Contents

Chapter 1: Technical Communication

1.1 Definition, nature and scope of technical communication

A. Definition

Technical communication is the process of conveying information in a clear, concise, and accessible manner to an intended audience with a specific purpose. It involves creating, managing, and sharing information about technical or specialized topics, such as technology, engineering, science, business, and other professional fields.
Some of the experts in this filed have defined technical communication in the following ways:

Mike Markel:

"Technical communication is the exchange of information that helps people interact with technology, advance workplace goals, and solve complex problems."
(Source: Markel, M. Technical Communication, 11th Edition)

Paul V. Anderson:

"Technical communication is the process of making and sharing technical information in the workplace so that people can use that information to do their jobs."
(Source: Anderson, P. Technical Communication: A Reader-Centered Approach)

Carolyn D. Rude:

"Technical communication is about translating complex ideas into meaningful communication for specific audiences, using the best tools and methods available."
(Source: Rude, C. Technical Writing)

Steven Katz:

"Technical communication involves a balance between clarity, accuracy, and ethical responsibility when conveying information."
(Source: Katz, S. The Ethics of Expediency: Classical Rhetoric, Technology, and the Holocaust)

B. Key Features (nature) of Technical Communication

Audience centered: Technical communication focuses on the needs, knowledge level, and expectations of the target audience.
Purpose-driven: Technical communication aims to inform, instruct, describe, and persuade the audience in decision-making or in task execution. It is also used for record keeping.
Clarity and precision: Technical communication ensures that its content is easy to understand and free from ambiguity.
Conciseness: Technical communication avoids unnecessary details and repetitions, focusing only on the essential information for the audience.
Use of Visuals: Technical communication often includes diagrams, charts, graphs, and images to enhance comprehension and readability.
Appropriate format: Technical communication always sticks to certain formats: report, record keeping forms (service reports, travel and expense forms), instructions (user guides, online help), correspondence (letters, memos, emails), and presentations (interviews, marketing calls, seminars).
Proper Layout: In technical communication, **layout** refers to the organized and structured arrangement of text, visuals, and other elements in a document to ensure clarity, readability, and ease of navigation. It involves the use of headings, subheadings, fonts, spacing, margins,

alignment, bullet points, numbering, and the integration of charts, tables, and images in a document to enhance its readability. A well-designed layout helps present complex information in a logical and visually accessible manner, allowing the audience to quickly find and understand the information they need. In short, “layout" in technical communication refers to the organized presentation of the content in a document or report. A well-structured layout ensures that the information is easy to follow and visually accessible, improving readability and comprehension for the audience. Maintaining a good layout of technical documents involves adhering to principles of clarity, consistency, and organization. Following are some practical ways to achieve proper layout in technical documents:

i. Use standard document Structure: Every technical document has its own standard format or structure. Technical writer should stick to the format to prepare various technical documents. Format of the document may slightly vary according to the style guides.
ii. Employ consistent formatting: Use the same font style, size, line spacing, and margins throughout the document. Consistency ensures the document looks polished and avoids distracting the reader with abrupt changes in style.
iii. Adopt hierarchical headings: Use heading levels (e.g., Heading 1, Heading 2, and Heading 3) to indicate the structure of the document. Number headings systematically (e.g., 1, 1.1, 1.1.1) for easy navigation.
iv. Incorporate visual elements like charts, tables, graphs and images thoughtfully.
v. Use page design features: Utilize design elements like headers, footers, page numbers, and columns to organize content. Page breaks, section dividers, and white space help balance the layout and enhance readability.
vi. Leverage style guides: Use predefined templates or styles (e.g., APA, MLA, IEEE) that are suitable for your university, industry or organization.
vii. Focus on readability: Use clear and concise sentences. Use short paragraphs. Avoid jargon unless necessary, and provide definitions for technical terms. Use a table of abbreviations if the document includes many acronyms.
viii. Highlight key information: Use bold, italics, underline or color to emphasize important points.
ix. Proofread and review: Check for formatting errors, inconsistencies, or typos. Review the layout from the perspective of the intended audience, ensuring usability and professionalism.
x. Test on different platforms: Ensure the document maintains its layout across various devices and software (e.g., print, PDF, or web versions). Test document’s readability in both digital and printed form.

C. Common Forms of Technical Communication

- Manuals and user guides
- Reports (technical, feasibility, and progress reports)
- Proposals
- Technical descriptions
- Instructional materials

- Online help
- Web sites
- Presentations
- Business correspondence (memos, emails, letters, and record keeping forms)

D. <u>Purpose and Importance of Technical Communication</u>:

Technical communication takes various forms, with each form serving a specific purpose. Some technical documents can serve dual functions. For example, a notice is used not only to inform but also to promote events, programs, or issues. There are **five** basic purposes of technical communication: to inform, to keep records, to instruct, to describe, and to persuade. Purposes and importance of technical communication can be presented as follows:

- Information dissemination to the concerned.
- Simplify complex concepts for non-experts.
- Provide clear instructions to perform specific tasks.
- Improves productivity.
- Facilitate effective collaboration among professionals.
- Ensure proper documentation for compliance and record-keeping.
- Persuade the audience in decision making.

Professionals like engineers, scientists, IT specialists, and business analysts rely heavily on technical communication to share knowledge and interact with diverse audiences effectively.

<u>E. Scope of Technical Communication</u>

The scope of technical communication refers to the domains in which it is applied and the methods through which it is used to convey complex information effectively. To be specific, the extent or range of technical communication, including where and how it is applied (e.g., in engineering, medicine, business, etc.), is considered its scope. Technical communication is a specialized form of communication that conveys complex, technical, or specialized information in a clear, concise, and structured manner. Its scope extends across various industries, professions, and media, playing a crucial role in ensuring that technical knowledge is effectively communicated to different audiences. The following sections provide a detailed overview of the scope of technical communication.

1. Scope Based on Industries

Technical communication is widely used across multiple industries where precise and accurate information is required for effective functioning.

a. Engineering and Manufacturing

- Preparation of engineering reports, feasibility studies, and technical specifications.
- Creation of instruction manuals, maintenance guides, and safety protocols.
- Communication of design and process documentation for industrial applications.

b. Information Technology (IT) and Software Development

- Development of user manuals, system documentation, and help files for software.
- Creation of software requirement specifications (SRS) and functional design documents.
- Writing API documentation and developer guides.

c. Medicine and Healthcare

- Writing medical research papers, case studies, and clinical trial reports.
- Creating patient information leaflets and healthcare guidelines.
- Preparing pharmaceutical documentation, including drug approval reports.

d. Science and Research
- Writing scientific research papers, theses, and dissertations.
- Documenting laboratory procedures and methodologies.
- Developing research proposals, abstracts, and technical journal articles.

e. Business and Finance
- Creating financial reports, business proposals, and market analysis documents.
- Developing policies, procedures, and compliance documentation.
- Writing investment reports and business strategy documents.

f. Aerospace and Defense
- Preparing military and defense technical manuals.
- Creating aviation safety guidelines and aircraft maintenance manuals.
- Writing reports on aerospace research and technological advancements.

2. Scope Based on Communication Medium

Technical communication is conveyed through various media depending on the audience, purpose, and complexity of information.

a. Written Technical Communication
- Instruction manuals, user guides, and product documentation.
- Reports, proposals, and white papers.
- Technical articles, case studies, and research papers.

b. Visual Technical Communication
- Infographics, charts, and diagrams.
- CAD drawings and engineering blueprints.
- UI/UX design documentation and wireframes.

c. Digital and Web-Based Technical Communication
- Websites, blogs, and knowledge bases for technical topics.
- E-learning modules, training videos, and online tutorials.
- Software documentation, FAQs, and online help centers.

d. Oral Technical Communication
- Presentations at conferences, meetings, and training sessions.
- Technical discussions in boardrooms and team collaborations.
- Verbal instructions for field technicians and support teams.

3. Scope Based on Target Audience

Technical communication is tailored for different audiences, from experts to general users.

a. Subject Matter Experts (SMEs) and Researchers
- Requires in-depth technical details and complex explanations.
- Includes research papers, technical specifications, and patents.

b. Engineers, Developers, and Technicians
- Focuses on precise instructions and technical details.
- Includes schematics, blueprints, and maintenance manuals.

c. Business Executives and Decision Makers

- Requires high-level summaries and analytical reports.
- Includes business proposals, feasibility reports, and market analyses.

d. General Users and Customers

- Needs simplified and clear instructions.
- Includes user manuals, FAQs, and step-by-step guides.

4. Scope Based on Professional Roles

Technical communication is an integral part of various professions and roles.

a. Technical Writers

- Create user manuals, documentation, and online help content.

b. Instructional Designers

- Develop training materials, e-learning modules, and course content.

c. Science and Medical Writers

- Write scientific papers, clinical trial reports, and healthcare documentation.

d. Business and Financial Analysts

- Prepare reports, proposals, and financial documents.

e. Content Developers for Digital Platforms

- Create technical blogs, knowledge bases, and explainer videos.

5. Scope in Emerging Technologies

With rapid technological advancements, technical communication is expanding into new domains.

a. Artificial Intelligence (AI) and Automation

- AI-driven chatbots and virtual assistants for technical support.
- AI-generated documentation and real-time content updates.

b. Virtual Reality (VR) and Augmented Reality (AR)

- Interactive training manuals and simulations for learning.
- AR-based instruction guides for complex machinery.

c. Blockchain and Cybersecurity

- Technical documentation for blockchain protocols.
- Cybersecurity guidelines and data protection manuals.

d. Green Technology and Sustainability

- Environmental impact reports and sustainable design documentation.
- Guidelines for energy-efficient technologies.

Conclusion

The scope of technical communication is vast and ever-expanding. It plays a crucial role in various industries, communication media, target audiences, professional roles, and emerging technologies. As technology evolves, the demand for clear and effective technical communication will continue to grow, ensuring that complex information is accessible and useful for diverse stakeholders.

