculum reform in recent years. The existing journalism curricula are mainly divided into four modules: (1) basic general courses, such as literature, sociology, economics, political science, law, aesthetics, philosophy, foreign language and history; (2) traditional and professional skills courses, mainly refers to news gathering and writing, news comment, news photography, video editing and multimedia editing; (3) journalism theory and critical thinking courses, such as journalism principles, communication, journalism criticism, journalism history, communication research methods, media criticism, media frontier studies, audience studies; (4) practical and quality development courses, such as convergence news, short video production, studio program production, film and television production, omni-media communication, media management. Some emerging or interdisciplinary courses are also included in this category, such as data journalism, new media technology, big data analysis, unmanned aerial vehicle aerial photography, animation design, audio-visual art, color design, mobile APP design, web design and production.

3.4. Cultivation path based on curriculum design

For the cultivation path of innovative journalism talents, Chinese universities generally adopt the following five methods: first, highlight the unique characteristics of school. Finance and economics, politics and law, sports, foreign languages, media colleges and universities all have their own distinctive characteristics and advantages in journalism talents training. For examples, Shanghai Foreign Studies University offers courses such as Bilingual Hosting and Reporting, Advanced English News Interview, and International Journalism and Communication etc. Zhongnan University of Economics and Law highlights the courses of Financial & Economic Journalism in the elective courses of Journalism. Some Financial and Economic colleges also introduce microeconomics, macroeconomics, statistics and media economics into the compulsory courses; Second, differentiated cultivation: colleges with comprehensive strength can efficiently optimize teachers, carry out effective educational reform and even set up new majors so as to implement differentiated talent training. For example, East China Normal University also offers a double degree of 'Journalism-Data Science and Big Data Technology' to train journalists adaptable to the development of big data media.
technology. Third, directional cultivation: since the strict approval standards and procedures of new majors opening in China, some schools will implement the directional diversion of talent training in journalism majors as an alternative. For example, Shandong University has provided a total of 27 elective courses in the direction of convergence journalism, strategic communication, big data and intelligent media for students to study according to their interests and career planning. Tianjin Foreign Studies University offers 76 elective courses in international journalism, study according to their interests and career planning. Tianjin Foreign strategic communication, big data and intelligent media for students to majors as an alternative. For example, Shandong University has provided will implement the directional diversion of talent training in journalism technology. Fourth, interdisciplinary cultivation: skill courses such as artificial intelligence and data science, statistical analysis, algorithm and programming have been included in the major courses of some colleges; Advertising planning and creativity, film and television creation, fashion communication, integrated communication, public relations, marketing and other interdisciplinary courses appear in the students' elective curriculum; Fifth: Professional practice training. Journalism students will practice in media for 4–6 months to improve their practical ability. Some trainees will be directly employed because of their excellent practice performance.

4. Discussion

4.1. Contradiction between journalism education and market demand

In recent years, professional media have tightened restrictions on recruitment, only 17.1% of the 724 jobs selected were offered by them in this survey. Due to the influence of e-commerce and short video, as well as the needs of enterprises' own external publicity, enterprises such as Alibaba, NetEase, Baidu and Bytedance have put forward higher demands for graduates. While journalists interested in data are highly educated in journalism or closely related fields, they do not have a strong level of education in the more technical areas of data journalism, such as data analysis, coding and data visualization (Heravi, 2019). It thus requires universities to improve the existing curriculum and provide corresponding curriculum training to meet the market demand. But the reality is not optimistic. Therefore, the following problems need to be solved:

First, the talent training in the new media era requires teachers with comprehensive innovation ability. They should have new teaching concepts, new knowledge systems and new teaching methods. However, not all teachers have this ability. We have interviewed more than 100 journalism graduates and undergraduates during past two years and found that 65% of them believed that although some teachers had a high level of theoretical research, their teaching methods were outdated and their lectures were stereotyped, which make it difficult for students to acquire enough new practical knowledge and skills of markets needed nowadays. Universities have to urge teachers to carry out teaching innovation, especially for online and offline hybrid courses. But for most of local journalism colleges, these are still at the exploratory stage (Yao, 2020; Yu, 2020). Second, the connection between college teachers and industry itself is not strong (Chung et al., 2007). Some journalism teachers have strong academic background but lack new media practice experience and guidance ability (Ji, 2019). In other case, some universities provided interdisciplinary data journalism courses; however they don’t have enough academically trained instructors (Chen and Yang, 2016). As a result, students only understand what data journalism is from the theoretical aspect, but don’t master the core technology, and cannot produce a high-level data news. Therefore, the effect of curriculum changes will not be observed in the short term. Third, educational mechanism restrictions. Journalism major is closely connected with life and society, and students should not be confined by books and campuses. However, such teaching practice was restricted in some universities for consideration of teaching order and student safety. It is necessary to explore a better mechanism to solve this problem. Fourth, differences in the development level of colleges and universities. The big media companies in China are mainly located in the prosperous cities. Those companies prefer to employ journalism graduates from Beijing, Shanghai, Guangzhou, Shenzhen or other first-tier cities and offer them generous salaries. However, some universities located in less developed areas are often troubled by problems such as insufficient investment in running schools, shortage of teachers, poor experimental and practical conditions and the quality of students. It will be a long-term process to carry out educational innovation in line with the technological era for them. Finally, too much emphasis on technology will lead humanities education to fall into the trap of technocentrism. Therefore, the future development of journalism education in China needs to consider the balance between "teaching" and "learning", "technical ability" and "humanistic quality", also the balance between regional differences.

