

Addressing Inclusivity, Diversity and Accessibility in Technical Writing: Case Study and Teaching Note

Addressing Social Sensitisation and the Awareness of Socio-Cultural Realities While
Implementing an Inclusive Approach to Coding and Technical Writing

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DISCLAIMER: The following case is a fictionalised narrative with data and references to real-life situations.

RedLine: The Code-Switch

Jane was recently promoted to the position of Principal Engineer at RedLine Technologies, a prominent foundation that specialized in the manufacturing of free and open-source operating systems and software for personal computers and embedded systems. While Jane was initially quite exhilarated to work at such a notable corporation as a developer, recent developments in the socio-political landscape of her state had significantly decreased the morale in her community, which also reflected in her team's productivity in the company. Being a woman of colour, the recent resistance movements and instances of authoritarian brutality had created a sense of distrust amongst the employees at RedLine, which seemed to be a common issue in most companies in her state. However, this was merely a miniscule part of the larger issue; For Jane and the other employees who were people of colour, RedLine's lack of statements and initiatives regarding such a crucial social movement had made the employees sceptical about the company's interest towards their internal ecology and work environment.

Spending hours pondering over possible solutions to larger questions pertaining to diversity and inclusivity, especially within a company that possessed a clear code of conduct for accessibility, Jane decided to hold an open discussion with her team to come to a hypothetical, but feasible plan of action. Lisa, a technical writer, had suggested that they could regulate the terminologies being used within the company to ensure that words and phrases that were rooted in a legacy of discrimination and partisan politics were prohibited. Jane could understand the rationale behind the idea, however, she hoped for a more permanent solution that could also reflect upon the company's image as a manufacturer of operating systems. Additionally, a permanent solution could also provide a framework for other organisations to utilise.

Cynthia, a programmer in Jane's team, extrapolated upon Lisa's idea and suggested that they could modify their internal, kernel code by modifying programming terminology that could indicate discriminatory practices. This would both be a permanent solution that they could implement and ensure that the employees use it, as well as a provisional framework for other companies to utilise. Cynthia was in close contact with programmers from other tech companies who had mentioned that there was an upcoming initiative to rename outdated terminology in programming languages, and Cynthia's idea would be one of the first applications of this movement. Jane and her team were quite pleased with this idea. She had promptly written a proposal for this concept to be sent to the lead developers.

Allison, the lead developer of RedLine Technologies, after a period of scrutinising the proposal, had accepted it and given Jane's team the permission to conduct this project. Upon receiving this

confirmation, Jane had organised a focus group meeting with the senior developers within the company. “How would we modify ‘blacklist’ and ‘whitelist’?” Jane asked. “We could just use blocklist and passlist.” One engineer suggested. “How about denylist and allowlist?” another engineer suggested. Following a similar pattern, Jane’s team had compiled a list of terminology that could be rationally modified in their code. Besides blacklist and whitelist, whose binary reflected long-standing partisan notions of race and morality, there were several other modifications such as “primary” and “secondary” instead of “master” and “slave”. With this, the final list had been compiled and Jane’s team had also successfully drafted the sample code. To familiarise their own employees with this modification, RedLine also conceptualised and mandated an online learning course that would enable them to formulate effective strategies for creating inclusive open-source codes. Coincidentally, several other tech companies had also begun to mandate inclusive terminology in their code bases.

While several engineers were pleased with this positive change, others were more sceptical about the authenticity of the intent behind this decision. Some of the major criticisms that Jane had received were that the action being taken was “too performative” and failed to address “real-life concerns”. Many employees also maintained that the terminology being modified did not directly correspond to discriminatory practices. Jane, however, insisted upon the fact that these changes were necessary as the binaries represented by these terms and their indirect correlations had been socialised and did not support inclusion. “If you think about it, ‘black’ in blacklist implies something undesirable, while ‘white’ implies something good. These words might not have a direct legacy but it’s all about the implications.” Jane said. However, this was not enough to quell the backlash.

