

Technical Writing Skills

SD-100

Introduction to Technical Writing

Spot the demons...

Ice jams form when an intact ice cover, hydraulic structure or river bends halt moving ice pieces. They normally occur during freeze up and ice breakup periods. An ice jam release can cause flooding, property damage, erosion of riverbanks and in some instances disrupt transportation. The formation of ice jams on streams can have adverse effects on fish habitat and hydropower generation. Although ice jam formation poses a significant threat to human safety, aquatic life and properties, not much field measurements have been conducted to outline the flow physics beneath. The lack of field measurement arises due to inherent safety concerns. Hence, there is the need for experimental investigations to enlighten our understanding of the flow physics.

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Learning Objectives

- ▶ Understand the nine basic principles governing communication
- ▶ Identify the basic principles of communication at play in everyday scenarios

Nine Axioms of Communication

- ▶ An axiom is a universal principle or foundational truth that operates across cases or situations.
- ▶ These principles provide a foundation for understanding how to communicate more effectively through variety of means:
 - E-mail messages
 - Written reports
 - Oral presentations and briefings

Nine Axioms of Communication

#1: Communication is not simply an exchange of information, but an interaction between people.

- It emphasizes that messages are not simply static commodities in an exchange; their meanings are negotiated, understood, and interpreted in complex ways by the participants in an interaction.
- ▶ Remember, communication is always personal in that it has an impact on the individual receiving it.

Nine Axioms of Communication

#2: All communication involves an element of relation as well as content.

- When we understand communication is an interaction between people rather than simply an exchange of information, we can begin to understand that all communication, on the job and elsewhere, involve building or maintaining human relationships.
- The established relationships may be formal/official, cordial, supportive, mentoring, etc. Remember, communication is always personal in that it has an impact on the individual receiving it.

Nine Axioms of Communication

#3: Communication takes place within a context of 'persons, objects, events, and relations'.

- This principle reminds us that our messages do not stand alone; they are all products of their social, historical, professional, and personal context.
- Before you can appropriately respond to or communicate effectively, it is very essential to understand the context.

Nine Axioms of Communication

#4: Communication is the principal way by which we establish ourselves and maintain credibility.

- People judge us by how effectively we communicate. In fact, a professional's ability to communicate is frequently the only basis others have for assessing your competence and authority.
- Always remember that if you are unable or unwilling to improve your communication skill, you are perceived as being incompetent. Remember, communication is always personal in that it has an impact on the individual receiving it.

Nine Axioms of Communication

#5: Communication is the main means through which we exert influence.

- The term influence is defined as the ability to gain cooperation and compliance from others. This is a very fundamental requirement for our survival, comfort, and success.
- What is true in our professional lives is also true in our personal and social lives; satisfaction and success depend on our ability to achieve the cooperation of others.

Nine Axioms of Communication

#6: All communication involves an element of interpersonal risk.

- This principle identifies the close relationship between credibility and communication. Once you interact with others, your professional and personal reputations are at stake.
- Remember that all communication involves the risk of being judged and possibly rejected.
- Once you form a positive impression on people through effective communication you work to maintain credibility, integrity and respect. Remember, communication is always personal in that it has an impact on the individual receiving it.

Nine Axioms of Communication

#7: Communication is frequently ambiguous: what is unsaid can be as important as what is said.

- It is important to note that all communication contains significant unstated elements that can be referred to as 'the message behind the message'.
- Some of the unspoken content of message includes nonverbal cues such as eye contact, facial expression, vocal tone, gestures, physical movement, stance or manner of dress.
- Nonverbal cues are always present, and can either compliment or contradict the explicit verbal message.

Nine Axioms of Communication

#8: Effective communication is audience-centred, not self-centred.

- For effective communication, the message should have practical purpose and should be addressed to an audience. The message should not focus on the writer's interest.
- To engage others, we must consciously train ourselves to take their point of view as we draft our messages (both oral and written).
- Always place the needs, expectations, and perspective of the audience ahead of our own.

Nine Axioms of Communication

#9: Communication is pervasive: you cannot not communicate.

- It is near impossible to not communicate once you are in a social environment.
- Every action you perform represents a message that could either be understood or misunderstood by others.
- In most technical jobs, (e.g., software developer), it is estimated that the personnel spend at least 50 - 90 % of their typical work-day engaged in communication tasks.

Activity

- ▶ Think about the last time you dealt with a representative of company: a clerk in a government office, an administrative personnel of the college you attend, a representative of an insurance company.
- ▶ Did you feel satisfied with the way in which your concerns were handled? If so, what *elements/principles* of communication made you feel this way?
- ▶ In what ways do the *nine axioms of communication* help to explain what took place?

Email Sample

Subject: problems with last lab assignment
Date: september 30, 2008
From: jms@stu.wpu.ca
To: r.wolfchild@mechtech.wpu.ca

dear dr wolfchild:

we would like to get together with you to discuss the marks we received on the last lab -- everybody in the class is upset with their grades and we don't think you explained clearly enough what you wanted anyway we want to meet with you thurs. on your lunch hour to settle this problem. please give us an answer in tommorrow's class.

Jim Shenassa, esq.
class rep

Figure 1.3: How effectively has Jim Shenassa considered the constraints of his rhetorical situation in writing to his mechanical engineering professor? Why might this e-mail message fail to resolve the issues the class has with Professor Wolfchild?

- What is wrong with the message written by the class rep?
- What impression does the class rep leave?
- What does the message say about the class rep?