4.2. The construction of "opening educational community"

The concept of "community" was proposed by Ferdinand Tönnies in his book "Community and Society" (Tönnies and Loomis, 1959). According to it, community is the organic organization form based on the cooperative relationship between people, and which is a primitive or natural and perfect unity of human will. Community emphasizes the close relationship between people, the common spiritual consciousness, and the sense of belonging and identity of individuals to the community. In the field of education, DuFour and Eaker proposed the concept of "Teacher Professional Learning Community", and pointed out that such community is established based on individual interests (DuFour and Eaker, 1998). Subsequent studies focused on the perspective of teacher professional development, ability improvement and professional cooperation (Bolam et al., 2005; Hord and Sommers, 2008). These studies pay more attention on the connection between teachers and the influence of teaching level. However, in the era of new media, the talent training of journalism major in Chinese universities are more closely related to "teaching" and "learning", "in-school classroom" and "out-of-school classroom". It requires us to construct an "Opening educational community" centered on the growth of students' overall quality. In this "community", universities, media (or media companies) and society (government departments, enterprises and institutions, social organizations, etc.) are all places for students to learn. The three entities work together to create an opening and comprehensive teaching system, and constantly gather common educational ideas in the cooperation.

4.3. The aim of "opening educational community": higher education value

Journalism education is essentially a humanistic education, not just a skill teaching (Du et al., 2020). The cultivation of journalism talents
should be understood from the internal requirements of the development of China's higher education and humanities social sciences. Universities have to face the current social changes, rethink and highlight the contemporary connotation and path of news talent cultivation in morality and civilization. The goal of 'Opening educational community' is to seek higher educational value and promote the all-round development of students. It means that the higher education should guide and help students to cultivate forward-looking perspectives and pluralistic thinking, so as to empower students with the ability of lifelong self-learning and continuous development, as well as the ability to manage their own career and actively seek success, rather than simply to solve employment problems.

We should seek higher quality and educational value. "Technology plays an important role in journalism education, but it is not advisable to overemphasize technology, because it will greatly weaken Humanism makes news communication become a 'cold' information release machine." (Fu, 2021). If we simply consider the application of digital technology and regard journalism as a factory of information production, journalism graduates may be reduced to "digital labor". We not only teach students to discover the facts, data, problems, learn the new media technology, but also help students to set up the professionalism, guide the student's curiosity and creativity, teach them to observe society and communicate the diverse audience. Students can not only use cameras, but also create images from the perspective of social philosophy and art of life.

In addition, from the perspective of professional literacy, active thinking, good sense of network, teamwork, responsibility, insight, social and communication, learning ability, stress tolerance, executive ability, and organizational management ability become more important.

4.4. The core of "opening educational community": cooperation and sharing

This is an era of win-win cooperation, resource sharing and complementary advantages. "University, industry and government are the tripartite forces of higher education cooperation and innovation" (Etzkowitz, 2017). China's education industry is gradually opening up in recent years, seeking all kinds of cooperation with governments, enterprises, institutions and organizations. Journalism, as a key part of "new liberal arts" strategy in China, needs a more open cooperation and sharing.

How to realize cooperation and resource sharing? The first is the establishment of a flexible cooperation mechanism between universities, media and society. It should clearly define the rights, obligations and responsibilities of the three parties in cooperative education and development plan. "Resources" can therefore be maximally integrated together to carry out educational innovation. Second, the construction of multi-platform or flexible talent training program which enable students to gain more immersive experience and innovative development. Students can also choose interdisciplinary courses among the member universities of the "Open education community" according to their own interests and development plans. Third, Universities should invite outstanding entrepreneurs and journalists to teach students the latest practical skills and knowledge (Wang, 2020). "Curriculum + project" is a feasible way to innovate the "educational community" model. In this way, we can move the classroom to the media or society, some projects from media or company can be performed by teachers and students; or jointly undertake service projects for enterprises and institutions.

The Ministry of Education of China has begun to implement the strategy of "University-Ministry co-construction", aiming to realize the joint cultivation of talents by universities and media resources. This policy has achieved remarkable results in some "Double First-Class", "985" and "211" universities, but the effect is not ideal in some local universities. Efficient cooperation mechanisms thus need to be further explored.