Eliza, a senior engineer at RedLine, and a woman of colour had expressed her distaste with Jane’s modus operandi, claiming that the latter had not provided a concrete solution to the company’s low morale and discriminatory work environment and had instead, worked towards the betterment of the brand’s image. “This is not to hate upon Jane, but this just seems too performative.” Eliza said. Besides Eliza, certain engineers were also worried about the implementation of this decision as it would create the issue of learning and unlearning years of programming expertise. Jane maintained that the new lexicon would only be implemented wherever it is possible and RedLine will refrain from introducing terminology that is otherwise biased in the future. However, this had prompted Jane to reflect upon the nature of her team’s proposal. If it was not mandated, then was it truly a solution to a socio-political issue within the company and beyond? In that case, this decision was truly performative. If she were to mandate it, how would it be conducted in a manner that would not violate the sensitivity of the issue?

Synopsis: Case of insensitivities whilst implementing an inclusive approach to coding in an attempt to address inclusivity and diversity in the workplace.

Keywords: Programming Language; Inclusive Terminology; Inclusivity; Diversity; Sensitivity; Communication Gaps; Lack of Transparency

Learning Objectives:

1. Understanding and reflecting upon socio-political and cultural events that directly and indirectly affect productivity within the workplace.
2. Identifying and evaluating biased and discriminatory terminology in programming and technical writing.
3. Addressing inclusivity, diversity and accessibility in the workplace and between employers and employees.
4. Proposing strategies and solutions to enhance inclusivity and diversity in the workplace and the company's practices.

Discussion Questions:

1. What was the primary factor or reason behind RedLine's lack of productivity and morale?
2. What were the strategies proposed by Jane's team to address inclusivity and diversity and were they feasible?
3. What could RedLine have done to ensure better implementation of Jane's project?
4. What role does sensitivity and understanding socio-cultural realities play in improving workplace productivity?
5. Was Jane's initiative performative or apt? How could she have been more effective in the conceptualisation of such a scheme?
6. How can Jane utilise feedback from a diverse set of employees to improve her project?
7. What strategies can RedLine employ in the future to ensure a sense of transparency between their expectations and employee morale during periods of social crisis?

```
+For symbol names and documentation, avoid introducing new usage of
+'master / slave' (or 'slave' independent of 'master') and 'blacklist /
+whitelist'.
+
+Recommended replacements for 'master / slave' are:
+  '{primary,main} / {secondary,replica,subordinate}'
+  '{initiator,requester} / {target,responder}'
+  '{controller,host} / {device,worker,proxy}'
+  'leader / follower'
+  'director / performer'
+
+Recommended replacements for 'blacklist/whitelist' are:
+  'denylist / allowlist'
+  'blocklist / passlist'
+
+Exceptions for introducing new usage is to maintain a userspace ABI/API,
+or when updating code for an existing (as of 2020) hardware or protocol
+specification that mandates those terms. For new specifications
+translate specification usage of the terminology to the kernel coding
+standard where possible.
```

TEACHING NOTE

Case Overview

Jane, a principal engineer at RedLine Technologies, a prominent developer of open-source operating systems, had been recently promoted to her current position as a woman of colour. She hoped to utilise her position to introduce decisions that would address and resolve the concerns pertaining to inclusivity and diversity within the company. Due to the recent social unrest and resistance movements against the authoritative and discriminatory institutions in her state, Jane and her team decided to collaborate and formulate a plan of action that would implement inclusive practices within RedLine to increase employee engagement and productivity. Having decided to modify their kernel code by replacing outdated biased terminology with inclusive alternatives, Jane sought the assistance of other senior engineers at RedLine to formulate a list of such terminologies. While this concept was approved by the higher management, it was not well received by the employees and was criticised for being “performative” and lacking “social sensitivity”. This case primarily highlights the necessity of understanding socio-political and cultural contexts to enhance one’s sensitivity towards these issues. Additionally, students will be equipped with the ability to identify practices, language-usage and behaviours that do not promote inclusivity and diversity and to propose feasible and measurable solutions for such practices. This case will also enable students to deduce methodologies to improve their own technical writing to make it more inclusive. Finally, students are encouraged to reflect upon the necessity for employee engagement, morale and workplace productivity as an intrinsic component of running a company.

