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Diversity, Equity, and Inclusion in the Technical Communication Workplace

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What is a technical communicator? Technical communicators develop and design instructional and informational tools needed to ensure safe, appropriate, and effective use of science and technology, intellectual property, and manufactured products and services. Technical communicators combine multimedia knowledge and strong communication skills with technical expertise to provide education across the entire spectrum of users' abilities, technical experience, and visual and auditory capabilities. For more information visit www.stc.org/about-stc/defining-technical-communication.

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ARTICLES

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Who Are China's Technical Communicators? A Survey on the State of Diversity, Equity, and Inclusion of the Profession

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By Lin Dong and Zhijun Gao

ABSTRACT

Purpose: This study updates our understanding of the group features of China's technical communication coming out of the COVID-19 pandemic. Our research uncovers workplace inequities in the profession by identifying and analyzing a wide range of professional differences in knowledge, skills, experience, practice, performance, benefits, opportunities, challenges, and discoveries. It is more than just a diversity report. We seek to help academics and practitioners across the world develop a basic grasp of China's technical communication, practitioners, and working conditions from a diversity, equity, and inclusion (DEI) perspective.

Method: We designed a four-part survey with 50 questions to examine DEI variables in several areas such as demographics, professional activities, career development, and challenges and problems. A total of 259 technical communicators from a target population of about 1,200 responded to our questionnaire.

Results: Diversity is an intrinsic feature of China's technical communication because of its short history of professionalization. Practitioners' educational backgrounds, language ability, job titles, affiliated departments, working activities and deliverables, and so on all exhibit diversity. Because of the lack of DEI initiatives, many participants reported structural inequalities in their career development.

Conclusion: The DEI situation in the field of China's technical communication is incarnated as a collective professional identity crisis in practitioners. This identity crisis has historical, societal, organizational, individual, and environmental reasons. To tackle it, we propose inclusive development as an effective DEI initiative.

Keywords: China's Technical Communicators, DEI Variables, Professional Identity Crisis, Global Technical Communication

Practitioner's Takeaway:

- China's technical communicators are predominantly female, aged 25–40, Han Chinese, bilingual or multilingual, with master's or bachelor's degrees in foreign language and literature or engineering technologies, and work in economically developed areas.
- Most of them work under the job title "Technical Documentation Engineer" in privately owned, large, or extra-large enterprises in high-tech industries. The majority earn between ¥100,000 and ¥300,000 ($14,671–$44,014 USD) each year.
- China's technical communicators have a professional identity crisis that were caused by historical, social, corporate, individual, and environmental factors. To tackle it, we propose inclusive development.

INTRODUCTION

All technical communication is potentially global technical communication, since stakeholders and/or users of that technical communication might come from diverse global locations, both digitally and geographically. Globalization, along with the culturally diverse technical contents that it brings, as stated by Angela M. Hass and Michelle F. Eble (2018), "has forever changed who we think of as technical communicators, the work that technical communicators do, and thus where and how we understand technical communication happens" (p. 3). The advancement of technical communication in China is an ideal illustration of their point.

Although technical writing has been practiced in China for at least 2,500 years, since the completion of the first instructions manual *Yi Jing* (*I Ching*, *Classic of Changes*) (Ding, 2003), technical communication as an academic field and as a profession didn't burgeon until the 1990s, when transnational enterprises implemented the strategies of globalization, internationalization, localization, translation (GILT) and opened the market of technical communication in China. Since then, technical communication has witnessed growth in industry openings and interest in higher education. The requirement for Chinese local businesses to "go abroad" into globalization has been a significant driving force behind the growth of technical communication. Statistics from the Ministry of Commerce of China show that since 2014, China has invested more on international markets than it has used inflows of foreign capital (Han et al., 2016). In the language-service industry (including technical communication, localization, translation, etc.), the business volume of Chinese-to-foreign-language translation has been higher than that of foreign-language-to-Chinese translation since 2011 and the disparity has continued to widen (China Academy of Translation et al., 2014), a sign that China's language service is progressively influential worldwide. The demand for language services is directly proportional to the level of economic development, according to the *Blue Book of Language Service for Chinese Enterprise Globalization* (Wang et al., 2016); China is "moderately developed" (p. 101) if the index of that demand is used as a barometer of the progress of China's economic globalization. Technical writing is the third most in-demand language-service sector after translation and interpreting (Cui & Zheng, 2021) and it has greatly aided China's rise as a major power in global technical marketplace.

Two professional associations, Technical Communication Alliance (TCA) and Technical Communicators in China (TCC), released survey reports on the state of technical communication in 2017 and 2018 that included information on the demographics of practitioners, their professional experience, employment situation, skills and qualifications, and challenges they faced at work, among other topics. The findings showed diverse educational backgrounds, previous jobs, working departments, job responsibilities, etc. More importantly, reports revealed that many technical communicators encountered inequity and exclusion at work, including company leaders who didn't appreciate technical communication, product developers who were unwilling to cooperate, and clients who were hard to reach and communicate with. More DEI-related issues were found in TCC's 2018 report, including ambiguous power and liabilities, unfair performance evaluation, and unsatisfactory payment, among others. As a result of these widespread issues, many practitioners complained of "hitting a bottleneck" and "feeling uncertain about self-worth" (p. 20).

Technical communication is a career that, admittedly, is underappreciated because it is largely in the nascent stage of development (Li & Cui, 2018; Zhang, 2020), but this issue also highlights how important diversity, equity, and inclusion (DEI) are both within and beyond the field. Without proper attention, it will lead to a professional identity crisis on a large scale—a problem already evident in the TCA and TCC reports—and harm the development of technical communication in China.

Given the following facts, it's simple to assume that China lacks workforce diversity if one applies the Western definition of diversity (which typically refers to racial, ethnic, religious, gender, or other demographic/background differences): first, China is ethnically homogeneous, with 91.11% Han people and 8.89% ethnic minorities ("Main data of the seventh national census," 2021); second, China is officially an atheistic country (The Sixth Plenary Session of CPC, 2016); third, despite the Employment Promotion Act's (2008–enacted) legal protection of the employment rights of women, ethnic minorities, people with disabilities, and other vulnerable groups, it doesn't have a dedicated

government agency to assist in its implementation and enforcement, like the U.S. Equal Employment Opportunity Commission does (Li, 2010).

Even though China can be described as somewhat less heterogeneous in specific ways than other large countries using conventional standards, it's wrong to overlook the degree of diversity based on misleading indicators or inapplicable metrics. What we propose in this study is a holistic perspective to consider the full spectrum of human differences, a developmental perspective to connect the past, present, and future of the field, and a critical perspective to understand historical, social, and cultural factors that affect working experience—all in line with understanding China as a young but fast-growing contributor to global technical communication. To see multiple dimensions of diversity, we shift away from the managerial or political lens that emphasizes people's cultural identities, severing its association with "bodies that look different" (Ahmed, 2012, p. 65), and put more emphasis on people's professional identities as technical communicators. Therefore, we define diversity as the presence of differences in the workplace, including individual variables (such as demographics and socioeconomic status), organizational variables (such as working abilities and experience, job functions, department affiliations, etc.), and industrial variables (such as the development level and the demand of workforce across various industries). Equal opportunities, access, treatment, and advancement are what we mean when we talk about equity in professionalization. We understand inclusion as the creation of environments—within companies, in the field, and in society—where technical communicators feel respected, valued, and supported to contribute both individually and collectively.

DEI is vital to resolving the identity crisis that China's technical communication is currently experiencing. This study serves as the start of a series of initiatives. To update our knowledge of this profession under the impact of COVID-19 pandemic, we surveyed a sample of technical communicators to draw a representative profile of the current population and their workplace DEI reality. Following this, we analyzed the factors that influence practitioners' career development and offer culturally appropriate DEI strategies important to their professionalization. This study is more than a diversity report. The discussion on fostering a DEI environment at all levels in China's technical communication is just getting started. By identifying systemic and structural issues in our field, we hope to help professionals deal with identity crises, inspire corporate leadership to develop effective DEI initiatives, and motivate educators to create a welcoming, inclusive learning environment for aspiring technical communicators.

LITERATURE REVIEW: CHINA'S TECHNICAL COMMUNICATORS IN HISTORY AND IN TODAY'S WORKPLACE

As we suggested in the preceding section, an evolving and critical view about the diversity of China's technical communication practice and practitioners will help construct its history and predict its future. This section will examine the historical and cultural backgrounds of technical communication and identify technical communicators from antiquity to the modern time. A brief overview of how technical communication was practiced in different historical periods will reveal what factors aided or hindered its development and made it today as part of global technical communication.