1.2 **Professional ethics in communication** (Ethical issues, plagiarism, and copyright concerns)

<u>Professional ethics in communication</u>

Professional ethics in communication refers to the principles that guide individuals in maintaining integrity, honesty, and respect while interacting with others in a professional setting. It emphasizes the responsible use of communication to foster trust, transparency, and fairness. Key aspects of professional ethics in communication include the following:

- Accuracy: It is an act of ensuring that information is truthful and free from distortion.
- Confidentiality: One should respect private and sensitive information. One should not disclose confidential details without proper authorization.
- Respect: Diverse perspectives should be valued and every individual should be treated with dignity.
- Clarity and Transparency: Clear and concise language should be used to avoid misunderstandings. Relevant information should be disclosed openly, especially in professional or business dealings.
- Professionalism: Maintain a formal and respectful tone in workplace communication. Avoid gossip, slander, or inappropriate jokes. Moreover, adhere to organizational communication policies and practices.
- Fairness and Inclusivity: Provide equal opportunities to everyone concerned for participation in discussions and decision-making. Avoid biased language or behavior that could marginalize individuals or group
- Ethical Use of Technology**:** Respect intellectual property rights and avoid plagiarism. Use communication tools responsibly, avoiding spam, misinformation, or data breaches
- Accountability: One should take responsibility for the impact of one's communication. These principles ensure ethical interactions, fostering trust and professionalism in workplace and public communication contexts.

<u>Ethical issues in communication</u>

Ethical issues in communication refer to situations where moral principles or values are challenged in the process of sharing or exchanging information. Ethical issues in communication arise when there are dilemmas regarding what is right or wrong in conveying information. These issues can occur in various professional, interpersonal, and societal contexts. Common ethical issues in communication include the following:

- Misrepresentation: Providing false, misleading, or incomplete information.
- Breach of Confidentiality: Sharing private or sensitive information without consent.
- Plagiarism: Using someone else's work or ideas without proper acknowledgment.
- Cultural Insensitivity: Ignoring or disrespecting cultural norms and values in communication.
- Manipulation and Deception: Using communication to exploit or mislead others for personal or professional gain.
- Bias and Discrimination: Allowing personal biases to affect fairness in communication.
- Lack of Transparency: Concealing motives, intentions, or relevant information.
- Overloaded or Omitted Information: Providing excessive information or leaving out important details to mislead or overwhelm for personal or professional gain.

- Cyberbullying and Online Harassment: Engaging in unethical behavior through digital communication platforms.

Addressing these issues requires adherence to ethical principles, clear communication policies, and accountability.

Plagiarism

Plagiarism is the act of using someone else's work, ideas, words, or creative expressions without proper acknowledgment. It is an unethical act of taking others' ideas and presenting them as our own. Plagiarism is considered an unethical practice and a violation of intellectual property rights.

Types of Plagiarism:

- Direct Plagiarism: Copying someone's ideas word-for-word without citation.
- Indirect plagiarism: Using others' ideas by summarizing or paraphrasing them.
- Self-Plagiarism: Reusing one's own previous work without disclosure or citation.
- Mosaic Plagiarism: Patching together phrases or ideas from various sources without proper attribution.
- Accidental Plagiarism: Failing to cite sources correctly due to carelessness or ignorance.

Consequences of plagiarism:

- **Academic Penalties**: Including failing assignments, suspension, or expulsion from academic institutions.
- **Legal Repercussions**: Copyright infringement can lead to lawsuits, fines, and legal action.
- **Loss of Reputation and Credibility**: Plagiarism undermines trust and damages a person's professional or academic reputation.
- **Loss of Job**: Professionals caught plagiarizing may lose their job, especially in fields where integrity and originality are crucial.
- **Copyright Infringement Penalty**: Legal action may be taken by the original creator for unauthorized use of their work.
- **Loss of Scholarships or Financial Aid**: Plagiarism may lead to the forfeiture of scholarships, grants, or other forms of financial aid.
- **Damage to Relationships**: Academic or professional relationships may be permanently damaged due to a breach of trust.
- **Emotional or Psychological Impact**: The individual who plagiarizes may experience guilt, shame, or anxiety from being caught.

Ways to Prevent Plagiarism:

- Cite Sources: Give credit to original authors using proper citation styles (e.g., APA, MLA, Chicago).
- Paraphrase: Restate ideas in your own words while still citing the source.
- Use Plagiarism Detection Tools: Tools like Turnitin, Grammarly Plagiarism Checker, and Quetext help identify unintentional plagiarism.
- Understand Copyright Laws: Be aware of what constitutes intellectual property and its fair use.

Copyright

Copyright is a legal right granted to the creator of original works, such as literary, artistic, musical, or other intellectual creations, giving them exclusive control over the use and distribution of their work for a specific period. It is designed to protect the creator's intellectual property and to encourage creativity and innovation.

Key Features of Copyright:

- Exclusive Rights: The copyright holder has the right to reproduce, distribute, perform, display, and create derivative works from the original creation.
- Automatic Protection: Copyright protection is granted automatically upon the creation of the work; registration is not always required but can provide additional legal benefits.
- Duration: The duration varies by jurisdiction but typically lasts for the creator's lifetime plus a certain number of years (e.g., 70 years after death in many countries).
- Protected Works: Includes books, music, films, software, photographs, architectural designs, and more. It does not protect ideas, methods, or facts.

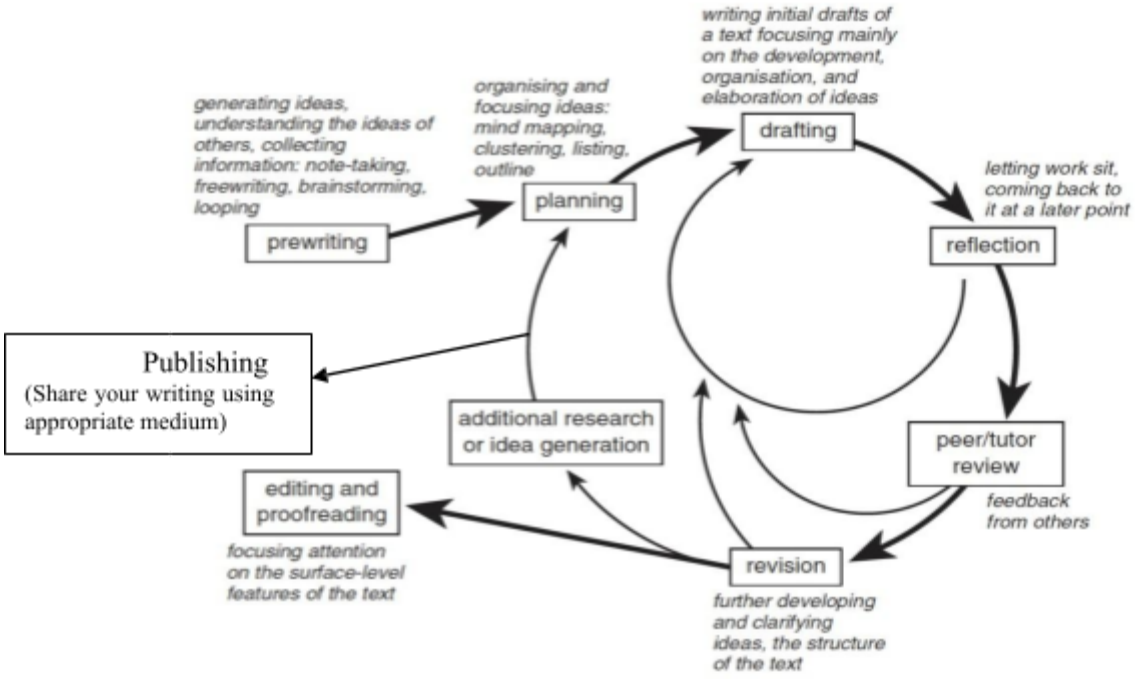
Chapter 2: Writing Skills

Technical Writing Process

Technical writing is a specialized form of writing that conveys complex information in a clear, concise, and structured manner. It is commonly used in fields such as engineering, information technology, healthcare, finance, and science to create documents like user manuals, technical reports, proposals, and standard operating procedures (SOPs). The primary goal of technical writing is to provide accurate and accessible information that helps users understand and apply technical concepts effectively.

Technical writing has been a part of our lives for centuries. As humans, we are able to communicate with each other effectively through verbal speech and written text. We develop words and structured sentences, which then form paragraphs. Delivering such information to our audience, we must consider various steps that guide us toward writing an effective document, otherwise known as the technical writing process.

Steps in the Technical Writing Process



One must take into consideration the following steps, including planning, drafting, revising, editing, proofreading, and publishing, to produce a well-structured, reader-friendly, and engaging document.

- **Planning** – This is the most critical portion of the technical writing process and is also where the majority of your time is spent on this writing assignment. In this stage, you begin to consider your **purpose, audience, ideas about the topic, and research**.
- **Drafting** – Once you have formed an outline around your topic, you can begin to create a format using a word processor, paper, or any other means of writing. You will use this as a basis or template to complete structured sentences and defined paragraphs. You may also consider **word choice, style of writing, sentence fluency, and organization of writing**.
- **Revising** – At this stage, you are looking at whether or not your draft answers the bigger questions. You must step back into the pre-writing phase by re-analyzing your **audience, purpose, and subject**. You are continuously rereading the document, looking for different things. You can have outside sources provide **constructive criticism** to your rough draft, also known as **peer review**, which allows another perspective "to help you see whether or not you have made correct assumptions about how readers will react to your ideas and whether you have chosen appropriate kinds of evidence and design elements."[1]
- **Editing** – For the most part, editing is interchangeable with revising because you are continuously making changes to your drafted writing. In this case, we are more focused on improving the **grammar, punctuation, style, diction (word choice), mechanics, and usage**. You may seek assistance from others using software functions such as **spell check** on your word document programs or having outside help. This is important in order for

readers to clearly understand what you are saying without being distracted by grammatical and mechanical mistakes.

- **Proofreading** – Again, this stage is usually in the mix with revision and editing because you are checking whether or not there are any **typos in your writing** (i.e., writing "two" instead of "to"), **misplaced words in your sentences**, or **missing articles** (i.e., forgetting an 'a' before the phrase "key statistical factor") in your sentences.
- **Publishing/Sharing Technical Writing**

  After you have completed drafting, revising, and editing, you must consider the type of medium you want to use to share your writing. This may be based on the intended audience and/or the criteria in which you are graded. The avenue of writing depends on who you want to read your document. For example, if you are writing a technical report, it might be published in a journal, company database, or online repository. If you are writing software documentation, it could be published on a company website, knowledge base, or help center. However, if you are writing a white paper or research article, it may be shared in print or digital publications.

1.1 Principles of effective technical writing

Good writing is essential for capturing audience's attention, and communicating ideas effectively. Modern communications are written in a much relaxed style. They do not make the use of jargons and complex vocabulary. They focus on expressing the message naturally, in a friendly manner. Technical writing should be clear, complete, concise and well structured. Following are some the principles of effective technical writing:

Clarity: Technical writing should be clear and straightforward, making it easy for readers to understand the intended message. It should not use vague expressions.

