Introduction

Core competencies for technical communicators are discussed frequently in articles about technical communication curricula, job requirements, job titles, and technical skills. The field of technical communication is broad, and as a field, we struggle to find our identity. This sentiment is reflected in Yvonne Cleary’s article about professionalism in the blogosphere; she found that the professionals often discuss that career paths for technical communicators are varied and undefined and that job titles do not always reflect the jobs that technical communicators actually do. It also displays the uncertainty some technical communicators feel about the changes in the field (Cleary 2012, 8-28). However, because the field is based on technology, it will always be in a state of change. Continued evaluation of core competencies shine a light on exactly where technical communication is today and also where it might be in a few years. In this article, I interview technical communicators and analyze a job corpus to determine how practitioners’ thoughts and job ad information can combine to reflect the state of technical communication. The first section details the methods used to gather the data sets. The second section describes conversations with technical communicators and their thoughts on digital literacy. The third section reviews the findings from an analysis of a job ad corpus. The last section synthesizes the findings to display the overlaps and gaps in the two data sets.

Method

I began this project by going to the STC Twitter page and seeking their followers who discussed technical communication in their profiles by mentioning their company’s name or their position as a technical communicator. As I identified people who work in technical communication and seemed credible based on their Twitter profiles, I went to LinkedIn to find out more about them. I identified 3 individuals who not only worked professional communicators but also had side businesses that involve technical communication. I then emailed one of them through the email address listed on her resume writing service website, messaged one of them on Twitter, and tweeted at one of them on Twitter. All three responded within a day, and each agreed to serve as interview subjects and gave me their email addresses. I emailed them a list of 10 questions. They submitted their responses, and I followed up with an additional 3 questions. I then compiled their responses to compare and contrast and made a corpus to use in AntConc.

I began the corpus analysis by sorting the job corpus created by students in the Digital Literacy class into 3 separate corpus files – job titles, job descriptions, and job skills/requirements. The entire corpus contains approximately 118 job ads. I then loaded the separate files into AntConc and used the Word Search, Concordance, and Clusters/N-Grams features to identify the most frequently used words, phrases, and groups of words in each corpus. As I noticed patterns in the interviews with the participants, I searched the corpus for terms that relate to those patterns. I also searched terms from articles assigned in class to determine differences between the articles from a few years ago by Rainey et al, Lanier, and Spyridakis with the current jobs posted online (Rainey 2005, 323-352), (Spyridakis 2015, 27-37), (Lanier 2009, 51-61).

Results

In this section, I will discuss the findings of the interview I conducted with technical communicators and of my analysis of the job ad corpus.

**Interview Analysis**

The three technical communicators interviewed are all female. One of them has been an independent consultant in training and communications since 1985. Her projects involve various industries including telecommunications, regulatory compliance, defense, and healthcare. She is also hired to help companies launch or relaunch products, services, and initiatives. The second interview was with a learning and development specialist in a call center at Hewlett-Packard; she also freelances as a resume designer. She has been in her current position for 6 months and has over four years’ experience in instruction and communication. The third interview was with a Senior Manager of Information Development for Rackspace, a managed cloud computing company that is based in Texas and has a location in Australia. She has worked in her current position for 3 years and worked as a technical writer at a different company for 7 years before moving to Rackspace. She also volunteers with OpenStack, an open sourced cloud software system, where she was elected as the Documentation Project Team Lead.

The interview subjects had similar but not identical views of the definition of digital literacy. Two of them emphasized the importance of using technology to meet the needs of the audience and situation. One of them said, “I consider digital literacy to be something beyond knowing how to operate a computer and navigate the internet. I think it’s having a nuance understanding of how to best take advantage of a digital medium for your intended purpose.” The third feels that digital literacy is about understanding the tools that are relevant to the job at hand. She stated, “I maintain that writers must have a wide but shallow understanding of all technologies that relate to their area of expertise.” She said she would expect that a writer could at least write an overview of a complex technology and be able to ask intelligent questions about it. These opinions echo Rainey, Turner, and Dayton who found that managers wanted employees to have a general understanding of the necessary tools and be able to learn new tools quickly (Rainey 2005, 323-352).