China's Technical Communicators in Premodern History

According to Daniel Ding (2020), the Chinese equivalent to technical writing, 方伎之书 (*fangji zhishu*), first appeared in the history book *Shiji* (*Records of the Historian*) around 100 B.C., which recorded a story happened in the Warring States Period (481–221 B.C.) when the King of Qi State asked a well-known physician about what medical books he had read, what technical skills he possessed, and what illnesses he could cure. The term "方伎之书" (*fangji zhishu*) literally means "the book of technical skills." In this case, it refers to medical writings or books on medical skills about how to diagnose diseases. Other types of technical writings include descriptions and instructions on pharmacopeia, astrology, almanacs, divination, immortals, etc. (pp. 16–17). These technical books were considered rare texts containing secret prescriptions or formulas that were written by master doctors, astrologers, and diviners, and distributed to their students or apprentices for study (p. 6). The purpose of technical communication in this historical period was to preserve health, extend life expectancy, and achieve

longevity. Some technicians, like those who served the imperial court, also had political power when they not only examined the state ruler's health but, more importantly, predicted the health and future of the Imperial State (p. 15).

The above account of the Chinese term for technical writing at its early emergence indicates two key points. First, technical writing had a very limited authorship and readership. Only the imperial family, other members of the ruling class, and qualified, experienced professional technical communicators (such as physicians, astrologers, and diviners) and their students had access to them. Second, technical writing has some similarities with the term we use today, because its primary goal was to provide instructions for meeting medical, divinatory, or political purposes.

In addition to these two indications, understanding the social settings of that era will disclose more about how technical communication was reserved for the upper class. One would need a certain level of literacy to recognize the written words and comprehend the arcane materials in these technical works, a skill that common people in premodern China lacked (Rawski, 1979). For those in the lower classes, who already fought to survive, living a long life was a luxury, if not impossible.

Science and technology remained "almost exclusively institutionalized and rarely offered to the public" until the late imperial China around the Northern Song Dynasty (960–1127 A.D.) (Zhang, 2013, p. 369). Technical writers were mainly court scientists who were not dedicated to making scientific knowledge accessible to the grassroots public. The pioneer who acknowledged science in and for the public was Shen Kuo. In his *Brush Talks from Dream Brook* (written in the 11th century), this scholar-official ethnographically recorded grassroots inventions and shared with middle and lower class lay audiences (Zhang, 2013). Another scholar, Song Yingxing in the 17th century, wrote *On Technological Subjects* as China's first comprehensive technical writing book (Ding, 2010) intended for a general audience.

To sum up, as we now understand it, China's concept of technical communication/writing has historically been limited, focusing mostly on specific topics in science and technology written by specialists and for literate people (often the upper classes or other professionals). Many technical communicators exclusively served political needs and stayed away from the public. This understanding of technical communication has been passed down over time and has influenced people today.

China's Technical Communicators in the Modern World

A rise in the demand for professional technical communicators in China first appeared in the computer software industry in the 1990s when transnational enterprises (such as Ericsson, IBM, Microsoft, etc.) localized their digital products and services in new markets. These high-tech companies either hired language translators qualified to deal with technical contents or outsourced "software Chinese localization" to local translation companies. At that time, technical writers/translators dealt with tasks like English to Chinese translation, terminology control, desktop publishing of product manuals, etc. (Cui, 2013; Ding & Li, 2018; Ding, 2019).

Encouraged by the national economic development policy of "reform and opening up" in the 1990s, some Chinese enterprises also realized the value of technical documentation in exports. Huawei[1] was one of the first local companies that built a technical writing team to create manuals for product usage, installation, operation, and maintenance. Around 2000, Huawei officially established the Department of Documentation Management, a ground-breaking move in the industry. Another major feat was that in 2005, Huawei introduced DITA and started structured writing for all product lines. Now, Huawei ranks among the top employers of technical communicators (X. Li,[2] personal communication, Jan. 15, 2023).

Technical communicators have been increasingly needed by both foreign and domestic businesses to advertise their products and service internationally (Ding, 2019; Gao et al., 2013). This phenomenon drew attention of international scholars in technical communication as they called for research into how China's educated knowledge workers might influence future trends in the field (St.Amant, 2001) or how to develop localized

1 *Founded in 1987, Huawei is the world's leading provider of ICT (information and communication) infrastructure and smart terminals. At present, Huawei has about 195,000 employees, and its business covers more than 170 countries and regions, serving more than 3 billion people around the world. Cited from "About Huawei."*

2 *X. Li was a former Huawei employee who worked as an Information Architect in the Depart of Documentation for 17 years (since 2005).*

technical communication curricula to satisfy the demands of the hungry market (Barnum et al., 2001; Dautermann, 2005; Ding & Jablonski, 2001; Hayhoe, 2003; Rainey et al., 2008; Tegtmeier et al., 1999).

The founding of professional societies signaled the growth of China's technical communicators. In 2015, the Technical Communication Service Committee was established as a subordinate by the China Association for Standardization ("Introduction to our committee," 2016). The committee's primary duties include drafting industry standards for national and international documentation; assessing documents' compliance with regulations and standards; looking into the advancement of the field; and organizing conferences and seminars for industry-academia exchanges, among other things ("Introduction," n.d."). The committee oversees the daily operations of the Technical Communication Alliance (TCA), a voluntary association of businesses or individuals involved in technical communication across the nation. Another influential professional group is Technical Communicators in China (TCC), which was founded by five technical communicators from Shanghai in 2005 ("About TCC," n.d.). Unlike TCA, which has official status (recognized by the Ministry of Civil Affairs), TCC serves as a community organizer, hosting regional or national conferences as well as certification courses online. Members who live in the same city or province have their own groups and regularly meet in person or online to discuss a range of topics, such as new practices in the field or in their own job, professionalization paths, talent cultivation, etc. Neither TCA nor TCC runs the membership system. Low entrance barriers and diverse activities foster an inclusive, friendly, and supportive culture that bind professionals together.

TCA defines technical communication as "the transmission and interaction of all technical information related to technical products or services during their entire life cycle" ("Introduction," n.d.). Technical communication and translation are distinct tasks in the GILT (globalization, internationalization, localization, and translation) link, which shows how transnational corporations operate businesses globally (Wang et al., 2016). Technical communication is a component of product/service design under internationalization. Quality technical communication will save trouble for downstream localization and translation (Han et al., 2016; Wang, 2017). The link of GILT and related work can be seen in Figure 1.

METHODOLOGY

China's technical communication presents a different history, path, and level of development, which naturally contributes to the diversity of global technical communication. In this relatively new profession, the issues of diversity, equity, and inclusion haven't been studied in-depth. This survey project is designed as an exploratory study to gain a better understanding of the under-researched profession.

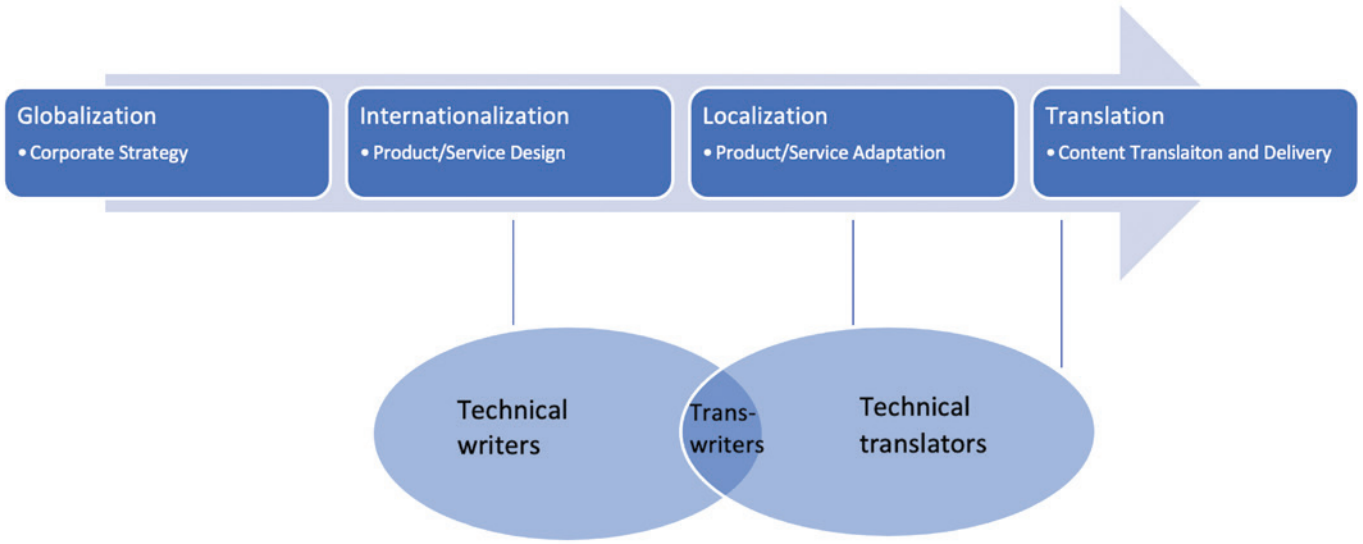

Figure 1: The GILT Process and Related Work in Transnational Corporations (adapted from Ding, 2019)

We ask the following research questions:

1. What are the demographics of Chinese technical communicators?
2. What DEI-related job experiences and practices do technical communicators have?
3. What factors help or hinder practitioners' professional development?
4. What obstacles and difficulties do technical communicators face on the job?