Example:

Unclear: The event might be postponed due to *some unexpected issues*.
Clear: The event may be postponed because of *logistical issues* with the venue.
Unclear: The system has *some problems* that could affect performance.
Clear: The system *has a memory leak* that may slow down performance during peak usage hours.

Conciseness: Technical writing avoids unnecessary words.

Example:

Wordy: "Due to the fact that the meeting is going to be postponed until a later date, we kindly request that all attendees should make sure to adjust their schedules accordingly."
Concise: "The meeting will be postponed. Please adjust your schedules accordingly."
Wordy: "Utilize the following facilitative measures for enhancing workplace productivity."
Concise: "Use these tips to improve productivity."

Proper grammar and punctuation: Proper grammar and punctuation help in conveying the intended message accurately and enhance the overall readability.

Example:

Incorrect: "Their going to the movies, it's always a fun time."
Correct: "They're going to the movies; it's always a fun time."

Use Active Voice: Active voice creates a more engaging and direct tone compared to passive voice.

Example:

Passive: You are requested to open the file.

Active: Please open the file.
Passive: "The book was written by Jane."
Active: "Jane wrote the book."

Use of Specific Language: Technical writing makes the use of precise and descriptive language to convey ideas vividly.

Example:
Vague: “The House was nice.”
Specific**:** "The house had a charming red-brick facade, flower-filled window boxes, and a cozy porch with a swinging bench."
Vague: “The food was delicious.”
Specific**:** "The creamy pasta was rich with the flavors of garlic, perfectly balanced with spice."

Free from Repetition: Repeating the same words or phrases can make the writing monotonous and less engaging.

Example:
Repetitive: "The new product is great. It's a great addition to our lineup."
Improved: "The new product is a fantastic addition to our lineup."

Consistency: Technical writing keeps the tone, style, and point of view consistent.

Example:
Inconsistent**:** "*The organization* values transparency. *We* believe that employees should always be honest."
Consistent**:** "*The organization* values transparency. *It* believes that employees should always be honest."
Inconsistent**:** "*The book* explains the topic in detail. *You* will find it helpful for understanding complex concepts."
Consistent**:** "*The book* explains the topic in detail. *Readers* will find it helpful for understanding complex concepts."

Use of transitional words: Transitional words help to create a logical flow between sentences and paragraphs, making the writing easier to follow.

Example:
Without Transition: "The weather is beautiful. Let's go for a walk."
With Transition: "The weather is beautiful. Therefore, let's go for a walk."

Appeal to the Senses: Technical writing engages the reader's senses by incorporating sensory details to create a more immersive experience.

Example:
Plain: "The bakery smelled good."
Sensory: "The bakery was filled with the enticing aroma of freshly baked bread and pastries."

Audience centered: Technical writing should take into consideration the intended audience, adjusting the tone and level of complexity accordingly.

Example:
Inappropriate: Using technical terms for non-experts in an instructional material.
Appropriate: Using simple language and relatable examples for non-experts.

Free from cliché: A **cliché** is a phrase, idea, or expression that has been overused to the point of losing its originality. Cliché does not change the meaning of the expression; it just makes the expression complex and vague.

Example,

Expression with cliché: He passed the exam *with a flying color*.
Straightforward: He passed the examination *with good division*.

Avoid obscure words: A good rule of writing is to *write to express, not to impress; write to communicate, not to confuse*. If writers are making readers use the dictionary, they are not writing clearly. Technical documents should avoid obscure or out-of-date terms and use the modern alternatives.
Following is the list of some outdated terms and the modern alternatives:

Obscure Terms	Modern Alternatives
Aforementioned	Already mentioned, previously stated
Herein	In this, In this document
Henceforth	From now on
Therein	In that, Within that
Thereafter	After that, Following
Thus far	that So far, Until now
Notwithstandin	Despite, Regardless of
g Whereas	While, Considering that
Hitherto	Until now, Previously
Thereupon	Immediately after that, As a result
Forthwith	Immediately, Right away
Whereby	By which, Through which
Thereof	Of that, From that
Wherein	In which, Where

Omit redundancies: Redundancies in writing occur when unnecessary words or phrases are used, making sentences longer without adding value. In short, redundancies are the words that say the same thing. In each of the following instances, the boldface words are redundant:

We have planned to start the project in **the month of** July. (Obviously July is a month; the words *the month of* are redundant.)
We collaborated **together** on the project (One cannot collaborate alone!)
We keep employees updated with **regular** monthly reports.
This laptop costs **the sum of** NPR 80000.
The results **so far achieved** prove that road accidents on the highways in Nepal have been increasing every year. (A result, by definition, is something that has been achieved)

Appropriate tone: The use of an appropriate tone is, indeed, a crucial aspect of good writing. In technical writing, tone refers to the writer's attitude and emotional expression towards the subject and the audience. It can greatly influence how the message is perceived by the audience. Maintaining a formal and professional tone is essential in technical writing, as it ensures clarity, precision, and credibility. Different tones serve distinct purposes and cater to diverse audiences. The primary types of tones in technical writing include the following:

i. Formal Tone: In technical writing, a formal tone is often required to maintain objectivity and seriousness. For instance, in a research report, the tone should be factual, unbiased, and avoid personal opinions.
   Example: "According to recent studies, the data indicates a significant correlation between X and Y."

ii. Informative Tone: When writing to inform or educate, an informative tone should be used to provide clear and helpful information.
Example: "To reset your password, please follow these steps."
iii. Persuasive Tone: In technical writing, persuasive tone aims to convince the reader of a particular viewpoint or idea.
Example: "By supporting this initiative, you can make a difference and contribute to a cleaner environment."
iv. Authoritative Tone: In instructional writing or manuals, an authoritative tone can establish credibility and confidence.
Example: "The guidelines provided by the World Health Organization are crucial for combating the spread of infectious diseases."
v. Professional Tone: In technical communication, a professional tone is expected to maintain a level of formality and respect.
Example: "Dear Mr. Smith, I hope this email finds you well. We would like to discuss the upcoming project in more detail."
vi. Appreciative Tone: When expressing gratitude or acknowledgment, an appreciative tone is used to show thankfulness.
Example: "We sincerely appreciate your efforts and dedication to this project. Your hard work has made a significant impact."

Use of gender-neutral language: Using masculine line gender in generic sense is old-fashioned and not practical today. Technical writing must be free from gender-based biases. Using gender-neutral language is essential to create an inclusive and equitable environment.

For example, instead of using gender-specific titles like "salesman," use gender-neutral alternatives such as "sales representative" or "salesperson." This ensures that individuals of all genders feel equally represented in various professions.

By adopting gender-neutral language, technical writing can create a more inclusive and welcoming environment for everyone. This fosters diversity, equity, and respect, contributing to a positive and forward-thinking workplace culture.

Proper format/structure: Technical writing follows certain formats: report, record keeping forms (service reports, travel and expense forms), proposals, instructions (user guides, online help), correspondence (letters, memos, emails), and presentations (interviews, marketing calls, seminars).

Use of visuals: Technical writing makes the use of visuals, such as tables, charts, graphs and images to enhance clarity and comprehension.

By sticking to these principles, writers can improve the clarity, effectiveness, and impact of technical writing, making it more enjoyable and compelling for readers.

2.2 Grammar (Pronoun and its antecedent, subject-verb agreement, non-finite verbs), sentence Construction (Simple, compound, complex, and mixed sentences), error analysis and punctuation)

Grammatical proficiency plays a crucial role in effective communication for several reasons. Following key points highlight its importance:

- **Clarity of Expression:**

Proper grammar ensures that one's ideas are conveyed clearly and accurately. It helps to avoid misunderstandings and misinterpretations by providing a structure that facilitates smooth communication. Correct grammar ensures that sentences are well-formed and ideas are presented in a logical order.

- **Professionalism:**

In many professional settings, the way one communicates reflects on one's professionalism. Well-constructed and grammatically correct messages contribute to a positive impression. Employers often value employees who can express themselves clearly and accurately, whether in reports, emails, or other forms of communication.

- **Credibility:**

Using proper grammar enhances one's credibility. When one's communication is free from grammatical errors, people are more likely to trust the information one provides. It signals attention to detail and a commitment to quality, which are important qualities in various personal and professional contexts.

- **Effective Writing:**

Whether one is writing reports or preparing any other form of written communication, grammatical proficiency is essential. It helps the writer to organize one's thoughts and ideas in a coherent manner, making it easier for the audience to follow one's argument or narrative.

- **Global Communication:**

In today's interconnected world, where communication often spans international borders, a common grammatical standard facilitates understanding among people from diverse linguistic backgrounds. Proper grammar helps to overcome language barriers, making communication more accessible and inclusive.

- **Avoidance of Ambiguity:**

Incorrect grammar can introduce ambiguity into your communication. Ambiguous sentences can be interpreted in multiple ways, leading to confusion. Clarity in grammar helps eliminate ambiguity and ensures that your message is understood in the way you intended.

- **Formal and Academic Requirements:**

In academic and formal writing, adherence to grammatical rules is often a requirement. Whether someone is writing an academic paper, a business proposal, or any other formal document, maintaining grammatical proficiency is essential for meeting the standards of these contexts.

- **Enhanced Reading Comprehension:**

Proper grammar aids in reading comprehension. Readers can more easily grasp the meaning of a text when it is grammatically correct. This is especially important in educational and professional settings where information needs to be absorbed accurately and efficiently.

- **Language Appreciation:**

Proficiency in grammar reflects an appreciation for the nuances and beauty of language. It allows individuals to express themselves more eloquently, fostering a deeper connection with the language and its rich cultural and literary heritage.

In summary, grammatical proficiency is fundamental to effective communication, as it influences the way ideas are expressed, received, and understood. It is a valuable skill that contributes to personal and professional success in various aspects of life.

Use of Tense

Some Tricks for the correct use of verb forms:

i) Sentences with Adverbs of time-frequency such as 'always, often, seldom, frequently, usually, generally, occasionally, daily, weekly, everyday, once a day/week/month, on Sundays etc.' take the **I** form of Verb (V1) + s/es (if applicable as per rules of Present Indefinite Tense).

Examples,

She always comes late.

We go to movies on Sundays.

I take tea twice a day.

ii) We use Present Perfect with adverbs like 'just, already, yet, so far, recently, in the last few days, lately, till now, till, until, ever, never, since, and for, etc.