4.5. The base of "opening educational community": multifunctional curriculum design

In the era of new media, content was often delivered on Apps, tablets, websites and via social media, new approaches of content production thus become crucial. The traditional skills of journalism are no longer sufficient in the age of new media, given that "the growth of technology and the blending of electronic and print journalism—convergence—is changing the face of journalism" (Pierce and Miller, 2007). New media talents are not only required to have professional skills in collecting and editing, video and audio production, but also good at content production, distribution and integrated communication planning of converged products. At the same time, some new media enterprises and professional media units have increased demand for IT talents due to the new technological trends of machine learning, algorithmic distribution and digital marketing. However, it is not impractical for individuals to master all of the above skills. In addition, the international journalism practice shows that an excellent journalistic work is often the result of collective creation. For example, the Pulitzer Prize work of "Avalanche" from the New York Times, as the most outstanding convergence news report, was done by a dozen people divided into three teams, responsible for writing, multimedia production and technical release respectively. Students thus may fulfill their professional value in a group via their unique skills.

The "Opening educational community" break through the barriers between colleges and regions, fully share curriculum, teacher and resources. Among them, a multi-functional course system consists of five modules, namely, general education curriculum modules and professional skills courses modules, new media technology modules, the career developing curriculum module and special module. The first three modules focus on universal education. The career developing curriculum module can also be divided into three types. Students who choose application-oriented courses will work at technical position, such as new media production, big data mining and artificial intelligence. Students who choose professionalized-oriented courses will become an international, political, financial, sports, education or other fields' journalist. Students who choose management-oriented courses will go to commercial media, or engaged in new media operation, or we media practitioners. Students who choose "creative courses" will enter advertising, film and television, public relations or other industries. The special courses shall be arranged according to the characteristics of the college, region, cooperative project and practice, detailed in Figure 4.

4.6. The path of "opening educational community": characteristic training

The Ministry of education of China encourages the differentiated and characteristic development of colleges and universities through discipline layout, so as to improve the quality of talent training (Han, 2017). In the "Opening educational community" model, universities with professional advantages may cultivate professional talents based on their own characteristics. For example, finance and economics universities train financial journalists, foreign languages universities train international journalists and universities with science and engineering background train big data journalists. While local colleges and universities, can rely on local geography, history, culture and other factors to form a distinctive feature of talent training and serve the local industrial, economic and cultural development. After all, small and medium-size cities and even rural areas also need a lot of journalism talents, and those areas are less attractive due to economic and geographical factors. For example, Huzhou, a small city located in Zhejiang province, is famous for its intangible cultural heritage and green ecology. Huzhou University has set up the "Liangshan Civilization Research Institute" to work together with the department of journalism. They encourage students to participate in field investigation and social practice to understand the needs of local history and culture and development, so as to cultivate students' critical thinking ability, team consciousness and professional ability, consciously guide students to spread local history and tourism culture.
Only in this way we can truly realize the public significance of higher education to serve society.

Some limitations of this study should be mentioned. First, as for the curriculum design of journalism major in universities, we adopt the method of content analysis, and we cannot obtain the implementation effect of different schools' courses, especially those newly opened courses to meet market demand. In the follow-up study, more in-depth and detailed investigation is needed. Second, this study is only limited to the investigation of undergraduate journalism majors, and does not involve higher education such as Master's and Doctor's degree in journalism, which affects the integrity of the analysis results to some extent.

5. Conclusion

This article investigates the issues between university journalism curricula and the demand for competence in labor market, and results suggest a gap between them. This article also put forwards the concept of "Opening educational community" to deal with the current problems of Chinese journalism education. In general, the cultivation of journalism talents in China is undergoing a transformation from the original "media centralization" to "social service" and "compound application". China's universities have been committed to the reform of journalism education although it is still in the exploratory stage. Findings in this article are expected to provide references for the future reform of journalism education in China.

5.1. Notes

1. Double First Class University: these universities were from Chinese Double First-class University Project, which plans to create numerous world-class universities and disciplines by the end of 2050 and improves China higher education power and international competitiveness.
2. 985 and 211 university: 985 universities were from Chinese Project 985 proposed on May 4, 1998, which plans to build several world-class universities; 211 universities were from Chinese Project 211, which plans to build 100 colleges and universities facing the 21st century.
3. "New liberal arts": The concept of "new liberal arts" was first proposed by Hiram College in 2017. In China, it was officially proposed by the Ministry of Education in 2021. The new liberal arts, based on the existing traditional liberal arts, reorganizes the professional courses in the discipline to form the intersection of liberal arts and science, that is, integrates modern information technology into such courses as philosophy, literature, language, etc., to provide students with comprehensive interdisciplinary learning, so as to achieve knowledge expansion and innovative thinking.
Declarations

Author contribution statement

Li Wang: Conceived and designed the experiments; performed the experiments; analyzed and interpreted the data; contributed reagents, materials, analysis tools or data; wrote the paper.

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Data availability statement

Data will be made available on request.

Declaration of interest’s statement

The authors declare no conflict of interest.

Additional information

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