Survey Participants

Our target participants were TCA and TCC members. On the social media platform WeChat, both organizations created a few member groups. These member groups include technical communication practitioners, educators, national conference guest speakers, regional meetup attendees, and so on. It's difficult to count how many WeChat groups TCA and TCC have founded, many of which are a one-time thing for specific events and then die away. Our study targets three of the most active groups, which typically have dozens or hundreds of daily exchanges on a wide range of topics, such as new technologies, tools, industry practices, useful learning resources, new research and publications, job hunting and seeking, national conferences and regional meetups, workplace practice and issues, etc. According to Ding (2019), these WeChat groups function as an interactive knowledge network like the WPA or ATTW listservs. Table 1 contains information about these WeChat groups.

Questionnaire Design

The questionnaire had four parts, each of which corresponded to one research question, with a total of 50 questions measuring the following variables (based on our definitions of DEI in the introduction):

- Diversity: age, gender, ethnicity, educational level, field of study, language ability, work location, previous profession, work experience, business industry, type, size, and functional level of employer, division/department, job title, rank of position, work content field, and income.
- Equity: intensity and workload of daily work, job qualifications, salary level, career development paths/ladders, vocational training opportunities, professionalization resources, and COVID-19 impacts.
- Inclusion: corporate/group culture, atmosphere of team working, sense of accomplishment, sense of being supported

There are 19 single-selection questions, 10 multiple-answer questions, six rating-scale questions, and 15 open-ended questions. All questions were written in Chinese.

Questionnaire Implementation

Wenjuan.com, an online survey tool and data collector, was used to generate the questionnaire. Wenjun.com has a mini program incorporated within WeChat that allows WeChat users to locate the survey. Wenjuan.com also provides online SPSS data services.

The following is the questionnaire implementation procedure:

- December 10–15, 2022: Survey trial testing
- December 16–21, 2022: Questionnaire revision
- December 22–January 20, 2023: Questionnaire release and data collection

We used voluntary response sampling since it was practical for our study. We also used the snowball sampling method to encourage survey participants to share the survey link with their colleagues. We limited responses to one WeChat ID per person to avoid repeated entry by the same person.

Table 1: Source of Survey Participants

WeChat Groups	Founders	Year of Establishment	Number of Members (at the time of survey)
TC Seminar	Zhijun Gao, Secretary General of TCA	2017	476
TCC Community	Hulianjun, Secretary of TCC	2016	500
The Community of Information Developers	Aye, Founder of TCC in Guangdong	2012	261
			Total N=1237

Who Are China's Technical Communicators?

Data Collection and Analysis

The survey was released amid the massive COVID-19 surge in China. Despite the difficulties, we had a comforting completion rate of 45.4%. The survey was opened by 571 people, and 259 completed it. We assert that the research results are representative (N=1,237, n=259, 90% confidence level, and 5% margin of error).

The 259 responses came from three groups of people: 212 incumbents, 44 previous technical communicators, and three educators. We focus on current technical communicators for further analysis. Their data (n_1=212) were visually displayed in Wenjuan.com before being exported to SPSS for descriptive and correlation analysis.

RESULTS

We discuss the findings for each research question following their numbered order.

Participant Demographics

The survey participants self-reported demographic information about age, gender, ethnicity, educational background, and geographic locations of workplace (see Table 2).

Age

The majority of the 212 participants were between the ages of 25 and 50. 46.7% of participants were at the age of 31–40, 26.9% were between the ages of 25–30, and 17.9% were between 41–50. The workforce is predominantly young and middle-aged.

Gender

More than two-thirds of the 212 respondents (69.8%) identified as female. Nearly one-third of respondents (30.2%) identified as male. Nobody identified with other genders.

Ethnicity

Among the 212 participants, 205 were Han people (96.7%), and only seven participants identified as ethnic minorities (3.3%), including two Mongol, one Hani, one Hui, one Manchu, one She, and one Xibe. The ratio is higher than the national average (91.11% Han and 8.89% ethnic minorities), indicating less diverse ethnical background in the field that might associate with inequities in education and employment.

Educational level

Academic degrees are held by all 212 respondents. Master's degrees are held by over half the respondents (55.7%). Bachelor's degrees are held by 42.9% of the respondents. Two respondents (0.9%) hold doctorate degrees.

Table 2: Participant Demographics

Category	Variables (Number and Percentage)							
Age	18-24 (15, 7.1%)	25-30 (57,26.9%)	31-40 (99, 46.7%)	41-50 (38, 17.9%)	51-60 (3, 1.4%)	≥61 (0, 0.0%)		
Gender	Female (148, 69.8%)	Male (64, 30.2%)	Other (0, 0.0%)					
Ethnicity	Han (205, 96.7%)	Ethnical Minorities (7, 3.3%)						
Educational level	Doctorate (2, 0.9%)	Master's (118, 55.7%)	Bachelor's (91, 42.9%)	Associate (1, 0.5%)				
Language ability	Chinese (178, 84.0%)	English (166, 78.3%)	French (3, 1.4%)	German (2, 0.9%)	Japanese (3, 1.4%)	Russian (1, 0.5%)	Spanish (1, 0.5%)	Other (0, 0.0%)
Geographic location	Eastern (157, 74.1%)	Southern (34, 16.0%)	Central (5, 2.4%)	Western (13, 6.1%)	Northeast (2, 0.9%)	Other (1, 0.5%)		

Note: Geographic division serves to emphasize essential contrasts in economic development. According to the National Bureau of Statistics, the eastern and southern parts includes Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, and Hainan (10 provinces and municipalities); central China includes six provinces: Shanxi, Anhui, Jiangxi, Henan, Hubei, and Hunan. The west includes Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia, and Xinjiang (12 provinces, autonomous regions, and municipalities). Northeast China includes three provinces: Liaoning, Jilin, and Heilongjiang.

Fields of study

We collected information about participants' fields of study at undergraduate and/or postgraduate levels, including general categories and specializations. Participants reported 30 undergraduate majors and 25 graduate majors (see Table 3), 40 of which were studied by only 1–3 people. Foreign Language and Literature (n=89) and Electronic Information (n=35) were the most popular undergraduate majors. Translation and Interpreting (n=49) and Electronic Information (n=10) were the most studied graduate majors. Technical Communication is not listed because it is a concentration in Electronic Information (e.g., at Peking University) or Translation and Interpreting (e.g., at Southeast University). Figure 2 shows that Language and Literature and Engineering are the two main employment pathways for technical communicators at both educational levels. At the graduate level, the percentage of Engineering majors decreases, while the percentage of Language majors increases.

Language ability

Conducting global technical communication requires strong language and communication skills, especially in English and other widely spoken languages. According to our findings, 61.8% of participants employed two or more languages in their daily work. English, French, German, Japanese, Russian, and Spanish are the most used foreign languages. 38.2% engaged in only one language, either Chinese or English.

Geographic location

Participants' workplaces were distributed in 13 provinces and municipalities (or 20 cities) of China's 34 provincial-level administrative regions. Two thirds of technical communicators lived in three cities: Beijing (26.4%), Shanghai (25.0%), and Shenzhen (14.6%). 90% of participants worked in China's eastern and southern coastal regions, which are the most economically developed areas in comparison to the country's central, western, and northeast regions. All 20 cities are municipalities, provincial capitals, or other big cities with thriving economies, diverse workforces, and high wages.

Professional Experience and Work Practice

We studied participants' past and present practices of technical communication in the following aspects.