Examples,

I haven't eaten anything since this morning.

I have never seen a dinosaur.

She has just gone out.

He has already ordered for Pizza.

iii) We say "It is the first time something has happened." For example,

It is the first time I have advised you.

It is the third time Shivraj has phoned Susmita.

iv) We follow this structure: It has +v3+time+since+subject+v2. For example,

It has been two months since I met her.

v) We use Future Perfect for an action that began in the past is continuing at present and will be accomplished at or by a particular time in the future.

Example,

I will have completed my project report by this time tomorrow.

vi) The past time adverbials such as 'yesterday, last week/month/year, in 2022, ago, long ago, once upon a time, etc.' when used in sentences generally take **II** form of the verb (V2).

For example,

He came to see me every day last week.

Last year she wore the same dress.

Whenever I went to see him, he was out.

vii) The adverbials related to present time e.g. now, still, at this time, at this moment, at present, today, now-a-days, look! etc. when used in sentences generally take the Present Continuous Tense form.

Examples,

She is still weeping.

Look! The dog is chasing the cat. Today I am not going to school. I am doing my project currently.

viii) If conjunctions like 'when, while, as' are used to connect two actions, one of the actions often appears in the Past Continuous Tense to express an ongoing action in the past. The other action can be in the Simple Past Tense to show a completed action that happens during the ongoing action.

For example,

When I saw her, she was weeping.

While she was studying, her brother was playing.

As I was watching TV, I heard a loud noise.

x) Two sentences when connected with words such as 'before or after', if one is in the Past Indefinite tense form, the other will always be in the Past Perfect tense form.

For example,

(a) Past Perfect + before + Past Indefinite.

I had turned on the light before I entered the house.

(b) Past Indefinite + after + Past Perfect.

I left the house after I had locked the door.

xi) Words like next week/month/year, I guess, I think, probably, perhaps, I hope, I expect, I believe, etc. if used in a sentence, they take future indefinite (will/shall+V1).

For example,

I think it will rain soon.

xii) If the decision of performing an action is taken spontaneously at the time of speaking, then 'will+V1' is to be used in the sentence.

For example,

I am hungry. I will order Pizza.

xiii) Future activity to take place according to some fixed time table, takes Present Indefinite Tense form.

For Example,

Our school opens at 9:40 am.

xiv) Phrases like ‘for a couple of years, all the while, this time, next week / month / year, in the future, in the next few days’ take continuous form showing future time.

For example,

This time next week, I will be setting question papers.

xv) Use Future Perfect form in sentences which have ‘by + time, in + time, before + present time’. For example,

By the time next week, I will have completed my revision.

He will have returned to Kathmandu in two days.

xvi) To describe two past actions taking place simultaneously, we use past indefinite for both actions.

Example,

I liked her as soon as I saw her.

The students greeted the teacher as soon as he entered the class.

Exemplary Junction

a. I hear that he now. (sings, **is singing**)
b. The patient before the doctor came. (died, **had died**)
c. He congratulated me for what (I did, **I had done**)
d. She came when (**it was raining**, it rained)
e. I wish a bird (I was, **I were**)
f. I wish I a house in Kathmandu. (**bought**, will buy)
g. It is the first time I (am advising you, **have advised you**)
h. No sooner had he reached the station then the train (had left, **left**)
i. It is the time we home. (go, **went**)
j. I her as soon as I saw her.(**liked**, had liked)
k. She acts as if she an actress. (is, **were**)
l. He acted as if he it. (did, **had done**)
m. The rain before the lightning flashed. (already stopped, **had already stopped**)
n. Let's go out. It any more. (**is not raining**, will not rain)

Subject-Verb Agreement

Subject-verb agreement means that a subject and its verb must be both either singular or both plural: A singular subject takes a singular verb. A plural subject takes a plural verb.

i) Nouns used with a quantifier *(some, any, all, and most)* can be singular or plural. This depends on whether the noun is countable or uncountable. For example,

Some of the policies (They) were rejected whilst others were approved. (policies = plural countable noun)

Some of the research (It) was conducted at the University of Melbourne. (research= uncountable noun)

ii) After a subject joined by *either ... or*, *neither ... nor*, or *not only ... but also*, the verb agrees with the subject nearest to it.

Neither the lecturer nor the students *want to reschedule the class.* ('*want'* agrees with '*students'*)

Neither the students nor the lecturer *wants to reschedule the class.* ('*want* s' agrees with '*lecturer'*)

iii) *'There is'* and '*there are'* agree with the noun that follows. There is **flexibility in** this kind of management structure.

There <u>are</u> many **advantages** to this kind of management structure.

iv) Indefinite pronouns (someone, anyone, no one, anybody, somebody, nobody, one, either, neither, each, every) usually take a singular verb.

No one <u>likes</u> to fail at university.

v) When a phrase comes between the subject and the verb, remember that the verb still agrees with the subject, not the noun or pronoun in the phrase following the subject of the sentence.

Examples:

The student, as well as the committee members, **is** excited.

The student with all the master's degrees **is** very motivated.

Strategies that the teacher uses to encourage classroom participation **include** using small groups and clarifying expectations.

The focus of the interviews **was** nine purposively selected participants.

vi) When a compound subject contains both a singular and a plural noun or pronoun joined by "or" or "nor" "not only…but also," the verb agrees with the part of the subject that is closest to the verb. It is also called the rule of proximity.

Examples:

The student **or** the committee members **write** every day.

The committee members **or** the student **writes** every day.

vii) The words and phrases "each," "each one," "either," "neither," "everyone," "everybody," "anyone," "anybody," "nobody," "somebody," "someone," and "no one" are singular and require a singular verb.

Examples:

Each of the participants **was** willing to be recorded.

Neither alternative hypothesis **was** accepted.

I will offer a $5 gift card to **everybody** who **participates** in the study.

No one was *available* to meet with me at the preferred times.

viii) Some countable nouns in English such as *earnings, goods, odds, surroundings, proceeds, contents,* and *valuables* only have a plural form and take a plural verb.

Examples:

The earnings for this quarter **exceed** expectations.

The proceeds from the sale **go** to support the homeless population in the city.

Locally produced goods have the advantage of shorter supply chains.

ix) Collective nouns are words that imply more than one person but are considered singular and take a singular verb. Some examples are "group," "team," "committee," "family," and "class."

Examples:

The group meets every week.

The committee agrees on the quality of the writing.

However, the plural verb is used if the focus is on the individuals in the group. This is much less common.

Example:

The committee participate in various volunteer activities in their private lives.

x) If two subjects are joined by 'as well as,' 'with,' 'along with,' 'together with,' 'and not,' 'in addition to,' 'but,' 'except,' 'rather than,' 'accompanied by,' 'like,' 'unlike,' 'apart from,' 'nothing but,' the verb will agree with the first subject. For example,

Ram, as well as his friends, **is** coming to the party.

The principal, accompanied by the teachers, **has** joined the picnic program.

My father, unlike my uncles, **is** very strict.

xi) The following nouns are always in singular form and agree with the singular verb: clothing, scenery, furniture, gossip, information, issue, traffic, accommodation, luck, luggage, poetry, permission, offering, alphabet, brick, etc.

Example:

All the furniture is new.

xii) The following nouns are always in plural form and agree with the plural verb: Binoculars, trousers, spectacles, pants, shorts, scissors, tongs, pincers, billiards, cards, intestines, socks, thanks, assets, goods, remains, premises, forceps, pyjamas/pajamas, jeans, etc.

Example:

My spectacles are broken.

But, a pair of spectacles is on the table.

xiii) The following nouns are always in singular form but agree with plural verb. Cattle, police, poultry, vermin, swine, public, gentry, and clergy.

For example:

The cattle are grazing in the field.

The police are coming to help the helpless.

xiv) The following nouns can take both singular (unification) and plural (division) verb. Army, committee, group, class, government, jury, etc.

Example:

The government is of one opinion.

The government are of different opinions.

xv) With the following expressions the verb agrees with the noun after 'of'. A great deal of, a good deal of, lots of, most of, majority of, minority of, the rest of, piles of, heaves of, a quarter of, two thirds of, one- third of, two-fifths of, none of, half of, etc.

Example:

Two-thirds of the novel is about war.

xvi) Noun representing any specific quality, quantity or amount is taken as singular subject. For example:

Ten kilometers **is** not long distance.

Hundred rupees **is** enough for today.

xvii) When a relative pronoun (who, which, that) refers to a plural antecedent, the verb in the relative clause must also be plural.

Example

She is one of the students who **work** hard.

She is the only <u>student</u> who **works** hard.

This is one of the <u>books</u> that **are** worth reading.

<u>Exemplary Junction</u>

a. ***He***, as well as I, running. (are, am, **is**)

b. Neither the teacher ***nor his student*** hard. (work, **works**)
c. Neither the teacher ***nor his students*** hard.(**work**, works)
d. Many ***a man*** done it. (**has**, have)
e. ***The teacher and principal*** helpful. (**is**, are)
f. ***The teacher and the principal*** helpful. (is, **are**)
g. ***The number of*** students playing outside. (**is**, are)
h. ***A number of*** students playing outside. (is, **are**)
i. The ***police*** coming.(is, **are**)
j. ***Neither of*** the statements correct. (**is**, are)
k. ***Each of*** them happy. (**is**, are)
l. Many ***a flower*** born to blush unseen. (**is**, are)
m. ***Each*** day and ***each*** night its own pleasure. (**has**, have)
n. ***This news*** correct. (**is**, are)
o. Two thirds ***of the novel*** good. (**is**, are)
p. Two thirds ***of the novels*** good. (**is**, are)
q. ***Letter*** after ***letter*** been sent to her. (**has**, have)
r. ***All*** but principal present yesterday. (was, **were**)
s. **The orator and statesman** dead. (is, are)
t. ***One of*** the boys present today. (**is**, are)
u. ***No one****except* Ram and Sita me. (help, **helps**)
v. ***Not one*** of them happy today. (**is**, are)
w. More than one ***of the teachers*** at Thapathali Campus hardworking. (is, **are**)
x. ***Less than two*** students good. (is, **are**)

Preposition

A preposition is a word that shows the relationship between a noun (or pronoun) and other words in a sentence. Prepositions usually indicate location, direction, time, or the relationship between two things. Some common prepositions include "in," "on," "at," "by," "for," "with," and "to." For example, in the sentence "The book is on the table," the word "on" is a preposition that shows the relationship between the book and the table, indicating the book's location. Prepositions are essential for understanding the spatial and temporal relationships in a sentence.

