

## Lesson Plan: Active vs. Passive Voice in Technical Writing

**Target Audience:** Engineering **Goal:** To help students understand the difference between active and passive voice and to teach them when to use each for maximum clarity and impact in technical and scientific documents.

### Learning Objectives

By the end of this lesson, students will be able to:

1. Define and correctly identify active and passive voice in sentences.
2. Explain the primary reasons for preferring active voice in most technical writing (clarity, conciseness, and directness).
3. Identify specific situations where passive voice is appropriate or necessary.
4. Convert sentences from passive to active voice and vice versa.
5. Write technical sentences using the most effective voice for a given purpose.

**Objective 1:** Define and correctly identify active and passive voice in sentences.

Active voice and passive voice are two ways to structure a sentence based on the relationship between the subject and the action.

### Active Voice

In the **active voice**, the **subject performs the action**. It follows a clear and direct structure: **Subject (doer) + Verb (action) + Object (receiver)**. It's the most common and direct way to write.

**Example:** "The programmer wrote the code." **Subject (doer):** The programmer **Verb (action):** wrote **Object (receiver):** the code

**Passive Voice:** In the **passive voice**, the **subject receives the action**. The sentence structure is often reversed: **Object (receiver) + Verb (action, often with a form of 'to be') + Subject (doer, often omitted)**. It is typically used when the focus is on the object or the action itself, rather than who performed it.

- **Example:** "The code was written by the programmer."

**Subject (receiver):** The code, **Verb (action):** was written, **Doer (optional):** by the programmer

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**Objective 2:** Explain the primary reasons for preferring active voice in most technical writing (clarity, conciseness, and directness).

### 1. Clarity and Readability

Active voice directly states who or what is performing an action, leaving no room for ambiguity. This is particularly important in technical documents where precision is key. For

example, "The user clicks the button" is much clearer than "The button is clicked by the user." The first sentence immediately tells the reader who needs to do what. This clarity helps prevent user errors and misunderstandings.

## 2. Conciseness

Active voice generally requires fewer words than passive voice to convey the same meaning. This makes the text more efficient and easier to read. In a technical document, every word matters. Cutting out unnecessary words helps readers quickly find the information they need. For instance, "The software analyzes the data" is more concise than "The data is analyzed by the software."

## 3. Directness and Accountability

Using the active voice helps establish a direct and confident tone. It holds the subject accountable for their actions. In a technical context, this is important for assigning responsibility and ensuring that tasks are performed correctly. For example, "The team implemented the new security protocol" is more direct and shows accountability, whereas "The new security protocol was implemented" is vague about who did the work.

## 4. Better for Instructions

Active voice is the best choice for giving instructions. It puts the reader in the role of the doer, directly telling them what to do. For example, "You must tighten the screw" is a much more effective command than "The screw must be tightened." Using the active voice in instructions and procedures creates a more user-friendly and actionable document.

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Objective 3: Identify specific situations where passive voice is appropriate or necessary.

Passive voice is appropriate in technical communication when the actor is unknown, unimportant, or when the focus should be on the action or the object receiving the action. While active voice is generally preferred for clarity and directness, passive voice serves specific, necessary purposes in several key situations.

### 1. Highlighting the Object of the Action

When the subject or recipient of the action is more important than the person or thing performing the action, passive voice shifts the emphasis. This is common in scientific or technical descriptions where the process or result is the main point.

- **Example:** "The data **was collected** over a six-month period."
- **Why it works:** The focus is on the data and the collection process, not on who did the collecting.

### 2. Scientific and Research Writing

Passive voice is a long-standing convention in scientific papers and research articles. It promotes objectivity by removing the researcher from the action, making the findings appear more universal and less personal. This helps maintain a formal, impersonal tone.

- **Example:** "The sample **was heated** to 100°C for twenty minutes."
- **Why it works:** The action of heating and the conditions are what matter, not who performed the action.

### 3. Reporting Unfortunate Events or Errors

In situations where you need to report a problem without assigning blame, passive voice is a diplomatic tool. It allows you to describe what happened without directly pointing fingers.

- **Example:** "A critical error **was made** during the software update."
- **Why it works:** The sentence reports the error without stating who made it, which can be useful for internal communications or incident reports.

### 4. Describing General Processes or Automated Actions

When describing a process that happens regardless of who performs it, or an action that is automated, passive voice is often the most logical choice.

**Example:** "The report **is generated** automatically at midnight."

**Why it works:** The focus is on the automated process itself. The person who set up the process is not relevant to the description of the event.

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### Objective 4: Converting from Passive to Active Voice

To convert a sentence from passive to active voice, you need to identify the doer of the action (the subject), the action itself (the verb), and the receiver of the action (the object). Then, rearrange the sentence to follow the active voice structure: **Subject + Verb + Object**.

**Passive Sentence:** The project was completed by the team. **Doer:** The team, **Action:** completed, **Receiver:** The project **Active Conversion:** The team completed the project.

**Passive Sentence:** The new website was launched by the marketing department.

**Doer:** The marketing department, **Action:** launched, **Receiver:** The new website **Active Conversion:** The marketing department launched the new website.

### Converting from Active to Passive Voice

To convert a sentence from active to passive voice, you reverse the process. You take the object of the active sentence and make it the subject of the passive sentence. You then use a form of the verb "to be" with the past participle of the main verb. The original subject (the doer) can either be included with a prepositional phrase ("by...") or omitted if it's not important.

**Active Sentence:** The engineers tested the new software.

**Subject:** The engineers, **Action:** tested, **Object:** the new software **Passive Conversion:** The new software was tested by the engineers.

**Active Sentence:** Researchers are designing a new model.

**Subject:** Researchers, **Action:** are designing, **object:** a new model **Passive Conversion:** A new model is being designed by researchers.

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## **Objective 5: Write technical sentences using the most effective voice for a given purpose.**

When writing technical sentences, the most effective voice depends entirely on the purpose. Here are examples using both active and passive voice for their most suitable applications.

### **1. Instructions and Procedures (Active Voice)**

For step-by-step instructions, **active voice** is the most effective choice because it directly tells the user what to do, making the process clear and actionable.

- **Ineffective (Passive):** The "Enter" key should be pressed to begin the installation.
- **Effective (Active):** You must press the "Enter" key to begin the installation.

### **2. Scientific Reporting (Passive Voice)**

In scientific writing, **passive voice** is often preferred because it focuses on the action and results rather than the researcher, promoting an objective tone.

- **Ineffective (Active):** We heated the solution to 50°C.
- **Effective (Passive):** The solution was heated to 50°C.

### **3. General Technical Descriptions (Active Voice)**

For describing how a system or tool works, **active voice** is clearer and more concise. It identifies the subject that is performing the function.

- **Ineffective (Passive):** The data is analysed by the software in real time.
- **Effective (Active):** The software analyses the data in real time.

### **4. Incident Reports (Passive Voice)**

When reporting an incident or a mistake without assigning blame, **passive voice** can be used diplomatically.

- **Ineffective (Active):** The team forgot to update the security protocols.
- **Effective (Passive):** The security protocols were not updated.