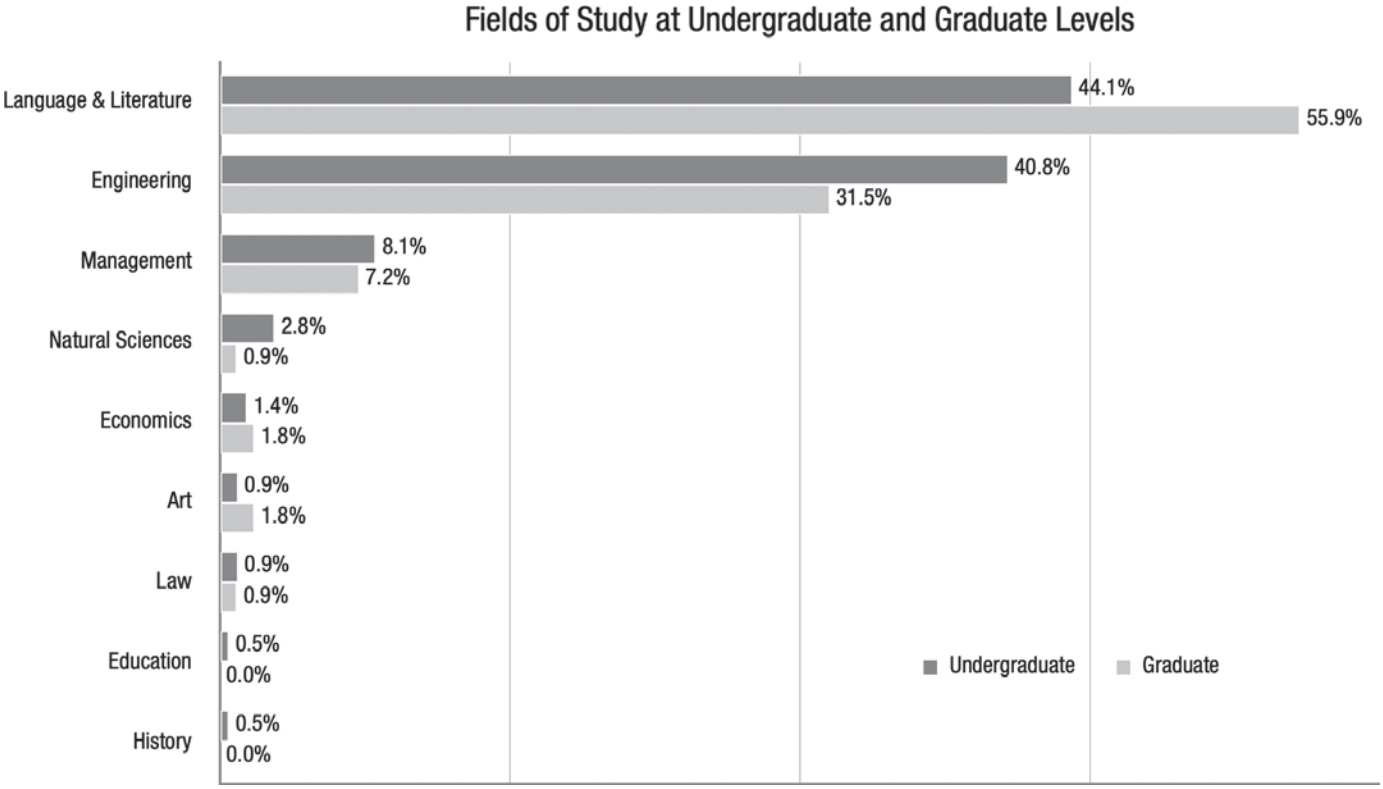

Figure 2: Participants' Areas of Study

Who Are China's Technical Communicators?

Table 3: Fields of Study at the Undergraduate and Graduate Levels

Undergraduate Major	Number of Participants
Arts	**2**
Design	2
Economics	**3**
Economics and Trade	3
Education	**1**
Education	1
Engineering	**86**
Aerospace	1
Architecture	1
Automation	5
Biomedical Engineering	1
Chemical/Pharmaceutical Engineering	2
Computer Science	19
Electrical Engineering	4
Electronic Information	35
Instrumentation	2
Light Industrial Products	2
Machinery	12
Materials	1
Mechanics	1
History	**1**
History	1
Language and Literature	**93**
Chinese Language and Literature	2
Foreign Language and Literature	89
Journalism and Communication	2
Law	**2**
Law	2
Management Science	**17**
Agricultural & Forestry Management	1
Business Administration	3
E-commerce	3
Management Science and Engineering	7
Public Administration	1
Tourism Management	2
Natural Sciences	**6**
Geology	1
Physics	4
Statistics	1
Grand Total	**211**

Graduate Major	Number of Participants
Art	**2**
Art	1
Design	1
Economics	**2**
Applied Economics	1
Economics	1
Engineering	**35**
Biomedical Engineering	1
Computer Science and Technology	4
Control Science and Engineering	3
Electrical Engineering	1
Electronic Information	10
Electronic Science and Technology	4
Engineering	2
Info. & Comm. Engineering	5
Management Science and Engineering	1
Materials Science and Engineering	1
Software Engineering	3
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Language & Literature	**62**
Chinese Language and Literature	2
Foreign Language and Literature	9
Journalism and Communication	2
Translation and Interpreting	49
Law	**1**
Sociology	1
Management Science	**8**
Business Administration	5
Engineering Management	1
Management	1
Science of Business Administration	1
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—	
Natural Sciences	**1**
Physics	1
—	
—	
Grand Total	**111**

Previous profession

Half of the participants (53.6%) began working in this field soon after graduating from college or graduate school. In other words, technical communicators were half of practitioners' first jobs. Among people who switched to technical communication from another field, we see a strong connection between their prior and current jobs. Engineers and translators ranked second (18.9%) and third (15.0%), respectively, as the most likely previous jobs. Other previous jobs include management and marketing specialists, product trainers, editors, consultants, English teachers, etc. It shows that most people's previous professions required dealing with various aspects of enterprise products or services, such as design, management, training, and document translation and editing, making the transition to technical communication easy.

Work experience

Two-thirds (67.9%) have been working in the field for fewer than 10 years. Nearly half (48.6%) of the participants have been working as technical communicators for fewer than five years. People with 0–2 years of experience account for 32.1%. At the other end, 29.7% have 11–20 years of experience and only 2.4% have more than 20 years' experience. This result corresponds with the age distribution of participants, indicating technical communication is a rising occupation that attracts young people.

Current employer: size, type, and industry

Large or extra-large enterprises with over 5,000 employees hired the greatest number of technical communicators (43.9%). On the other hand, 10.9% of participants work for microenterprises with fewer than 100 employees. Regarding the type of enterprises, most companies (64.2%) are privately owned by Chinese founders. Foreign-invested or Sino-foreign joint ventures come in second most (26.4%). State or group enterprises only make up 8.5%. Participant industries (75.9%) are concentrated in information technology, Internet technologies, telecommunications, and electronic technologies. Manufacturing has the second highest percentage (16.5%) of technical communicators. Figure 3 depicts the proportion of participants in various industries and subfields.

Affiliated department: name, size, structure, and culture

The results show that participants are mainly affiliated with two departments: research and development (34.9%) and documentation (32.1%). Products, tech support, and marketing come in third to fifth place, with percentages of 13.2%, 6.6%, and 5.2%, respectively. Other departments represented by 17 participants (8%) include project management, general affairs, services, customer satisfaction, and so forth.

Over half of departments (50.9%) that hire technical communicators are small, having 10 or fewer

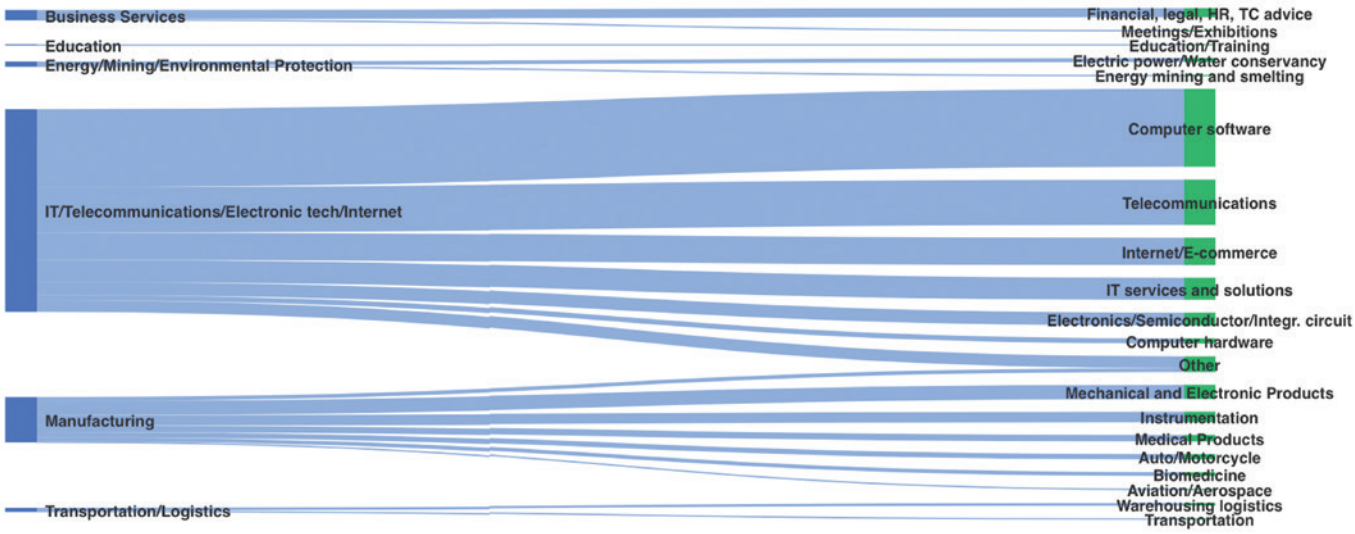

Figure 3: Industries in which Technical Communicators Work

Who Are China's Technical Communicators?

employees. Departments with 50 or more employees are scarce (16.5%). When asked about the department structure, 68.4% said it was flat, while 29.7% said it was hierarchical. According to some, their department implemented a "project system" in which tech writers were organized around product projects and assigned to project-specific responsibilities.