Use of prepositions

- Use of **'in'**

  It is used for dresses. For example,
  The woman dressed **in** a red sari is my aunty.
  It is used for occupations. For examples,

His brother is in the army.
His dad is in the politics.

It is used before the following nouns as:

in hospitals, in prison, in the bathroom, inn bed, in the mirror**,**

It is used for places important to the speaker. For examples,

It is dangerous in the forest at night.
Who is the girl in the photograph?
Look at yourself in the mirror.

It is used for conditions or state. For example,

His business is in a profit.

● Use of **'on'**

It is used for activity. For example,

He is on a diet.
We are on a holiday
My father is on business.
This house is on rent.

It is used for membership. Example,

The man is on the committee.

It is used to express a basis /reason for doing something. For example,

He did that on purpose.
The colonel has retired on purpose.

Use of **'at'**

It is used for manner. Example,

The students took the exam at a single sitting on Monday.

It is used for degree, value and cost. Example,

He is driving at full speed, tell him to slow down.
He is selling bananas at Rs.30 per kg.

Use of **'by'**

It is used in the sense of 'according to.' Example,

It is 12 O'clock by my watch.

It is used for measurements. Example,

Temperature is measured by a thermometer.

Some confusing prepositions

'Before' and 'within'

'Before' is used for point of time. 'Within' is used for point of time.

'Till' and 'until'

'Till' is used for point of time. 'Until' is used when the time is no specified.

'In' and 'into'

'Into' is used with verb of motion. 'In' is used with verb representing state.

'Made from' and 'made of'

'Made from' is used to show transformation of one material into another, while 'made of' is used to show material or substances that form the essential composition of something. For example,

Paper is made from wood pulp.
The table is made of wood.

‘Beside’ and ‘besides’

‘Beside’ means ‘next to.’ ‘Besides’ means ‘in addition to.’

<u>A List of Verbs that take Specific Prepositions</u>

1. *Verbs with "about"*
   - **Complain about** – He complained about the noise.
   - **Talk about** – We talked about the project.
   - **Think about** – She is thinking about moving abroad.
   - **Worry about** – He worries about his exams.
   - **Know about** – Do you know about this rule?
2. *Verbs with "of"*
   - **Approve of** – His parents approve of his decision.
   - **Dream of** – She dreams of becoming a pilot.
   - **Remind of** – This song reminds me of my childhood.
   - **Think of** – I am thinking of my next vacation.
   - **Consist of** – The book consists of ten chapters.
3. *Verbs with "to"*
   - **Listen to** – She listens to music every evening.
   - **Belong to** – This book belongs to me.
   - **Respond to** – He didn’t respond to my email.
   - **Admit to** – She admitted to making a mistake.
   - **Refer to** – He referred to his notes during the lecture.
4. *Verbs with "on"*
   - **Depend on** – Your success depends on your effort.
   - **Insist on** – He insisted on paying the bill.
   - **Rely on** – You can rely on him.
   - **Focus on** – She is focusing on her studies.
   - **Agree on** – They agreed on a solution.
5. *Verbs with "in"*
   - **Participate in** – Many students participated in the event.
   - **Succeed in** – She succeeded in passing the exam.
   - **Believe in** – He believes in hard work.
   - **Engage in** – They engaged in a heated debate.
   - **Specialize in** – He specializes in digital marketing.
6. *Verbs with "at"*
   - **Look at** – She looked at the painting.
   - **Smile at** – He smiled at the baby.
   - **Laugh at** – They laughed at his joke.

- **Arrive at** – We arrived at the airport early.
- **Guess at** – He guessed at the correct answer.

7. Verbs with "for"

- **Apologize for** – He apologized for his mistake.
- **Search for** – They searched for the missing key.
- **Wait for** – I am waiting for my friend.
- **Ask for** – He asked for help.
- **Pay for** – She paid for the meal.

8. Verbs with "from"

- **Recover from** – He recovered from the flu.
- **Suffer from** – She suffers from allergies.
- **Protect from** – The roof protects us from rain.
- **Resign from** – He resigned from his job.
- **Escape from** – The prisoner escaped from jail.

9. Verbs with "with"

- **Agree with** – I agree with your opinion.
- **Cope with** – She is coping with stress.
- **Deal with** – He deals with customers daily.
- **Provide with** – The school provides students with books.
- **Help with** – Can you help me with my homework?

10. Verbs with "into"

- **Translate into** – She translated the text into Spanish.
- **Turn into** – The caterpillar turned into a butterfly.
- **Break into** – Thieves broke into the house.
- **Divide into** – The cake was divided into four pieces.
- **Look into** – The police are looking into the case.

Exemplary Junction

i. He came to meet me morning. (**at**, in)
ii. The man jumped the swimming pool(in, **into**)
iii. The children are swimming… the pool. (**in**, into)
iv. He will return to Kathmandu… two days (**in**, after)
v. He returned to Kathmandu… two days (in, **after**)
vi. The tiger sprang… the man.(on, **upon**)
vii. The project will be over next Monday. (**before**, within)
viii. The project will be over six days (before, **within**)
ix. I bought two copies a pen.(beside, **besides**)
x. He is absent the class. (in, **from**)

Voice

Voice refers to the unique style, tone, and perspective of a piece of writing. In communication, the choice between active and passive voice can affect the tone, emphasis, and clarity of the message. Active voice is generally more direct and engaging, while passive voice can be used to shift focus, highlight the recipient of an action, or sound more formal. Both have their uses depending on the context and intention of the communication.

a) In passive voice, sometimes preposition 'to' 'with' 'in'or 'at' is used in place of 'by.'

i) Use the preposition 'at' instead of 'by' for the sentences with (surprised, annoyed, shocked, alarmed, disappointed, displeased, stressed, astonished, laughed) as main verb. Example,

A: His bahaviour annoyed me

P: I was annoyed at his behavior.

ii) Use the preposition 'to' instead of 'by' for the sentences with (married, know, obliged) as the main verbs. Example,

A: Hari married Shreya

P: Shreya was married to Hari

iii) Use the preposition 'with' instead of 'by' for sentences with (pleased, disgusted, impressed, etc.) as the main verbs. Example,

A: Her performance impressed us

P: We were impressed with her performance.

iv) Use the preposition 'in' instead of 'by' for the sentences with (interested, consisted, absorbed, contained, etc.) as the main verbs. Example,

A: This topic might interest students

P: Students might be interested in this topic.

b) Quasi passive voice

Structure:

Active: sub+v1/v5+adj.

Passive: Sub+ aux+ Adj.+ when+ it/they+aux+v3

Basically active voice with **'test' 'feel' 'read' 'smell' 'cost' and 'sound'** take the help of **'when'** in the passive. Examples:

A: The food tasted delicious.

P: The food was delicious when it was tasted.

A: Honey tastes sweet.

P: Honey was sweet when it was tasted.

c) Consider the following structure:

A: It is time+ to=v1+obj.

P: It is time+ for+ obj. + to+be+v3

Examples:

A: It is time to write a letter.

P: It is time for a letter to be written.

A: It is time to ply music.

P: It is time for music to be played.

d) Miscellaneous Passive voice

A: I hope to win.
P: It is hoped that I shall win.
A: It is your duty to do this work.
P: You are supposed to do this work.
A: Your shoes need policing.
P: Your shoes need to be polished.
A: Prepare yourself for the examination.
P: Be prepared for the examination.

Exemplary Junction

i) The passive voice of "who did it" is (Who is it done by?, **By whom was it done?)**

i) The passive voice of "He let him do it" is (He is let to do it, **He was allowed to do it)**

ii) The passive voice of "All know Kalidash" is (Kalidash is known by all, **Kalidash is known to all**).

iii) The passive voice of "Nobody told me the news" is (The news were not told to me, **I was not told the news**)

iv) The passive of "Let's play cricket" is (Let the cricket be played, **It is suggested that we should play cricket**)

Conditionals

Conditionals describe the result of a certain condition. The 'if clause' tells you the condition (*If you study hara*) and the main clause tells you the result (*will pass your exams*). The order of the clauses does not change the meaning.

Example,

If you study hard, you will pass your exams.
You will pass your exams if you study hard.

Conditional sentences are often divided into different types.

<u>Zero conditional</u>

We use the zero conditional to talk about things that are generally true, especially for laws and rules.

If I drink too much coffee, I can't sleep at night.
Ice melts if you heat it.
When the sun goes down, it gets dark.

The structure is: *if*/w*hen* + present simple > present simple.

<u>First conditional</u>

We use the first conditional when we talk about future situations we believe are real or possible.

If it doesn't rain tomorrow, we'll go to the beach.
Arsenal will be top of the league if they win.
When I finish work, I'll call you.

In first conditional sentences, the structure is usually: *if/when* + present simple > *will* + infinitive.
It is also common to use this structure with *unless*, *as long as, as soon as, provided that* or *in case,* instead of '*if*.'

I'll leave as soon as the babysitter arrives.

I don't want to stay in London unless I get a well-paid job.

I'll give you a key in case I'm not at home.

You can go to the party, as long as you're back by midnight.

Second conditional

The second conditional is used to imagine present or future situations that are impossible or unlikely in reality.

If we had a garden, we could have a cat.

If I won a lot of money, I'd buy a big house in the country.

I wouldn't worry if I were you.

The structure is usually: *if* + past simple > + *would* + infinitive.

The Third Conditional

We use the third conditional to talk about impossible situations, as in the second conditional, in the past. We often use the third conditional to describe regrets. Examples,

If we had left earlier, we would have arrived on time.

If I hadn't learnt English, I wouldn't have got this job.

What would you have studied if you hadn't done engineering?

They wouldn't have hired you if you hadn't had some experience abroad.

Exemplary Junction

i) Provided that she were good, she this position (had attained, **would attain)**
ii) Be careful, or else you… these plates. (drop, **will drop)**
iii) Had I been there, I every part of the world.(had visited, **would have visited)**
iv) He for a long drive today if the weather had been sunny. (would go, **would have gone)**
v) She you if she were here.(had told, **would tell**)
vi) If she to come I would be delighted. (was, were)
vii) If you hit the ball, it (**bounces,** will bounce)
viii) I would fly in the sky if I a bird. (was, **were)**
ix) He his flight unless he had been running fast. (would miss, **would have missed**)
x) Find a seat quickly, or else there……..any left. (**will not be**, isn't)

Pronouns and their Antecedents

Pronouns are words used to replace nouns in a sentence, helping to avoid repetition. For instance, in the sentence "John went to the store because he needed milk," "he" is a **pronoun** that refers to the noun "John."