The interviewees did not have any tools that they all use, but each of them listed 4 or more software applications or tools that they use frequently. Adobe Captivate and PowerPoint are used by the independent consultant and the learning and development specialist, both of whom do instructional design. The independent consultant also uses Microsoft Office, Articulate Studio, Lectora, Google Docs, Google Hangout, LinkedIn, Meetup, Twitter, Adobe Connect, WebEx, and YouTube. She uses the social sites to for networking. The learning and development specialist uses Adobe Illustrator and Adobe Captivate. The information development manager uses KDE Advanced Text Editor, Docbook XML, Restructured Text (RST), Git, Gerrit, Jenkins, tox, Maven, Sphinx, and other small tools.

All of the respondents agreed that it is extremely important to teach themselves new technical skills. Two of them emphasize the importance of learning the tools about which they will be developing deliverables. The independent consultant stated, “Observing my own learning process often helps me create a logical path and a helpful perspective for new learners.” The information development manager makes the point that users want different content today than they wanted 5 or 10 years ago and that knowing the available tools helps us to deliver the content that our users expect. The instructional designer and independent consultant develop their technical skills in response to their clients’ needs and job requirements. The independent consultant takes advantage of design thinking courses and MOOCs to learn new tools and platforms that can help her in her job. The instructional designer is improving her skills with Adobe Captivate, and she is also learning HTML and CSS. The manager said she has become more comfortable with new technology over the years and is now learning RST markdown and the Sphinx tool they use to generate final HTML.

The respondents gave each gave 2 responses regarding the most important technical skill they possess. The independent consultant values her ability to “think at the keyboard” to quickly make complex information more concise and easier to understand; she also values her ability to step outside of her own experience to find new information. The instructional designer values her knowledge of software applications and “ability to work with highly technical subject matter experts and translate that knowledge into accessible language for non-experts”. The information development manager uses fewer technical skills as a manager than she did working strictly as a technical writer, but her ability to troubleshoot toolchain errors is her most important technical skill because the toolchain at her company is highly complex. She also finds that knowing the basics of English grammar and knowing when rules can and should be broken is extremely important.

When asked about the most valuable technical skill for new hires, the respondents all mention adaptability and the ability to communicate in the ways the job requires as being extremely important. Knowledge of technology is seen as a plus, but the respondents answers suggest that knowing how to perform the basic job functions well is key because as one stated, “These may not be “technical skills,” but they provide a solid base as technologies and industries evolve.” Another stated, “I don’t require any technical knowledge, but I do like to see evidence of a willingness to try new things and investigate interesting problems. If you already have that kind of inquiring mind, then I can put you in front of a Linux machine or a new piece of cloud infrastructure and know that you won’t fall to pieces trying to work it all out.”

Only the independent consultant and information design manager responded to this question, and they both produce documentation assistance to help users navigate new products or to help sell new products. The independent consultant also develops training programs for clients that include independent courseware components, comprehensive solutions like multi-level curriculums, and self-paced, web-based courses used in a client’s online university. She also creates guides to help users understand the courseware and slides for instructors who train in person instead of online. The clients in both cases expect high-quality work that meets the client’s needs and is completed within the designated timeframe, but the independent consultant mentions that the success metrics differ for each project and client because her work supports strategic goals that vary.

When asked about what they liked most about their work, the responses included seeing trainees excel after they are trained, writing and managing a team of writers, meeting new people, learning new things, and providing excellent documents to clients. Each of them disliked the administrative work, such as budgeting, managing schedules, and dealing with bureaucracy, that is required of them. Two of them elaborated and said they would rather spend that time doing their technical communication-related tasks such as writing or training people.

**Corpus Analysis**

This section includes results from a review of the job corpus and includes findings from the job title, job description, and requirements and skills sections of the job ads.