We measured participants' working environments by three indicators: work intensity and efficiency, as well as team/office atmosphere. The results in Table 4 reveal that working intensity and efficiency of technical communication are high, reflecting a common situation in the IT, telecommunications, and Internet industries. The team atmosphere is typically pleasant and harmonious, which could be attributed to the popular flat organizational style that encourages open discussion and promotes coordination.

Table 4: Measurable Indicators of Departmental Culture

n=212	Average Point	Standard Deviation	Variance	Mix Value	Max Value
Intensity (1–weakest, 5–strongest)	3.68	0.80	0.64	1	5
Efficiency (1–lowest, 5–highest)	3.85	0.79	0.63	2	5
Atmosphere (1–nervous and tense, 5–relaxing and harmonious	3.90	0.97	0.93	1	5

Job position and title

208 participants reported 100 distinct technical-communication-related job titles that were variations of technical writer (e.g., Technical Documentation Engineer, Content Designer, User Assistance Developer) or denoted hierarchy (e.g., Senior Technical Writer, Documentation Executive, Head of Content Development). Department or project managers, directors, heads, executives, or leaders made up 32 of the 208 participants (15.4%). The remaining people were divided into five categories: engineers (n=103), writers (n=16), developers (n=13), designers (n=14), and others (n=30). The most common job titles were Technical Documentation Engineers (n=43), Documentation Engineers (n=20), Technical Writers (n=13), Content Designers (n=7), and Data Developers (n=4). Most job titles (n=160, 75.5%) were held by a single person. Figure 4 shows examples of job titles.

Figure 4: Participants' Job Titles

Daily tasks and workload

The technical communication activities that participants performed in daily work spread across the list of 50 survey items (Figure 5). We divided the 50 items into three groups and colored them differently based on the percentage of participants in each activity. Items 1–15 (in red) are performed by over 30% of participants and can thus be identified as the key tasks of technical communication. This category contains documents primarily target product users (e.g., user manuals, installation guides, troubleshooting guides, FAQs, product descriptions). Video tutorials have also become a standard chore for many participants. Items 16–35 (yellow) are supplementary jobs that 10%–30% of participants do on a regular basis. Participants not only write technical documents, but they also participate in project management, internationalization, and localization. Furthermore, some oversee writing for their company's professional and social media platforms (such as their website, blogs, and tweets). Green represents the least frequent job duties, which include writing for new technologies (e.g., cloud computing, AI, AR, VR) or novel applications (e.g., chatbot). Notably, translation is at the bottom of the list, implying that people's daily activities exclude language switching and instead focus on content development in a single language.

Figure 6 shows that, on average, each participant performs 10.5 activities of technical communication. Most participants take on 5–15 activities. At the

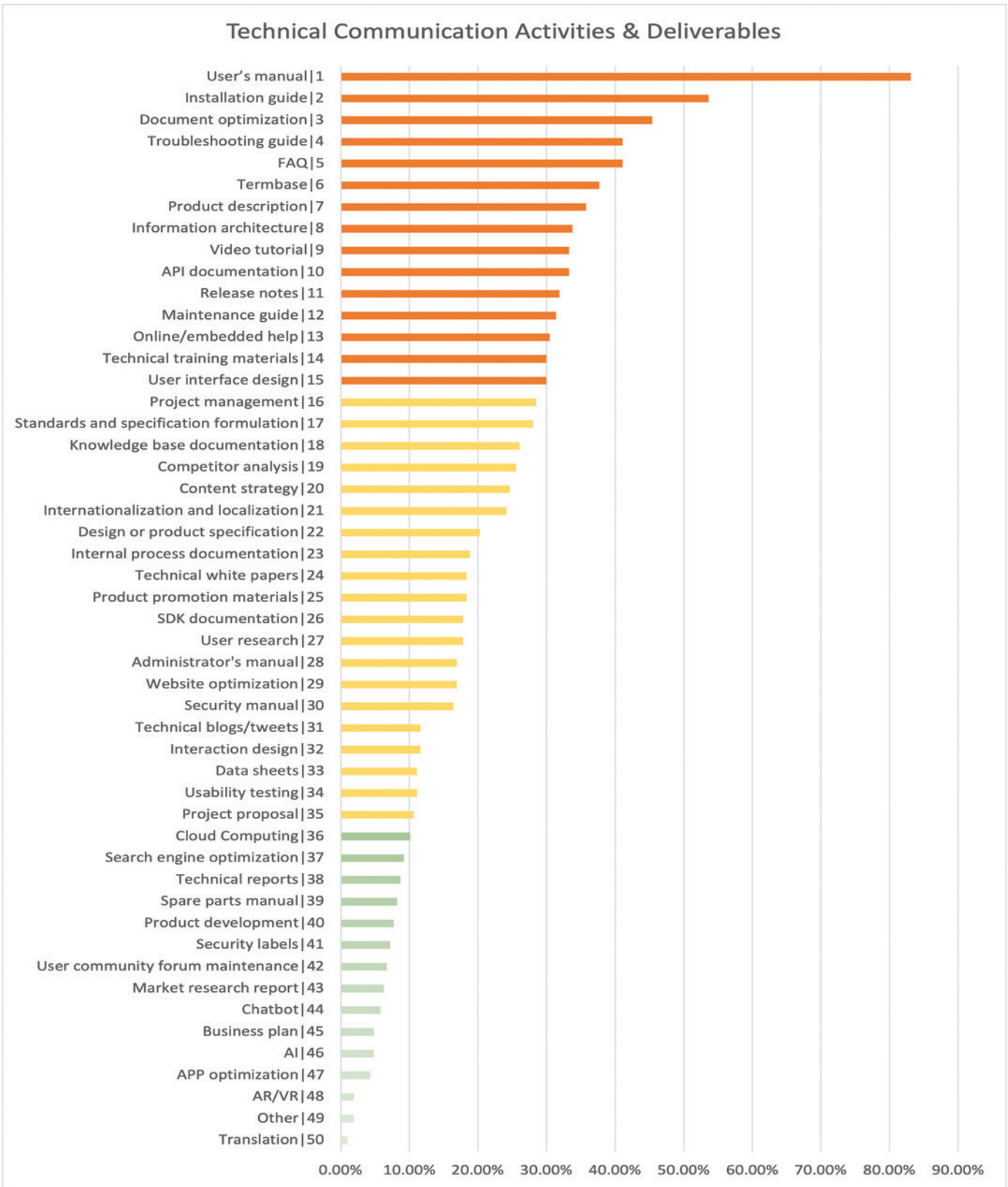

Figure 5: Participants' Daily Tasks

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extremes, seven participants perform only one of the tasks provided, while one person conducts 48 tasks. Knowing what and how many activities technical communicators work on can help us better understand the DEI status of this profession. It can also assist academics in determining which skills to emphasize in the classroom.

Annual wage

We conducted a cross-tabulation analysis to examine the variables that could affect pay. Table 5 shows how annual incomes vary by gender, education, industry, company size, and workload. We chose these five factors based on popular assumptions in Chinese society about who, where, and how to acquire a high wage. The findings suggest that for the entire sample, the statistical distribution of salary skews to the lower end between ¥100,000 and ¥300,000 ($14,671–$44,014 USD), with 67.3% falling in this range. This pay is much higher than the national average of ¥88,115 and is comparable to the average pay of ¥197,353 in the highest-paid industry—information technology service (National Bureau of Statistics, 2022).