The noun that a pronoun refers to is called its **antecedent**. A pronoun must agree in number, gender, and person with its antecedent.

Examples:

1.Singular antecedent:

Sentence: *The student submitted her assignment on time.*
Antecedent: *The student* (singular) → **Pronoun:** *her* (singular, feminine)

2. Plural antecedent:

Sentence: *The students submitted their assignments on time.*
Antecedent: *The students* (plural) → **Pronoun:** *their* (plural)

Common Errors:

- Ambiguous pronouns: When it's unclear which noun the pronoun refers to.
  Incorrect: "John and Peter went to the store, and he bought bread." (Who is "he"?)
  Correct: "John and Peter went to the store, and John bought bread."

Non-Finite Verbs

Non-finite verbs are verb forms that do not change according to the subject. They do not show tense, person, or number. The three primary non-finite verb forms are the infinitive, gerund, and participle.

1. **Infinitive** (to + base verb):
   - Example: "I want **to eat** dinner."
2. **Gerund** (verb + ing):
   - Example: "He enjoys **swimming** in the pool."
3. **Participle** (verb + ed or irregular forms):
   - Example: "The **broken** window needs to be fixed."

Common Errors:

- Incorrect: "He is looking forward to **meet** you." (The infinitive form should be "meeting.")
- Correct: "He is looking forward to **meeting** you."

QUESTIONS FOR PRACTICE

a) The diet is deficient vitamins. (on, in)
b) The lady takes pride beauty. (in, about)
c) He has confidence me. (in, about, at, of)
d) She is proficient English.(at, in)
e) The post was allotted him.(for, in, to, on)
f) He made a list of things that required. (was, were)
g) He is one of the best leaders who served the nation perfectly. (has, have)
h) All of them happy. (is, are)
i) He, accompanied by the other members of the team, arrived. (have, has)

j) A number of people absent today. (is, are)
k) Neither of the boys……to go out. (wants, want)
l) He, in addition to his loves ones, hard. (work, works)
m) Two-tenths of the people been listen for elections. (have, has)
n) Not only Hari, but also his friends helpful. (are, is)
o) Ram or I studying in the same grade. (are, is)
p) She sang so well that she the competition. (can win, might win)
q) He told me that the force of gravity objects fall.(make, makes)
r) She wrote so well that she the exam.(could pass, might pass)
s) She liked him more than she her friends. (liked, had liked)
t) It is a known fact that they present I the class today.(are, were)
u) The rain before the lightning flashed.(stopped, had stopped)
v) Before she left Germany, she good scholar. (has been, had been)

Sentence Construction: Simple, Compound, Complex, and Mixed Sentences

1. **Simple Sentence:** A sentence with only one independent clause (a subject and a predicate). Example:
   They helped me.
   He won the race.

2. **Compound Sentence:** A sentence that has two independent clauses joined by a coordinating conjunction (for, and, nor, but, or, yet, so).
   Example:
   I wanted to go to the park; but it started raining.

3. **Complex Sentence**: A sentence with one independent clause and at least one dependent clause. A dependent clause cannot stand alone.
   Example:
   Although it was raining, I went to the park.

4. **Mixed Sentence/Compound-Complex Sentence: A combination of simple, compound, and/or complex sentences.**
   Example:
   I went to the park, but it started raining, so I returned home.

Error Analysis

Error analysis is the process of identifying and correcting mistakes in writing or speech. It helps to understand common patterns of errors, such as:

1. **Grammatical Errors**: These include mistakes in subject-verb agreement, incorrect word forms, or sentence structure.
   - Example: "She don't like apples." (Incorrect) → "She **doesn't** like apples." (Correct)
2. **Punctuation Errors**: These occur when punctuation marks are missing or misused.

- Example: "Let's eat, grandma!" (Correct) vs. "Let's eat grandma!" (Incorrect)

3. **Spelling and Vocabulary Errors**: Incorrect spelling or misuse of words.
   - Example: “She adjusted the **lence** of her camera to capture a clearer image of the sunset.” (Incorrect) → “She adjusted the lens of her camera to capture a clearer image of the sunset.” (Correct)

Punctuation

Punctuation marks are essential for clarifying meaning and indicating pauses or changes in tone in written language. Following are some of the key punctuation marks:

1. **Period (.)**: Used at the end of a declarative sentence. Example: “I like coffee.”
2. **Comma (,)**: Comma **(,)** is used to indicate a pause, separate elements in a sentence, clarify meaning, and improve readability. It is one of the most commonly used punctuation marks in English. Below are the key uses of a comma, along with examples.

Separating Items in a List

A comma is used to separate words, phrases, or clauses in a list to ensure clarity.
Example:

I bought apples, oranges, bananas, and grapes.
She enjoys reading, writing, painting, and traveling.

- The final comma before "and" (called the **Oxford comma**) is optional but recommended for clarity.

Before a Coordinating Conjunction in Compound Sentences

When two independent clauses are joined by **coordinating conjunctions** (for, and, nor, but, or, yet, so – FANBOYS), a comma is placed before the conjunction.
Example:

I wanted to go to the park, but it started raining.
She studied all night, so she passed the exam.

Exception: If the independent clauses are very short and closely related, the comma can be omitted.

- She ran and he followed.

After an Introductory Word, Phrase, or Clause

A comma is used after an introductory word, phrase, or subordinate clause to indicate a natural pause and improve readability.

A. **Introductory Words** (Yes, No, Well, However, etc.) Yes, I will join you for dinner.
- However, she was not interested in the offer.

B. **Introductory Phrases** (Prepositional, Participial, Infinitive, etc.)
- After the meeting, we went for coffee.
- Running late, she skipped breakfast.

C. Introductory Dependent Clauses
- If you work hard, you will succeed.
- Although it was raining, they continued playing.

Setting Off Nonessential (Parenthetical) Information

A comma is used to separate **nonessential** (extra) information in a sentence. Removing this information does not change the main meaning of the sentence.
Example:

- My brother, who lives in Canada, is visiting Nepal next month.
- The Eiffel Tower, one of the most famous landmarks, attracts millions of tourists. But no comma is needed if the clause is essential to the meaning of the sentence.
- The students who study regularly score higher on tests.

Between Coordinate Adjectives

When two or more adjectives independently describe a noun, they should be separated by a comma.
Example:

- It was a long, tiring journey.
- She has a bright, cheerful personality.

No comma is needed if the adjectives are not interchangeable.

- She wore a light blue dress. (No comma because "light" describes "blue," not the dress directly.)

In Direct Address (When Speaking to Someone)

A comma is used to separate the name of a person being spoken to from the rest of the sentence.
Example:

- Lisa, can you help me?
- Thank you, John, for your support.

With Direct Quotations

A comma is used to introduce or interrupt direct speech.
Example:

- He said, “I will be there soon.”
- “I don’t know,” she replied, “if I can make it.” No comma is needed for indirect speech.
- He said that he would be there soon.

In Dates, Addresses, and Numbers

A. Dates

- July 4, 1776, is an important date in history.
- On Wednesday, October 5, we have a meeting.

B. Addresses

- They moved to 123 Main Street, New York, NY 10001.

C. Numbers (Every Three Digits in Large Numbers)

- The population of the city is 1,234,567.

Avoiding Confusion and Misreading

A comma is sometimes used to prevent misinterpretation.
Example:

- Let’s eat, Grandpa! (Talking to Grandpa)
- Let’s eat Grandpa! (Sounds like you are eating Grandpa!)
- I love my parents, Barack Obama, and Oprah Winfrey. (List of three people)

- I love my parents Barack Obama and Oprah Winfrey. (Sounds like your parents are Obama and Oprah!)

With "Which" Clauses (Relative Clauses)

Use a comma before **which** when introducing nonessential clauses.
Example:

- The book, which I borrowed from the library, is fascinating.
- The book that I borrowed from the library is fascinating. (No comma because "that" introduces an essential clause.)

With Contrast and Emphasis

A comma is used before words like **but not, instead, too, though, however, and nevertheless** for contrast or emphasis.
Example:

- I like tea, not coffee.
- She is kind, though strict.

3. **Question Mark (?)**: Used at the end of a direct question.
    - Example: "What time is it?"
4. **Exclamation Mark (!)**: Used to express strong emotion or emphasis.
    - Example: "Wow! That was amazing!"
5. **Colon (:)**: A colon **(:)** is used to introduce, explain, or emphasize information. It provides a strong pause that signals to the reader that something important follows. Below are the main uses of a colon, along with examples.

Introducing a List

A colon is used before a list when the introduction is a complete sentence.
Example:

- We need several items for the trip: a tent, sleeping bags, food, and a flashlight.
- The bookstore sells three types of dictionaries: English, French, and Spanish.

Before an Explanation or Example

A colon can introduce an explanation, definition, or example that clarifies the previous statement.
Example:

- There was only one possible explanation: she missed the train.
- He has one main goal in life: to become a successful entrepreneur.

Between Independent Clauses (Instead of a Period)

A colon can separate two independent clauses when the second explains or expands on the first.
Example:

- She was faced with a choice: stay and fight or walk away forever.
- He finally understood the truth: his best friend had betrayed him.

Note: The second clause should explain or emphasize the first. Otherwise, use a semicolon or period.

With Quotations

A colon is used to introduce a formal or long quotation.
Example:

- The teacher reminded us of Shakespeare's famous words: "All the world's a stage, and all the men and women merely players."
- The CEO made an important announcement: "We are expanding our business to three new countries next year."

In Titles and Subtitles

A colon separates the main title from the subtitle.
Example:

- The Art of Writing: A Guide to Effective Communication
- Frankenstein: The Modern Prometheus

For Emphasis

A colon can be used to emphasize a word or phrase at the end of a sentence.
Example:

- There was one thing she feared the most: failure.
- He had only one passion in life: music.

6. **Semicolon (;):** A semicolon (;) connects closely related ideas, separates items in complex lists, and improves clarity in writing. It is stronger than a comma but weaker than a period.

Connecting Two Independent Clauses (Without a Coordinating Conjunction)

A semicolon can join two independent clauses that are closely related in meaning.
Example:

- She loves to read; her favorite book is *Pride and Prejudice*.
- The weather was perfect; we decided to go for a hike.

Note: If you use a coordinating conjunction (*and, but, or, nor, for, so, yet*), a semicolon is **not** needed. Instead, use a comma.