Job Titles

The job corpus contained 118 job titles; 64 of the job titles occur more than once, and the other 54 appear only once. The most frequent job title was ‘Technical Writer’, which appeared 49 times. The second most frequent title was ‘Content Strategist’ with 6 occurrences. ‘Technical Writer/Editor’ appears 3 times, and ‘Associate Technical Communicator’, ‘Grant Proposal Writer’, ‘Proposal Writer’, and ‘Senior Writer’ appear 2 times. The word ‘Content’ appears in 13 job titles, 6 of which are ‘Content Strategist’ and the other 7 vary. ‘User’ appears 4 times. The 54 job titles that occur in the corpus only once reflect the variety of technical communication job titles that Spyridakis discussed upon reviewing job titles on the Society of Technical Communication website and the variation in titles of technical communication managers interviewed by Rainey et al (Spyridakis 2015, 27-37), (Rainey 2005, 323-352).

The frequency that ‘Technical Writer’ appears may be due to the search terms used and job ads selected by the students in the class and may not actually reflect the disbursal of jobs titled ‘Technical Writer.’ A quick search of jobs within 50 miles on Denton on [www.indeed.com](http://www.indeed.com) shows 5,822 jobs when searching ‘user experience’ and 186 for ‘technical writer.’ It is possible that the class did not use a variety of search terms when compiling the corpus which led to an inaccurate reflection of technical communication jobs/job titles that are available.

Seventeen of the jobs titles in the corpus involve a ‘slash’ where the position has two separate duties that are combined into one job; some of these jobs are related such as ‘Technical Writer/Editor’, but some of them seem quite different from one another. For instance, ‘Content Strategist/Web Editor’ and ‘Technical Writer/Business Process Analyst’ are two of the seemingly different jobs that include slashes. This could reflect the evolving nature of technical communicators where technical communicators are required to be more than just, “packagers of information,” as Hayhoe mentioned (Hayhoe 2002, 397-398) . When the jobs of technical communicators can be easily outsourced, it is relevant that technical communicators would take on multiple roles within their companies to make themselves more valuable and to demonstrate their skill sets. On the opposite end, it could also mean that non-technical communication employers still struggle to know the roles of technical communicators and their value to companies.

Job Descriptions  
The most frequently used words in the job description corpus are ‘technical’ and ‘documentation,’ each of which appeared over 235 times. ‘Technical’ is most frequently followed by ‘writer’ (41 times) and ‘documentation’ (21 times). ‘Documentation’ is most often preceded by ‘technical’ (21 times) and ‘product’ (18 times). Because the job title ‘Technical Writer’ is the most frequent job title in the corpus, it stands to reason that ‘technical,’ ‘documentation,’ and ‘product’ would appear frequently in the job descriptions.

Though only 4 job titles include the word ‘user, the word ‘user’ appears 92 times in the job description section; it is followed most commonly by the words ‘experience,’ ‘manuals,’ ‘guides,’ ‘documentation,’ ‘interface,’ ‘research,’ and ‘training.’ Additionally, ‘easy-to-use’ and ‘easy to understand’ are phrases that are used 7 times in the job descriptions in the corpus. ‘Concise’ is used 10 times and ‘clear’ and ‘clearly’ are used 18 times. Each of these terms reflects the focus that technical communication places on the user and the need to make sure that content is accessible for users.

‘Manuals’ appears 55 times in the job description corpus while ‘web’ is mentioned 48 times in all its forms. This seems counterintuitive considering the changing nature of technical communication, but I think it reflects again the job searches that were performed for jobs in the corpus; jobs titled ‘Technical Writer’ might be more likely to require tasks such as writing manuals than those requiring skills in web content management or web design.

Required Experience and Skills  
‘Communication skills’ is used 56 times. ‘Time’ is mentioned 49 times and is largely surrounded by ‘management.’ ‘Technical’ and ‘Writing’ appear 276 and 209 times, respectively. ‘Communication skills’ appears 56 times and references to ‘presentation’ or ‘oral communication’ appear 29 times. ‘Writing’ is mentioned 80 times and ‘written’ is mentioned 36 times, and both largely reference writing skills. ‘Oral communication’ and similar terms referencing verbal communication and presentation skills are mentioned 29 times. The requirement that applicants have writing and communication skills is unsurprising because we are writers and communicators at heart.