The highest percentage of female (35.1%) and male salaries (35.9%) are in the ¥210, 000–¥300,000 and ¥310,000–¥400,000 ranges, respectively. In the female group, almost all data were found to be less than ¥600,000. For the male group, the salary distribution was wider and had a higher number of high-wage earners. Males outnumbered females in the range of ¥500,000 and higher. Without precise figures of salary reported, we cannot calculate the average salary or answer to what extent one group is higher. However,

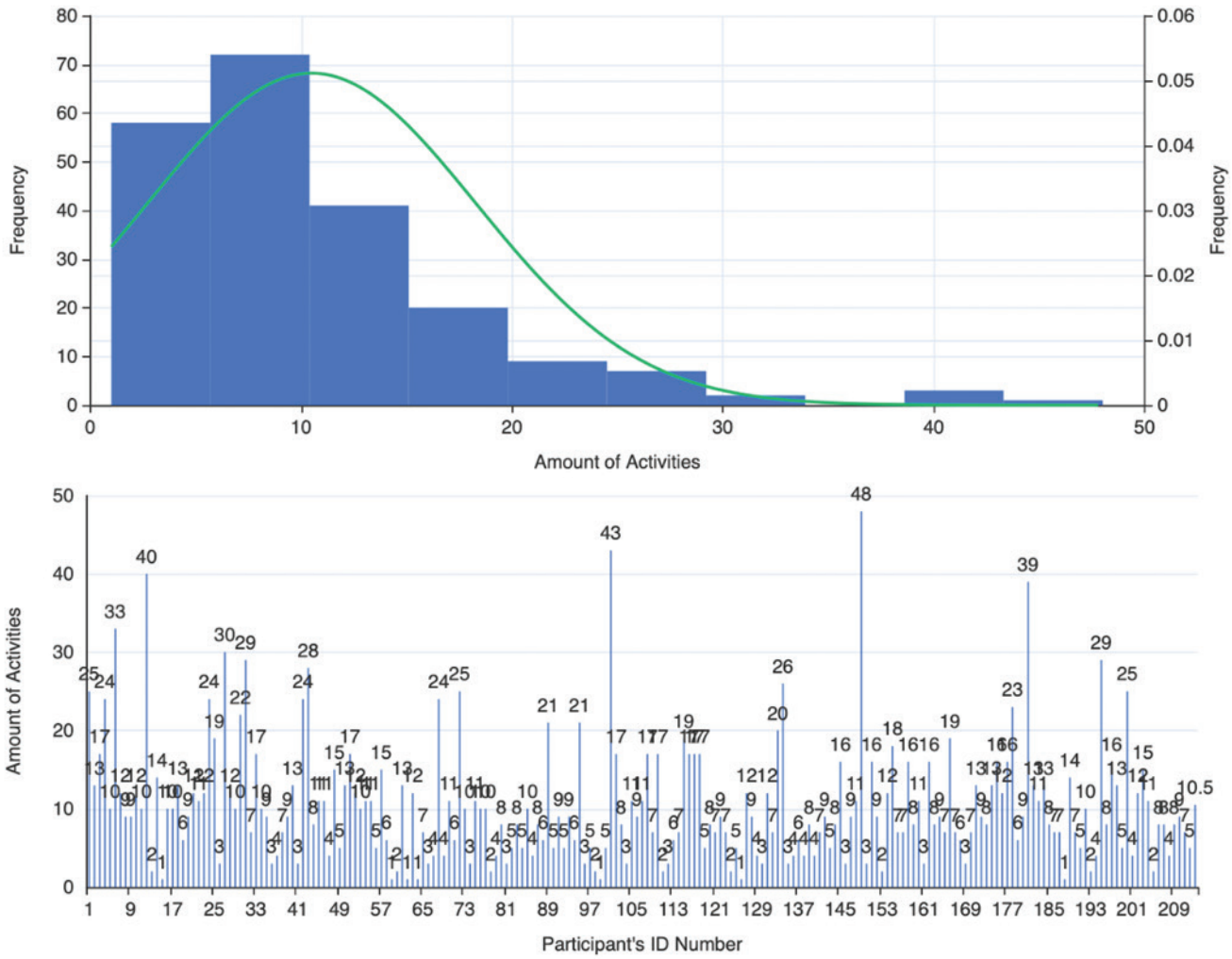

Figure 6: Participants' Workload

Table 5: Annual Salary by Gender, Education, Industry, Company's Size, and Workload

Category	Item	Annual Salary in Chinese Yuan											N
		<100,000	100,000–200,000	210,000–300,000	310,000–400,000	410,000–500,000	510,000–600,000	610,000–700,000	710,000–800,000	800,000–900,000	910,000–1000,000	>1 million	
Gender	Female	10(6.8%)	52(35.1%)	46(31.1%)	19(12.8%)	11(7.4%)	6(4.1%)	0(0.0%)	1(0.7%)	0(0.0%)	2(1.4%)	1(0.7%)	148
	Male	3(4.7%)	15(23.4%)	23(35.9%)	4(6.3%)	5(7.8%)	6(9.4%)	1(1.6%)	3(4.7%)	0(0.0%)	0(0.0%)	4(6.3%)	64
Number of Participants		13	67	69	23	16	12	1	4	0	2	5	212
Education	Associate Degree	0(0.0%)	1(100.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1
	Bachelor's Degree	6(6.6%)	26(28.6%)	29(31.9%)	13(14.3%)	7(7.8%)	4(4.4%)	0(0.0%)	2(2.2%)	0(0.0%)	1(1.1%)	3(3.3%)	91
	Doctorate Degree	0(0.0%)	1(50.0%)	1(50.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	2
	Master's Degree	7(5.9%)	39(33.1%)	39(33.1%)	10(8.5%)	9(7.6%)	8(6.8%)	1(0.8%)	2(1.7%)	0(0.0%)	1(0.8%)	2(1.7%)	118
Number of Participants		13	67	69	23	16	12	1	4	0	2	5	212
Industry	Business Services	1(12.5%)	1(12.5%)	3(37.5%)	1(12.5%)	0(0.0%)	1(12.5%)	1(12.5%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	8
	Education	0(0.0%)	0(0.0%)	1(100.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1
	Energy/Mining/ Environ. Protection	0(0.0%)	1(25%)	0(0.0%)	0(0.0%)	1(25.0%)	2(50.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	4
	IT/ Telecommunications/ E-tech/Internet	11(6.8%)	49(30.4%)	54(33.5%)	17(10.6%)	12(7.5%)	8(5.0%)	0(0.0%)	4(2.5%)	0(0.0%)	2(1.2%)	4(2.5%)	161
	Manufacturing	1(2.9%)	16(45.7%)	9(25.7%)	5(14.3%)	2(5.8%)	1(2.9%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(2.9%)	35
	Transportation/ Logistics	0(0.0%)	0(0.0%)	2(66.7%)	0(0.0%)	1(33.3%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	3
Number of Participants		13	67	69	23	16	12	1	4	0	2	5	212
Company's Size	<100 Employees	3(13.0%)	10(43.5%)	6(29.1%)	3(13.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(4.3%)	23
	100–1000 Employees	4(6.3%)	23(36.5%)	18(28.6%)	8(12.7%)	3(4.8%)	6(9.5%)	1(1.6%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	63
	1000–5000 Employees	3(9.1%)	9(27.3%)	13(39.4%)	1(3.0%)	5(15.2%)	2(6.7%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	33
	5000–10000 Employees	1(6.7%)	6(40.0%)	6(40%)	1(6.7%)	1(6.7%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	15
	>10000 Employees	2(2.6%)	19(24.4%)	26(33.3%)	10(12.3%)	7(9.0%)	4(5.1%)	0(0.0%)	4(5.1%)	0(0.0%)	2(2.6%)	4(5.1%)	78
Number of Participants		13	67	69	23	16	12	1	4	0	2	5	212
Number of Activities	1–10	9(6.5%)	56(40.3%)	45(32.4%)	11(7.9%)	8(5.8%)	4(2.9%)	1(0.7%)	2(1.4%)	0(0.0%)	1(0.7%)	2(1.4%)	139
	11–20	2(3.8%)	10(19.2%)	20(38.5%)	9(17.3%)	5(9.6%)	4(7.7%)	0(0.0%)	1(1.9%)	0(0.0%)	0(0.0%)	1(1.9%)	52
	21–30	2(12.5%)	1(6.2%)	4(25.0%)	1(6.2%)	3(18.6%)	2(12.5%)	0(0.0%)	0(0.0%)	0(0.0%)	1(6.2%)	2(12.5%)	16
	>30	0(0.0%)	0(0.0%)	0(0.0%)	2(40.0%)	0(0.0%)	2(40.0%)	0(0.0%)	1(20.0%)	0(0.0%)	0(0.0%)	0(0.0%)	5
Number of Participants		13	67	69	23	16	12	1	4	0	2	5	212

comparing the range of salary distribution suggests that female salary is skewed toward the lower numbers more seriously than male salary, whereas male participants are likely to have higher salaries, and the disparity becomes significant at the range of half a million and above.