Learning Objectives

1. **Understanding Socio-Cultural and Political Realities and Enhancing One’s Sensitivity:** Students will become familiarised with the socio-cultural and political realities of different communities while training their sensitivities to become better-informed social advocates.
2. **Identifying Discriminatory Practices, Language-use and Behaviours:** Students will be able to identify and reflect upon how practices, language and behaviours can indicate, directly or indirectly, discriminatory practices and bigotry.
3. **Analysing the Intricacies of Inclusivity in Technical Writing:** Students will be able to analyse the intrinsic components of technical writing while understanding the significance of using inclusive language to represent sensitive information and to prevent the normalisation of problematic euphemisms.
4. **Proposing Collaborative and Feasible Solutions:** Students will be asked to formulate inclusive solutions that adhere to sensitivities and are feasible while maintaining the company’s transparency and policies.

- 5. Understanding the Importance of Enhancing Employee Morale and Productivity:** Students will be able to understand the significance of maintaining employee morale within a workplace, by introducing an inclusive, diverse and accessible code of conduct, as a means of enhancing productivity.

Discussion Questions

1. What was the primary reason behind Jane's initiative and how did her role as a woman of colour in a leading position affect the nature of the decision that was taken?
 - This question prompts the students to analyse the causality and intentionality behind a major technological decision and how the intersectionalities of her identity had played a major role in the nature of the decision and its future reception.
2. What were the evident issues in the implementation of Jane's project? What could RedLine have done to ensure better implementation?
 - This question prompts the students to identify the inadequacies and defects in the implementation of Jane's project and directs the students to devise a feasible implementation strategy.
3. What are the challenges or obstacles that can arise while discussing questions of inclusivity, diversity and accessibility?
 - This question prompts the students to identify the social, cultural, political and technical challenges that may arise while discussing questions of inclusivity, diversity and accessibility.
4. What role does sensitivity and understanding socio-cultural realities play in improving workplace productivity?
 - This question directs the students to reflect upon the prevailing socio-cultural realities and to reflect upon the need for higher sensitivities to ensure a proper workplace environment.
5. What solutions can RedLine implement to better address inclusivity and diversity within their company?
 - This question prompts the students to propose possible solutions to address inclusivity and diversity.

Key Teaching Concepts

- 1. Discriminatory Language in Technical Writing:** This case highlights the existence and problematics of outdated discriminatory practices in technical writing and their lack of sensitivity towards socio-political realities.
- 2. Lack of Sensitivity in Handling Social Concerns:** Students will become cognizant of the methods of sensitively addressing social concerns.

3. **Performativity in Proposing Solutions Due to Lack of Clarity and Awareness:** Students will become aware of the differences between performative solutions and attentive solutions towards a particular problem.
4. **Infeasible Solutions and Improper Implementation:** This case highlights the necessity of measuring the feasibility of a solution prior to its implementation.

Teaching Approach and Methodology

1. **Case Discussion:** Ask the students to read the case and to critically analyse its individual components, keeping in mind the questions of sensitivity, positionality, intentions and performativity while handling concerns regarding diversity and inclusivity.
2. **Practical Implementation:** Students will be asked to practically apply Jane's proposal and to produce a short piece of code and to enumerate its pros and cons.
3. **Short Film Screening and Discussion:** Students will be made to watch a short film or informational video on inclusivity and diversity in the workplace which would then be followed by a class discussion.
4. **Peer Discussion and Feedback:** Students will be asked to devise strategies and solutions for addressing inclusivity and diversity in technical practices. Students will review and discuss each other's work collaboratively, providing feedback and constructive criticism.
5. **7 C's:** Ask the students to use clarity, conciseness, concreteness, correctness, completeness, coherence and consideration while proposing solutions.

This case highlights the necessity of heightening one's sensitivities towards social-cultural and political realities, through education and social awareness to attentively address concerns pertaining to inclusivity and diversity in technical writing and practices. By identifying discriminatory and bigoted practices and materials, and providing alternatives for the same, ensures increased employee morale, participation and a healthy workplace environment. Students become aware of the ethical ramifications of writing for a technical purpose and are able to manoeuvre the challenges that arise on account of it.

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