To: Drs. Youngblood, Whittemore & Welhausen
From: Mst Nur E Taj Tamanna
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Re: Designing for Usability and Accessibility in Technical Communication

Keywords: Usability, Accessibility, User-centered design (UCD), Inclusivity.

Executive Summary

This memo focuses on the integral role of technical communicators (TCs) in ensuring usability and accessibility through strategic communication and design. As digital platforms and professional environments increasingly prioritize inclusivity, TCs are key facilitators in ensuring that information is functional and universally accessible. Their expertise extends beyond conventional content creation, encompassing rhetorical precision, user advocacy, and iterative design to develop materials that address a wide range of user needs.

Overview of Usability and Accessibility

"Good design is timeless" (Beaird, 2014). This principle speaks to the enduring value of creating designs that transcend fleeting trends, a challenge that technical communicators address through their proficiency in rhetorical strategies, audience analysis, usability testing, and iterative design processes. Every product or tool is designed to serve a specific function, and rather than focusing solely on the product's functionality, technical communicators play a crucial role in prioritizing user-centered design, drawing on user experiences to ensure these tools are user-friendly and accessible. This user-centered approach improves usability, allowing users to engage with the content effortlessly and helping them accomplish their goals more effectively.

Usability refers to the extent to which specified users can use a product to achieve specific goals effectively, efficiently, and satisfactorily (ISO, 1998). Beyond mere functionality, usability ensures that users can navigate, understand, and interact with content seamlessly, minimizing effort and frustration while maximizing efficiency. Accessibility, however, goes a step further. As Petrie and Bevan (2009) explain, "Accessibility is more than just usability—it is about breaking down barriers so everyone can engage with content." While usability focuses on ensuring products work well for specific users in certain situations, accessibility ensures that these products are designed from the start to meet the needs of people with diverse abilities, removing barriers for all users, regardless of ability.

The Role of Technical Communicators in Enhancing Usability and Accessibility

Technical communicators (TCs) are essential in crafting accessible, user-centered experiences by advocating for users and rhetorical strategy experts. Slater and Rosselot-Merritt (2023) integrate Kenneth Burke's rhetorical aesthetic theory of form into their discussion of technical communication, demonstrating how TCs shape the interaction between content and audience by ensuring communication builds anticipation, meets expectations, and creates a cohesive and emotionally engaging experience. TCers might be seen as artists, seamlessly blending rhetorical and aesthetic elements to create content that resonates intellectually and emotionally with users, thereby highlighting their role as creative problem solvers. By recognizing the "inseparable relationship between rhetoric and aesthetics" (Slater & Rosselot-Merritt, 2023, p. 58), TCs combine creativity and empathy into their work, addressing users' functional needs while meeting their emotional and cultural expectations. In this way, TCs act as both designers and creators, crafting communication that is impactful and deeply human-centered.

Technological Advancements and the Evolving Role of TCs

The adaptability of technical communicators (TCs) makes them uniquely suited to navigating the last decade's rapid technological advancements and workplace shifts, enabling them to integrate usability and accessibility into evolving design practices. As the transition from print to digital communication has made technology central to technical and professional communication (TPC), TCs have proven to adopt and adapt to new tools and ideas quickly. As Redish (2010) notes, "Technical communicators have to be open to change, quick to adopt and adapt new ideas and new tools" (p. 195). This adaptability and user-centered design expertise position TCs as key players in ensuring digital products align with workplace goals and values. As the relationship between usability and technical communication evolves, there is a growing emphasis on cross-disciplinary collaboration, managing complex systems, and meeting the needs of diverse user groups, particularly through accessible design. Huntsman (2021) highlights how TCs ensure accessibility aligns with organizational priorities, making their role critical in this fast-paced, ever-changing digital world.