Higher academic degrees provided no competitive advantages. Bachelor's and master's degrees holders had similar percentages in the range of ¥100,000–¥200,000 and ¥210,000–¥300,000, roughly 30% for each category. No substantial difference in annual incomes was found between bachelor's and master's degree holders at any level, including the lowest and highest.

Across industries, most participants' salaries fall between ¥210,000 and ¥300,000, except for manufacturing on the lower side (¥100,000–¥200,000) and the energy/mining/environmental protection on the other (¥510,000–¥600,000). IT/telecommunications industry has the highest and lowest payments, with 7.1% earning the least and 2.6% getting the most. Since only one-quarter of participants came from non-IT industries, we couldn't generalize more about them based on the limited data.

In terms of whether company size (by the number of employees) correlates with income, it shows that salaries in small or middle-sized companies (with <100 or 1000 employees) are generally ¥100,000 lower than salaries in large or extra-large companies (with >1000 employees). Small companies (<100 staff) employ the most individuals with lower incomes than larger companies. On the other end, the highest payments above ¥700,000 are all made by extra-large enterprises (>10,000 employees).

About the correlation between workload and salary, we notice that people performing fewer activities tend to earn less than those who take on more labor. People who participate in 1–10 activities earn the least (¥100,000–¥200,000), while those who perform 10–30 activities earn more (¥200,000–¥300,000). Those with 30 activities or more earn the most. It suggests a positive correlation between workload and salary.

Until now, we've found that some variables seem to influence annual salary (i.e., gender, company size, and workload), while others don't (i.e., educational attainment and industry). Finally, the Cohen's kappa coefficient test was used to measure the degree of correlation. The statistical results of pairing each variable with salary showed that the significant P value for each pair was NaN (not significant), indicating that no consistency existed between two variables. Meanwhile, the Kappa coefficient is 0.0, indicating that the degree of correlation is extremely low. Although the qualitative/categorical data can suggest the distribution tendency of annual salaries in a certain range, it can't prove a significant correlation between any of these factors and salary.

Additionally, we asked participants to rate the overall payment level of the technical communicator population. 44.1% chose "relatively low" and 46.9% chose "appropriate." People's perceptions corroborate our findings.

Career Development

We investigated participants' career development from four aspects: self-evaluation, job application requirements, training programs, and means of acquiring professional skills.

Participants' self-evaluation

Table 6 shows that survey participants have high consistency (SD=0.8) on the sense of fulfillment as a technical communicator. Over half participants chose "relatively strong" or "very strong" on sensing job achievement. However, people generally believe that it's not easy to achieve professional development in current companies. People have widely divergent views (SD=0.98) on whether their current employers provide sufficient support for their career development. Two thirds don't believe their employers give adequate opportunities for professional development.

Table 6: Measurable Indicators of Self-evaluation on Career Development

n=212	Average Point	Standard Deviation	Variance	Mix Value	Max Value
Sense of Fulfillment about Work (1–weakest, 5–strongest)	3.49	0.8	0.64	1	5
Difficulty Level to Realize Career Development (1–easiest, 5-hardest)	2.93	0.90	0.80	1	5
Support from Company (1–extremely insufficient, 5–extremely sufficient)	3.14	0.98	0.96	1	5

Current job qualifications

We asked participants about what prerequisites and qualifications they needed when applying for their current position. Surprisingly, having a degree in a discipline related to technical communication was not the top pick. Having a technical writing certificate was not a must for most participants. Foreign language skills were ranked as the most important qualification by the majority (74.6%). The second most popular answer (68.1%) was work experience in this profession (often three years). The next must-have was proficiency in utilizing document authoring tools (54.9%), followed by familiarity with the document development process (53.1%). Having skills in design or translation, as well as knowledge of practice standards and regulations, can help land a decent position.

Professional training opportunities

When asked if they received regular or frequent professional training at work, half of the participants (49.28%) said yes, while the other half (50.72%) stated no. We investigated what aspects might be related to professional training. The findings indicate that the industries in which individuals work and their educational background had no effect on whether they received regular training. However, the scale of the enterprise seems to be related to the training situation. 61% of participants from small companies and 74.6% from medium-sized companies didn't have regular professional training. People in large (62.1%) or extra-large companies (65.8%) had regular or frequent skill training.

Approaches to professional development

We asked how technical communicators develop professional abilities when their enterprises couldn't offer a regular professional training program. The response "self-study" was chosen by 85.0% of participants as the most common. Other typical responses include peer networking (62.9%) and mentorship (56.8%). Online communities, online courses, and professional conferences are also common methods for improving professionalization. It's interesting to see pre-job training as the least chosen item, indicating a lack of systematic professionalization mechanisms in many enterprises.

Workplace Issues and Challenges

To address our last research question, we examined the issues technical communicators face as a group and as individuals in the workplace.

Common problems technical communicators face

The most common issue that technical communicators face together is feeling unrecognized, both inside organizations (71.4% of participants) and in society (69.0% of participants). The second most serious issue is insufficient technical communication education. 56.8% considered the decoupling of industry and academia in research, collaboration, and talent development. They also expressed concern about the scarcity of education opportunities, resources, and access. The third problem is about professional practices: 43.2% reported a lack of standard norms and an ignorance of current practices in global technical communication.

At the institutional or interpersonal level, the biggest challenge for most practitioners (54.9%) is insufficient understanding of products, which makes it difficult to create technical contents for the products. As noted by 53.1% of participants, technical writers were unable to participate in the product development process, and many product researchers and developers don't understand the value of documentation. As a result, there can be poor communication and lack of cooperation in document writing, and potential delays in the document production process.

COVID-19 effects on technical communicators

Divergent views exist on the COVID-19 impacts: 52.4% acknowledged impacts, whereas 41.0% acknowledged little impact. Two thirds of those who felt the effects spoke about the negative impacts, with the remaining third discussing the favorable effects.

COVID-19 has reduced the business of technical communication. The global demand for technical writing has further declined throughout the pandemic after already suffering a blow from anti-globalization sentiment. Reduced commerce and fewer international clients triggered a cascade of reactions that included project shutdowns, budget cuts, less technical support, layoffs, fewer job openings, and an insufficient workforce. Many people mentioned that technical writing was the "hardest-hit area" of layoffs because of its non-core status. On the other hand, a few technical

communicators saw COVID as a good chance to advance technical communication. As stated by one participant, "the pandemic has expedited society's digital transformation… Technical communication should be optimized and modified to stay up with the times in terms of its contents, forms, methods, and technologies." Participants with this belief spotted new niche markets in online technical marketing.

About the COVID effects on their individual work, 45.3% of participants reported these changes: less effective working and communication; lack of contact with clients, colleagues, or products; marginalization or layoffs; lack of job opportunities; decreased income; increased anxiety and pressure; etc.

Other issues of inequity and exclusion

In previous sections, we investigated workplace equity and inclusion based on external variables including employees' workload, job requirements, income, career development, corporate/team culture, etc. Now we focus on internal variables and invite participants to share any situations they have come across.

The open-ended question generated two types of answers: one-quarter of participants admitted to persistent workplace disparities, while the other quarter denied them. The low response rate on "yes" could be attributed to participant fatigue or a desire to finish the questionnaire as quickly as possible (since this was the last question on the questionnaire). After analyzing the 56 "yes" responses, we believe inequity and exclusion are widespread problems in technical communication. The findings show that participants who reported inequities came from a variety of industries. Cases are less common in the IT/Telecomm/Electronic Tech industries (18.6% on "yes") and more common in other industries (25%–66.7% on "yes").

People characterized workplace inequity and exclusion as discrimination that happened on both institutional/structural and interpersonal levels, which impairs their working ability and professionalization.

Institutional discrimination manifests itself as unfairness in job performance appraisal, payment level, and professional rank promotion. Participants claimed that technical communicators were viewed as a "basic delivery position" or "non-core position" when contrasted to "advanced" or "core" jobs such as product research and development. Technical writing is often (mis)understood to be synonymous with word polishing, which adds value to a product after product developers have done much of the work. Technical writers' work is frequently undervalued and underappreciated. This results in a disproportion between hefty responsibilities and little salary increases or slow rank promotion.

Interpersonal discrimination was caused by company leaders, supervisors, colleagues, or clients. People complained that line leaders didn't understand the process of document writing and assigned an excessive quantity of tasks. Because many technical communicators have a background in language studies, their colleagues regarded them as translators and sent an unreasonable request for legal document translation. Gender, age, and personality are common employment discrimination targets. Female technical communicators with a liberal arts background are thought to be less likely to advance because "they are too feminine to handle technologies." Discrimination against young workers persists when they are assigned more tasks than they should. One participant was mocked for being a "doc-aholic."

Discrimination against technical communicators in the workplace is motivated by superiority/inferiority attitudes about organizational labor divisions, job responsibilities, and human/social features. Many technical communicators have been placed in a disadvantaged position with limited access to professional opportunities or benefits, whether purposefully or unintentionally, institutionally or interpersonally.