Correct: She loves to read, and her favorite book is Pride and Prejudice.

Incorrect: She loves to read; and her favorite book is Pride and Prejudice.

Connecting Independent Clauses with a Transitional Phrase or Conjunctive Adverb

A semicolon is used before conjunctive adverbs (*however, therefore, thus, moreover, consequently, nevertheless, meanwhile, etc.*) when linking two independent clauses.
Example:

- The project was difficult; however, we completed it on time.
- He didn't study for the exam; therefore, he failed.

Note: A comma follows the conjunctive adverb.

Separating Items in a Complex List

When list items contain commas, a semicolon is used for clarity.
Example:

- On our trip, we visited Paris, France; Rome, Italy; Madrid, Spain; and Berlin, Germany.
- The conference includes speakers from Tokyo, Japan; New York, USA; and Sydney, Australia.

Note: Without semicolons, the sentence could be confusing due to multiple commas.

Avoiding Comma Splices

A comma splice occurs when two independent clauses are joined by a comma instead of a semicolon or conjunction.
Incorrect: She is very talented, she plays the piano beautifully.

Correct: She is very talented; she plays the piano beautifully.

Before a Coordinating Conjunction in Lengthy Sentences

Though rare, a semicolon can be used before a coordinating conjunction (*and, but, or, nor, for, so, yet*) if the sentence is long and contains multiple commas.

Example:

- The storm caused power outages in several areas, including downtown, where businesses had to close; but emergency crews quickly restored electricity.

Note: In shorter sentences, a comma is sufficient.

7. **Quotation Marks ("")**: Used to indicate direct speech or a quotation.
    - Example: She said, “I will be there soon.”

8. **Apostrophe (')**: Used to show possession or form contractions.
    - Example: "That’s Sarah's book."

9. **Hyphen (-)**

A **hyphen** is used to join words or parts of words. It helps clarify meaning and improve readability. Some common uses include:

Compound Words: It connects words to form compound terms.
- Example: well-known author, father-in-law, high-speed train

Word Breaks: When a word is split between lines in justified text.
- Example: The project was com- pleted on time.

Prefixes and Suffixes: It links prefixes to root words when necessary.
- Example: **ex-president, self-confidence, re-enter**

10. Long Dash (—)

A long dash, also called an em dash **(—)**, is used to indicate a break in thought, add emphasis, or introduce additional information. Some common uses include:

Indicating a Pause or Break: It creates a dramatic pause.
- Example: **She finally arrived—after hours of waiting.**

Replacing Parentheses or Commas: It sets off nonessential information.
- Example: **The conference—originally scheduled for Monday—was postponed.**

Indicating an Interruption: Often used in dialogue or sudden breaks.
- Example: **"I was just thinking—" "No time for that now!"**

2.3 Bias-free language guideline, reducing bias

Bias-Free Language: Definition, Features and Importance

Bias-free language refers to communication that is inclusive, neutral, and respectful, avoiding words or expressions that discriminate against or stereotype individuals based on characteristics such as gender, race, ethnicity, disability, age, socioeconomic status, or other personal attributes. It ensures that language is fair, objective, and does not reinforce prejudice or exclusion.

Key Principles of Bias-Free Language

Inclusivity – Ensures that all individuals, regardless of background, are represented respectfully.
Neutrality – Avoids language that favors or marginalizes certain groups.
Accuracy – Uses precise and respectful terms that reflect reality without assumptions or stereotypes.
Sensitivity – Recognizes and respects cultural, social, and personal differences.

Examples of Bias-Free Language

Biased Language	Bias-Free Alternative
Chairman	Chairperson or Chair
Fireman	Firefighter
Mankind	Humankind or People
Elderly people	Older adults
Disabled person	Differently able
Poor people	People experiencing financial hardship
He or she	They (for gender neutrality)

Why Is Bias-Free Language Important?

Promotes Respect – Shows consideration for all individuals and groups.
Encourages Fairness – Avoids reinforcing harmful stereotypes.
Improves Communication – Makes messages clearer and more effective.
Reflects Diversity and Inclusion – Creates an environment where everyone feels valued.

Using bias-free language helps build more inclusive societies, workplaces, and educational environments by ensuring that language is a tool for equality rather than exclusion.

Ways to Reduce Bias in Communication

Reducing bias in communication ensures that language is fair, inclusive, and respectful. Following are the key ways to minimize bias, along with examples:

Use Gender-Neutral Language

Avoid gender-specific terms that assume roles based on traditional stereotypes.
Example:

- Instead of *Chairman*, say **Chairperson** or **Chair**.
- Instead of *Policeman*, say **Police officer**.
- Instead of *He or she must submit the form*, say **They must submit the form**.

Avoid Stereotypes

Do not make generalized assumptions about people based on gender, race, age, or profession.
Example:

- Instead of *Women are more emotional than men*, say **People express emotions differently based on individual personality.**
- Instead of *Older people struggle with technology*, say **People of all ages can learn and use technology.**

Use Person-First Language

Place the individual before their condition or characteristic to emphasize their identity beyond a single trait.
Example:

- Instead of *A disabled person*, say **A person with a disability**.
- Instead of *An autistic child*, say **A child with autism**.
- Instead of *A homeless man*, say **A person experiencing homelessness**.

Eliminate Racial and Ethnic Bias

Avoid unnecessary references to race or ethnicity unless relevant.
Example:

- Instead of *The Asian scientist made a discovery*, say **The scientist made a discovery** (if ethnicity is irrelevant).
- Instead of *A black doctor treated the patient*, say **A doctor treated the patient**.

Use Inclusive Pronouns and Titles

Recognize and respect diverse gender identities in communication.
Example:

- Instead of *Ladies and gentlemen*, say **Everyone** or **Distinguished guests**.
- Instead of *He must complete the task*, say **They must complete the task**.

Avoid Ableist Language

Do not use disability-related terms metaphorically or negatively.
Example:

- Instead of *She is wheelchair-bound*, say **She uses a wheelchair**.
- Instead of *He suffers from depression*, say **He has depression**.

Use Culturally Sensitive Language

Respect religious and cultural differences in communication.
Example:

- Instead of *Merry Christmas* (in diverse settings), say **Happy Holidays**
- **Be careful with gestures and symbols**: A thumbs-up is positive in some cultures but offensive in others. Instead of relying on gestures, use clear verbal or written communication.

Avoid Socioeconomic Bias

Do not use language that belittles or stereotypes people based on financial status.
Example:

- Instead of *Poor people*, say **People experiencing financial hardship**.
- Instead of *Low-class neighborhoods*, say **Underserved communities**.
- Instead of *Welfare-dependent families*, say **Families receiving government assistance**.

Be Mindful of Age Bias

Avoid making assumptions about people based on their age.
Example:

- Instead of *The elderly struggle with new technology*, say **Some older adults may need assistance with new technology**.
- Instead of *Young people are lazy*, say **Work habits vary among individuals of all ages**.

Avoid Sexual Orientation and Gender Identity Bias

Respect all gender identities and sexual orientations in communication.
Example:

- Instead of *Do you have a wife/husband?*, ask **Do you have a partner?**

Avoid Stereotypes:

Do not make generalized statements about a group or assume characteristics based on identity.

Example:

Avoid saying, "Women are naturally better caregivers."

Reducing bias in communication promotes respect, inclusivity, and fairness. By using gender-neutral terms, avoiding stereotypes, and being mindful of language that marginalizes individuals, we can create a more inclusive and respectful environment.

Chapter 3: Technical Writing

3.1 Technical proposals (Purpose, types, structure, key considerations and examples)

Purpose of Technical Proposals

A **technical proposal** is a formal document that presents a solution to a technical problem, project, or research initiative. It is often submitted to request approval, funding, or support from a client, organization, or government agency. The main objectives of a technical proposal include:

- **Defining a problem or need** – Clearly articulating a technical issue or requirement.
- **Proposing a solution** – Outlining a feasible, efficient, and well-researched technical approach.
- **Justifying feasibility** – Demonstrating why the proposed solution is practical, cost-effective, and technically sound.
- **Securing funding or approval** – Convincing stakeholders to invest in or approve the project.
- **Providing technical details** – Presenting specifications, methodologies, and expected outcomes.

Technical proposals are used across industries such as engineering, IT, construction, healthcare, and research, making them essential for technological and infrastructural advancements.

Types of Technical Proposals

Technical proposals vary based on their purpose and audience. Some of the common types include:

A. Solicited Technical Proposal

- Submitted in response to a request for proposal (RFP) issued by a government agency, business, or organization.
- The requirements and evaluation criteria are predefined by the requester.
- Example: A software company responding to an RFP for a cybersecurity system for a bank.

B. Unsolicited Technical Proposal

- Prepared without a formal request, often to introduce an innovative idea or solution to a potential client.
- Requires strong justification to persuade decision-makers.
- Example: A renewable energy company proposing a new solar grid system to a government agency.

C. Competitive Technical Proposal

- Submitted as part of a competitive bidding process where multiple organizations or companies submit proposals.
- Must stand out in terms of cost, efficiency, and innovation.
- Example: A construction firm bidding for a government highway project.

D. Non-Competitive Technical Proposal

- Presented in cases where an organization has a unique or proprietary solution, making competition minimal or non-existent.
- Example: A company proposing a patented medical device to a hospital.

E. Research & Development (R&D) Proposal

- Focuses on proposing a research-based technical study or innovation.
- Often submitted to academic institutions, research organizations, or government funding bodies.
- Example: A university proposing a study on AI-driven climate prediction models.

Structure of a Technical Proposal

A well-structured technical proposal ensures clarity, professionalism, and persuasiveness. There are some common elements of a technical proposal, but not every technical proposal includes all of them. The structure, length and components of a proposal depend on factors such as:

Purpose of the Proposal: Whether it's for research, product development, engineering design, or service implementation.
Audience: Government agencies, private companies, investors, or internal stakeholders may require different levels of detail.
Project Scope and Complexity: A small-scale proposal may not require a risk analysis, while a large one might need extensive budgeting and resource planning.
Industry Standards and Requirements: Some industries, such as construction, IT, and healthcare, have specific technical documentation requirements.

Essential Elements (Almost always included

A. Title Page

- Includes the proposal title, recipient's details, individual submitting it, name of the organization, and date.

B. Executive Summary

- A concise overview of the problem, proposed solution, key benefits, and expected outcomes.
- Designed to capture the reader's interest quickly.