Technical communicators (TCs) play a significant role in the evolving workplace by ensuring that user-centered principles guide the design and communication of products. User-centered design (UCD) is a comprehensive, interdisciplinary approach that prioritizes direct user involvement to understand user needs and the demands of specific tasks. Through iterative cycles of design and evaluation, UCD ensures that products are highly functional and intuitive to use. In this context, TCs play a pivotal role by advocating for user needs and ensuring that product design and communication are aligned with those demands. Their expertise in adapting content and design to meet user goals enhances functionality and accessibility. As Martin, Carrington,

and Muncie (2017) emphasize, "TCs should explicitly ground arguments about their thinking, decisions, and actions in user advocacy... it demonstrates the positive impact of a TC's work" (p. 329).

TCs excel at refining products based on user feedback to maintain long-term usability. By collaborating across teams, they integrate user-centered practices throughout product development, thereby aligning their contributions with broader organizational goals and ensuring successful outcomes. As Redish and Barnum (2011) highlight, technical communicators are uniquely equipped to prioritize user needs and address the expectations of their audience—the individuals who ultimately engage with their work. This user-centered mindset enables TCs to ensure that design and communication solutions meet user needs from the outset. Besides, this rhetorical training equips TCs with a unique ability to adapt communication strategies, craft persuasive arguments, and analyze audience needs, making them exceptionally suited to advocate for users.

The Strategic Role of Technical Communicators in Elevating Accessibility and Inclusive Design

Technical communicators (TCs) use their expertise in rhetorical theory, audience-oriented practice, and user-centered design to advocate for inclusivity, ensuring that assistive technologies and interfaces are developed with the lived experiences of disabled users in mind. This advocacy begins with treating disabled "users as co-designers and co-creators" in the participatory design process, where their insights inform design decisions from the ideational phase onward (Oswal & Palmer, 2021). By fostering mutual understanding among stakeholders and translating complex user needs into actionable design goals, TCs bridge the gap between designers and diverse users, ensuring products comply with accessibility standards while genuinely aligning with real-world contexts.

Participatory design shifts the focus from compliance-driven models to user-driven innovations, promoting usability and autonomy for all. TCs excel in challenging ableist assumptions and advocating for equitable solutions that dismantle practices marginalizing users with disabilities. This approach, as Melançon (2013) emphasizes in Rhetorical Accessibility, integrates disability studies into technical communication, addressing systemic barriers and harmful narratives, such as the "supercrip" metaphor, to reframe accessibility as a societal responsibility. TCs move beyond technical fixes, embedding inclusivity into the broader social, cultural, and political forces that shape technology. Accessibility is not merely about meeting compliance standards like those outlined in the Americans with Disabilities Act (ADA). It reflects a commitment to design with autonomy, independence, and engagement at its core. As Pionke (2017) emphasizes, universal design aims to create environments that accommodate the diverse needs of all users. Hennes (2013) further highlights that accessibility must be integrated into the design process

from the beginning, as it cannot be separated from broader social and cultural forces. This is where TCs shine, using their expertise to bridge the gap between complex technologies and user needs. By proactively addressing barriers and fostering inclusive practices, TCs streamline user experiences and drive innovation. For example, Microsoft's inclusive design practices (2023) demonstrate how reducing cognitive load can align design with intellectual and emotional user needs, enhancing engagement.

Of course, by building accessibility into the design process from day one, TCs help companies avoid expensive fixes down the road and pave the way for more inclusive and effective user experiences. As Petrie and Bevan (2009) highlight, considering the full range of potential users from the beginning makes addressing the needs of disabled and older users a natural part of the process. Furthermore, TCs' role extends beyond compliance and retrofitting, promoting genuinely inclusive user experiences that enrich the design process and contribute to the evolution of an "Accessible User Experience (AUX)" that serves diverse populations effectively (Oswal, 2019). Ultimately, TCs are indispensable facilitators, advocates, and innovators in advancing accessibility and inclusive design. Their interdisciplinary expertise and commitment to participatory design empower them to embed accessibility seamlessly into both process and product, aligning inclusivity with organizational goals and fostering a more equitable future for all users.