What is more interesting is that many terms related to more technology-driven aspects of technical communication appear as frequently as references to the soft skills required of applicants. ‘Content management’ is mentioned 22 times, and references to responsibilities regarding ‘web’ analysis, development, design and other web skills are mentioned 21 times. ‘Tools’ is mentioned 51 times mostly in reference to the ability to use non-specified tools but be familiar with technologies that are related to the job at hand. Specific tools are also mentioned, with ‘html’ and ‘xml’ being mentioned a combined total of 62 times. Additionally, ‘Adobe’ is mentioned 60 times. The frequency of technology and tool related requirements shows that technology and tools might be equally relevant for jobs titled simply ‘Technical Writer’ as they are to jobs with titles related more specifically to technology and tools.

**Discussion**

The interview respondents range from 4 years’ experience to over 30 years of experience. It was interesting to note the differences between their years of experience and the skills they valued most. The respondent with the most experience places a lot of value in soft skills while the respondent with the least experience values the software required for her current position most. The respondent in the middle places the most value on software applications at least in part because her job is more technology-driven but also because she enjoys her work with cloud-based systems enough to volunteer her time to an open-source software company. Users are still central to the work that they do, and each of them mention users when they discuss their work and how it relates to technology, though none of their titles reflect users. This connects to the data in the job description corpus that shows that users are mentioned 92 times in the job description corpus even though only 4 jobs have ‘user’ in their titles. Technology and tools are only necessary if they assist the communicator with sharing information with a user or making a product effective for users. One of the respondents used the following statement when defining digital literacy, “I think it’s having a nuance understanding of how to best take advantage of a digital medium for your intended purpose. It means being able to understand the situation, exigency, and constraints and then take that understanding and translating it into communication that fits the audience, context, and rhetorical situation.” Topics like single-sourcing are a non-issue for users a majority of the time, but it does allow users to receive the information they need faster. In the corpus analysis, ‘authoring’ is mentioned only 16 times, and ‘single sourcing’ is mentioned 7 times, but I expect that these words will appear in job ads more frequently as time goes on.

It is interesting that the interview respondents and the corpus data show that basic writing skills are still integral to being an effective technical communicator. The interview respondents use their communication skills daily in their work with their companies and also their freelance work. They mentioned the need to convey information clearly and concisely. The job ads reflect the need for technical communicators to have traditional communication skills. The term ‘excellent’ is used most often with skills like writing, grammar, speaking, and communication (91 times in requirements, 8 times in descriptions). ‘Superior’ is used 6 times and ‘good’ is used 27 times in requirements, and ‘good’ is used 7 times in the job description corpus, all in reference to writing, communication.

The interview respondents and results from the corpus analysis also align in reference to tools; employees are expected to be capable of learning new tools but are not necessarily required to know them from day one. When referencing tools and technology in the job requirements corpus, ‘basic knowledge’ is mentioned 32 times; ‘expert’ is used 11 times, and ‘advanced’ is mentioned 24 times. In the job description corpus, ‘basic’ is mentioned 4 times; ‘advanced’ is mentioned 6 times, and ‘expert’ is referenced once.

The job ads reflect different terminology when referencing writing skills and knowledge of technology and tools. When referencing communication skills, the jobs ads use terms like ‘excellent,’ ‘good,’ and ‘superior while tools and technology experience is described as ‘basic,’ ‘advanced,’ and ‘expert.’ In addition to the separate terminology, communication skills with qualitative descriptors are referenced at a much higher rate than those describing tools and technology. These differences reflect the idea that we are communicators at heart, so it is expected that we excel at writing, speaking, and communicating whereas we are able to choose our paths once we enter technical communication and our specialization determines the tools and technologies we need to know.

While the corpus and interviews reflect that necessary technologies depend on the field one enters, they do not provide any insight into how to select a specialization or even which specialization is most employable. Future research could include interviewing technical communicators about why they chose their selected field and the numbers of jobs based on not only job title but also specialization, which is often not clear in the job titles.

Some limitations to this study are that I only interviewed three people, and 2 of them work in instructional design at least part of the time and have somewhat similar jobs. Additionally, the corpus might have duplicate jobs in it because the job ads were all added by different students; this might lead to slightly higher returns on some of the search terms. The findings in the corpus may also skew toward a view of jobs for technical writers and away from a view of other jobs in technical communication.

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