DISCUSSION: PROPOSING INCLUSIVE DEVELOPMENT AS A DEI INITIATIVE TO TACKLE PROFESSIONAL IDENTITY CRISIS

We posed an overarching question at the beginning of this article: Who are China's technical communicators, and what is their DEI status? We can now respond based on the survey results.

A simple label to describe the group profile of China' technical communicators would be as follows: (1) China's technical communicators are predominantly female, aged 25–40, Han Chinese, bilingual or multilingual, with master's or bachelor's degrees in Foreign Language and Literature or Engineering Technologies, located in economically developed areas, and have been practicing technical communication

as their first job usually for less than ten years; (2) most of them work in the Department of Research & Development or Department of Documentation under the job title "Technical Documentation Engineer" in privately owned, large or extra-large enterprises in high-tech industries; (3) they work on a wide range of technical documents (50 items) and have moderately substantial workload (5–15 job responsibilities); and (4) the majority earn between ¥100,000 and ¥300,000 ($14,671–$44,014 USD) each year.

The broad profile will not obscure the diversity of China's technical communicators. Diversity is an intrinsic feature of this profession because of its short but fast-growing history. Practitioners' diverse educational backgrounds compensate for the lack of an academic discipline in technical communication or students thereof. Insufficient education or training in technical communication was one of the biggest challenges participants reported, so they chose self-study to improve their professional abilities. The various industries in which technical communicators work, as well as various levels of industry development, considerably contribute to China's diverse technical communication market. Chinese Internet/Telecomm giants such as Huawei, Alibaba, Bytedance, Tencent, and others have maintained the largest need for technical communicators, as seen by the dominant number of survey participants from this industry. Other industries offer fewer job opportunities and cannot compete in terms of working conditions and salary levels with large tech companies. The size of the documentation team, technical communicators' department affiliation, workload, wage level, professional development, and other factors differ between tech and other industries. As a result, it's hard to use a single term to assess China's current degree of progress in technical communication.

Diversity has contributed to economic success and the huge potential for sustained growth. Meanwhile, we see that the profession's social development is outpacing its economic performance in terms of speed and scale. The longstanding, ubiquitous professional identity crisis, which is a matter of equity and inclusion, has plagued practitioners since the birth of the profession.

Practitioners' professional identity crises have historical and societal roots. First, technical communication was historically understood as a specialty, i.e., specialists writing about science or technology subjects for other professionals or literate audiences rather than for the public. The ancient practice didn't help technical communication earn widespread acknowledgement. Second, the term *technical communicator* lacks professional legitimacy due to a lack of government recognition. Direct evidence is that it is not listed as a profession in *China's Code of Occupational Classification 2022* (enacted by the Ministry of Human Resources and Social Security). In practice, technical communicators are usually classified as engineers or clerical workers based on different labor divisions in companies. Third, technical communication education is underdeveloped (Li & Cui, 2018; Ding, 2019; Zhang, 2020) and cannot meet market needs. Except for Peking University, technical communication hasn't become an independent discipline or a major area of study. Most universities offer technical communication as a service course ("China's universities that have opened classes of technical communication," 2022).

Besides these, our survey results reveal corporate, individual, and environmental causes. At the corporate level, technical writers with limited involvement in product development are often pushed to the bottom of the "chain of contempt" and marginalized as peripheral or inferior jobs, particularly if they don't have a documentation team. The situation may worsen if senior administrators don't value documentation. At the individual level, practitioners' identity crises stem from a mismatch between their educational background and job responsibility (e.g., majors of language studies working as technical content developers, engineers, architects, etc.); between high academic attainment and low professional rank, salary, and reputation; and between a strong desire to learn about new technologies or products and limited training opportunities, sources, or access. As for the environmental reason, the sluggish economy, reduced global needs, and higher unemployment during the COVID-19 pandemic aggravated the professional identity crisis.

To address the professional identity issue among China's technical communicators, we propose inclusive development as a broad DEI initiative. The term "inclusive development" originated in economic policy (World Economic Forum, 2018), which places a greater emphasis on equity, empowerment, and overall well-being than economic growth (Dörffel & Schuhmann, 2022). Realizing inclusive development in China's

technical communication requires equal opportunities, the creation of fair environments, and the equitable distribution of development outcomes, all of which will contribute to practitioners' professional development. We propose the following initiatives to promote human-centered development in China's technical communication. First, development subjects should be inclusive. We must pay attention to the actual needs and feasible capabilities of practitioners, especially those from non-IT industries. Second, development goals should be multidimensional, encompassing both economic and social growth while focusing on improving people's social status. Recognizing the social benefits that technical communicators generate is just as vital as understanding the economic values they create. Third, growth opportunities—including but not limited to job application, transition, promotion, and reward—should be equitable. Finally, the outcomes of development should be fairly distributed among all contributors, regardless of employment position or level.

Meanwhile, professional associations can boost their role as cooperation platforms for participants from various industries and countries around the globe. Our findings reveal that practitioners agree on the importance of peer networking, online communities, and online courses for career development. We all aspire to create an inclusive community through this platform to share knowledge and resources, assist with professional growth, instruct and train pre-professionals, develop skills and competencies, and advance global technical communication.

IMPLICATIONS AND LIMITATIONS

DEI was an untapped topic in China's technical communication research and practice. Although different countries have distinct historical and sociopolitical circumstances, and thus varied DEI metrics, we believe the core of DEI stays the same for all human societies—the right to be unique, fairly treated, and valued. We believe that our research will allow readers all over the world to learn about China's technical communicators as people and what they do at work.

Because this survey was designed as an exploratory project, it has a few limitations. The sample size is small to be generalizable, although the data are statistically representative and sufficient to draw tentative conclusions. Furthermore, obtaining a group image implies overlooking individual stories and insights that might tell more truth about realistic situations. We intend to conduct an interview study to understand cultural factors (such as societal power dynamics) and workplace DEI in China's technical communication.

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Privacy in social media friendships with direct supervisors: A psychological contract perspective

Cistulli, M. D., & Snyder, J. L. (2023). *International Journal of Business Communication*, *60*, 403–419. https://doi.org/10.1177/2329488419856072

"Social media in modern companies can connect workers with their supervisors in myriad ways via multiple platforms. This study analyzes the perceived relationships between workers and their supervisors using the theoretical framework of psychological contract violation (PCV). The role of social media in the workplace in terms of privacy and trust between workers and their supervisors and workers' organizational commitment was analyzed. Demographic information, communication channels (platforms), and the source of the social media relationship request were also considered. An online survey of full- and part-time employees yielded a diverse sample of 327 participants. This social media privacy research is consistent with previous literature on e-mail privacy. Both social media privacy and PCV influenced perceptions of (supervisor) trust. Additionally, PCV and trust influenced perceptions of affective organizational commitment. Implications of the results are discussed."

Katherine Wertz

The user experience of low-techs: From user problems to design principles

Colin, C., & Martin, A. (2023). *Journal of User Experience, 18*(2), 68–85. [doi: none]

"Our technical culture is characterized by the development of increasingly complex artifacts. In this article, [the authors] introduce low-techs (sometimes termed 'appropriate technologies'), which are alternative technologies designed to use fewer resources, target priority needs, and aim for a positive social and environmental impact. [The authors] describe their relevance for user experience researchers and practitioners interested in tackling environmental crises, and [they] discuss what actions can be conducted to improve low-techs' design and dissemination. Finally, from a survey of 396 participants, [they] derived 14 general user experience problems for low-techs to propose seven corresponding design principles: identify priority needs to derive necessary functionality, strike the right balance between empowerment and assistance, pay attention to non-functional features, facilitate discoverability, make artifacts and operation transparent, develop users' technical knowledge and skills, and compensate increased material loads and deficits. Practitioners can use these design principles to guide their development of low-techs."

Lyn Gattis

Writing

Constructing structured content on WordPress: Emerging paradigms in web content management

Carter, D. (2023). *Communication Design Quarterly, 11*(1), 42–52. https://doi.org/10.1145/3563890.3563894

"Web content management systems (WCMSs) are widely used technologies that, like previous writing tools, shape how people think about and create documents. Despite their influence and ubiquity, however, WCMSs have received exceedingly little attention from scholars interested in social aspects of technology. [The author] begin[s] to address this gap by analyzing the development of WordPress's content creation experience through the lens of structured content. Based on this analysis, [the author] contribute[s] to ongoing discussions of content management by first suggesting that concepts such as structured content need to be understood as the contingent products of technical lineages and technical and social relationships and by second drawing attention to emerging paradigms of content creation, such as the merging of content creation and arrangement and the conflation of visual and abstract representations of content objects."

Lyn Gattis