Conclusion

Technical Communicators are essential experts in their profession because of their unique capacity to design for accessibility and usability. Their expertise extends beyond surface-level design as they thoroughly know rhetorical strategies, user-centered approaches, and accessibility standards. Unlike other professional TCs have a special combination of creative and analytical abilities that enable them to bridge the gap between technology and its users, ensuring that systems and products are not only useful but also inclusive and intuitive. Their mastery in adapting content for diverse audiences and their ability to anticipate and eliminate barriers make TCs irreplaceable in creating equitable and effective communication solutions. By crafting designs that align with user needs and organizational goals, technical communicators redefine the standard of usability and accessibility, demonstrating their special contribution to the advancement of inclusivity in the digital era.

Portfolio Content

I have chosen to include the following documents in my portfolio because each one exemplifies the critical role of technical communicators in designing for usability and accessibility, showcasing how user-centered principles can enhance diverse communication contexts.

1. Guide to Undergraduate Studies in English
Course: ENGL 7000 Technical Editing:

In this project, I revised and edited the Guide to Undergraduate Studies in English to transform it into an evergreen, comprehensive, and accessible resource for all faculty coordinating undergraduate studies. By updating content, enhancing usability, and applying university and Microsoft style guides, I ensured the guide aligned with user-centered principles, making it usable for print and electronic formats. This work emphasizes the role of technical communicators in creating accessible, user-centered solutions that meet diverse needs, demonstrating the integration of rhetorical expertise, accessibility practices, and audience-oriented design.

2. User Research Project
Course: ENGL 7010 TPC: Issues and Approaches

In collaboration with a classmate, I conducted a user research project evaluating the usability of the Alabama Department of Public Health (ADPH) website. Using user testing and evaluation methods, we assessed the site's accessibility and usability, focusing on its effectiveness for diverse audiences. We gathered feedback through pre-test and post-test questionnaires, think-aloud sessions, and task performance metrics. Based on the findings, we provided actionable recommendations, including redesigning the navigation structure, improving the search engine, and clarifying program names. The project highlights the role of technical communicators in advocating for user-centered design and enhancing digital platform accessibility through targeted research and actionable recommendations.

3. The Alabama River Alliance (ARA) Client Project
Course: ENGL 7080 Document Design

As part of a team of five, I collaborated on a client project for the Alabama River Alliance in our document design class. We designed materials, including a brochure, rack card, and infographic, to meet the organization's communication needs, focusing on enhancing usability, accessibility, and audience engagement. As a team member, I co-designed the brochure, collaborating with teammates to conceptualize layouts, ensure adherence to ARA's style guide, and incorporate usability principles. My contributions included creating low-fidelity sketches, refining the document through iterative feedback, editing the documents, and ensuring the final design was accessible and visually cohesive. This project involved assessing the client's requirements, implementing effective design strategies, and delivering cohesive and impactful documents. The work underscores the importance of technical communicators in creating user-centered materials that address real-world challenges and promote inclusivity and clarity.

4. **Infographic Poster Project**
   Course: ENGL 7080 Document Design

For this Infographic Poster Project, I created an infographic titled “How to Establish a Work-Life Balance.” This project involved designing a visually engaging and informative poster, supported by an accompanying memo, to effectively communicate strategies for achieving balance in personal and professional life. By employing user-centered design principles, I ensured the content was accessible, clear, and relatable to the intended audience, aligning with the broader goals of technical communication to create functional and inclusive materials. The intended audience for this infographic is graduate students seeking guidance on balancing personal and professional responsibilities. This infographic can be displayed in office spaces or shared through internal newsletters. Providing clear, actionable strategies helps individuals recognize the importance of maintaining a healthy work-life balance, reducing stress, and improving overall productivity and well-being.

5. **A Seminar Paper**
   Course: ENGL 7180 Nineteenth-Century Studies

I wrote a 20-page seminar paper titled "Environmental and Ecocritical Perspectives on Heart of Darkness by Joseph Conrad" for the Nineteenth-Century Studies, Blue Victorian class. This project involved conducting in-depth research and applying critical analysis through an ecocritical lens to explore themes of environmental degradation and humanity's complex relationship with nature. I prioritized interdisciplinary articles that bridged literature with environmental ethics and colonial history to deepen my analysis. By integrating rhetorical knowledge, I demonstrated the ability to construct persuasive and culturally resonant arguments, showcasing the analytical and communicative expertise central to technical communication.

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