C. Introduction

- Provides background information on the problem, project objectives, and significance of the proposal.

D. Problem Statement

- Highlights the existing problems that necessitate the project.
- List the issues that need to be addressed.
- Includes supporting data, research findings, or case studies.

E. Proposed Solution / Methodology

- Details the technical methodology, technology, or process that will be implemented.
- Includes specifications, workflows, engineering designs, or research methodologies.

F. Project Implementation Plan
- Outlines the step-by-step execution of the proposed solution, including timelines, milestones, and key deliverables.

G. Budget and Cost Estimation
- Provides a breakdown of costs related to resources, equipment, labor, and other expenditures.
- Justifies cost-effectiveness and return on investment (ROI).

H. Conclusion
- Summarizes the proposal, reiterating its feasibility and benefits.
- Includes a call to action for approval or

funding. Optional Elements (Included as needed)

A. Table of contents

List of sections and subsections with page number for easy navigation

B. Objectives of the project
- The objectives section of a project proposal outlines the specific goals the project aims to achieve.
- Clearly defines the issue that the proposal seeks to address.

C. Significance of the Project

This section highlights the crucial reasons why implementing the project is beneficial not just in terms of immediate outcomes, but also for long-term urban development and sustainability.

D. Risk Analysis (for high-risk projects)

E. Possible outcomes

F. Evaluation Criteria (for performance-based projects)

G. Appendices
- Provides additional supporting documents, technical drawings, graphs, or references.

<u>Key Considerations for Writing an Effective Technical Proposal</u>

To ensure a compelling and successful technical proposal, on should consider the following:

A. Clarity and Precision
- Use clear, concise, and technical language that aligns with the expertise level of the audience.
- Avoid jargon unless necessary, and provide explanations where required.

B. Data-Driven Justification
- Support claims with quantitative data, case studies, research, or real-world examples.
- Include graphs, charts, and tables for better visualization.

C. Alignment with Client or Stakeholder Needs
- Understand and address the specific requirements and concerns of the recipient.
- Ensure that the proposal meets industry standards and compliance requirements.

D. Feasibility and Practicality

- Demonstrate the technical and financial feasibility of the proposed solution.
- Address potential risks and provide viable mitigation strategies.

E. Professional Formatting and Presentation

- Use a formal, well-organized layout with headings, subheadings, and bullet points for readability.
- Ensure consistency in font, spacing, and visuals.

F. Persuasiveness and Value Proposition

- Highlight the benefits, cost-effectiveness, and long-term impact of the solution.
- Provide compelling reasons for stakeholders to approve the proposal.

Technical proposals play a vital role in driving innovation, solving technical challenges, and securing funding for projects. Whether for engineering, IT, research, or construction, a well-crafted proposal should clearly define the problem, propose a viable solution, justify its feasibility, and persuade stakeholders to support its implementation. Following a structured approach and incorporating key considerations can significantly enhance the effectiveness and success of a technical proposal.

Technical Proposal Samples

Sample1. Proposal for a Smart Traffic Management System to Reduce Congestion and Improve Road Safety in Urban Areas in Nepal

A. **Title Page**

A PROPOSAL
FOR
SMART TRAFFIC MANAGEMENT SYSTEM TO REDUCE CONGESTION AND IMPROVE ROAD SAFETY IN URBAN AREAS IN NEPAL

SUBMITTED TO
ER. PREM CHANDRA ROY
HEAD OF THE DEPARTMENT
DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING

SUBMITTED BY
GRISHMA DAHAL
ACEM080BCT017

ADVANCED COLLEGE OF ENGINEERING AND MANAGEMENT
KALANKI, KATHMANDU
10 FEBRUARY 2025

B. Executive Summary

This proposal presents a Smart Traffic Management System designed to address traffic congestion and enhance road safety in urban areas in Nepal. Urban traffic congestion is a persistent challenge, leading to delays, environmental pollution, and safety hazards in Nepal. This proposal outlines the development of a Smart Traffic Management System that utilizes IoT, Artificial Intelligence (AI), and real-time data to optimize traffic flow, reduce congestion, and improve road safety. The system involves deploying IoT sensors and cameras for real-time data collection, implementing AI algorithms to dynamically adjust traffic signal timings, and providing commuters with live traffic updates through a mobile app. A step-by-step implementation strategy, comprising site surveys, pilot testing, and system evaluation, will ensure the feasibility and scalability of the project. This innovative solution is expected to enhance urban mobility, reduce vehicle emissions, and contribute to safer roadways, making it a sustainable approach to modern traffic management challenges.

C. **Introduction**

Urbanization and population growth have significantly increased traffic congestion in Nepal's urban areas, leading to delays, rising road accidents, and environmental pollution. Existing traffic systems, which rely on fixed schedules, are insufficient to manage dynamic and complex traffic patterns. This proposal aims to develop a Smart Traffic Management System utilizing IoT and AI to optimize traffic flow, dynamically adjust signal timings, and improve road safety while reducing vehicular emissions. The system will provide real-time data analysis and accident detection, addressing critical urban challenges and promoting sustainable mobility. By reducing congestion and enhancing road safety, this project will benefit commuters, local authorities, and the environment, serving as a model for technology-driven solutions to urban development challenges.

D. Problem Statement

Nepal's urban areas are experiencing escalating traffic congestion due to rapid urbanization and a surge in vehicle numbers. The existing traffic management systems, which rely on fixed signal schedules and manual interventions, are inadequate in handling dynamic and unpredictable traffic patterns. This inefficiency leads to prolonged travel times, excessive fuel consumption, increased carbon emissions, and a higher incidence of road accidents. Additionally, the lack of real-time traffic monitoring and adaptive control mechanisms exacerbates congestion and safety concerns. Recent studies indicate a significant rise in urban traffic delays and accident rates, highlighting the urgent need for an intelligent, technology-driven solution. Addressing these challenges requires an innovative approach that integrates real-time data collection, artificial intelligence, and IoT-based adaptive traffic control systems to optimize urban mobility, enhance road safety, and reduce environmental impact.

E. Methodology

The Smart Traffic Management System will be developed and implemented using a systematic, data-driven approach tailored to Nepal's urban road conditions. The methodology involves the following key phases:

i) System Design and Architecture

- Develop a comprehensive framework integrating IoT-based infrastructure, AI-driven analytics, and cloud computing.
- Ensure compatibility with existing traffic management systems, including traffic lights, surveillance cameras, and road signage.
- Establish a centralized traffic control center for real-time monitoring and decision-making.

ii) Data Collection and Real-time Monitoring

- Deploy sensors, cameras, and IoT devices at key intersections to monitor:
    - Vehicle density and traffic flow
    - Road congestion levels
    - Accident occurrences
    - Pedestrian movement
- Store and process real-time traffic data using a cloud-based system for analysis and reporting.

iii) Traffic Flow Optimization

- Implement AI-powered algorithms to:
    - Adjust traffic light cycles dynamically based on real-time congestion levels.
    - Provide alternative routes to vehicles during peak hours.
    - Offer predictive traffic modeling to prevent congestion.

iv) Intelligent Decision-making and Control System

- Utilize machine learning models to:
    - Predict future traffic patterns based on historical data.
    - Identify high-risk accident zones and suggest preventive measures.
- Integrate automated traffic control mechanisms for adaptive signal timing.

v) Pedestrian and Road Safety Enhancements

- Implement automated pedestrian signals that adjust based on real-time pedestrian movement.
- Deploy vehicle detection systems to prevent reckless driving and enhance safety.
- Introduce emergency response prioritization, allowing ambulances and emergency vehicles to navigate through traffic efficiently.

vi) System Integration and Testing

- Conduct pilot testing in selected high-traffic urban areas in Nepal.
- Evaluate system performance, response time, and accuracy of congestion predictions.
- Make necessary modifications based on feedback and performance analysis.

vii) Implementation and Maintenance

- Implement the system in phases, prioritizing highly congested areas.
- Provide continuous monitoring and maintenance to ensure system efficiency.
- Regularly update algorithms and hardware to adapt to evolving traffic patterns.

F. Project Implementation Plan

The implementation of the Smart Traffic Management System in the urban areas in Nepal will take one year, and it will be carried out in four phases:

Phase 1 – Planning and Design (2 Months)

- Finalize system requirements and specifications
- Design the technical architecture
- Identify pilot areas for initial deployment

Phase 2 – System Development (4 Months)

- Develop the software for real-time traffic monitoring and management
- Install sensors and cameras in pilot locations
- Set up data storage and analytics infrastructure

Phase 3 – Testing and Optimization (3 Months)

- Conduct pilot testing in selected urban areas
- Optimize the system based on real-time data and feedback
- Fine-tune traffic management algorithms

Phase 4 – Full-Scale Deployment (3 Months)

- Expand the system to other high-traffic areas
- Train city officials and traffic management personnel
- Monitor system performance and make adjustments as needed

G. Budget and Cost Estimation

The total cost estimated for the Smart Traffic Management System is NPR 50 lakhs. The breakdown of costs is as follows:

- Hardware (Sensors, Cameras, IoT Devices): 20 lakhs
- Software Development: 12 lakhs
- System Integration and Testing: 8 lakhs
- Personnel (Project Management, Technicians): 5 lakhs
- Training and Documentation: 3 lakhs
- Contingency Fund**:** 2 lakhs

H. Conclusion

The Smart Traffic Management System provides a practical solution to the pressing issues of traffic congestion and road safety in Nepal's urban areas. By implementing this system, we can significantly improve traffic flow, reduce accidents, and enhance safety through advanced technologies like real-time monitoring and optimized traffic signals. Additionally, the system will have a positive environmental impact by reducing emissions and promoting more sustainable urban mobility. Taking into consideration its potential to transform urban transportation, it is crucial to move ahead with approval and funding to make this solution a reality.

I. Appendices

Appendix A**:** Technical Drawings and System Architecture
Appendix B**:** Case Studies and Research Data on Smart Traffic Systems

Sample 2. Proposal for Sustainable Urban Architecture: Integrating Green Building Strategies in Nepal

A
Proposal
for
Sustainable Urban Architecture: Integrating Green Building Strategies in Nepal

Submitted to
Ministry of Physical Infrastructure and Transport
Kathmandu, Nepal

Submitted by
Siddhartha Acharya
ACEM080BEI026
Advanced College of Engineering and Management
Kalanki, Kathmandu

11 February 2025

A. Executive Summary

This proposal presents a comprehensive initiative to integrate green building strategies into Nepal's urban architecture, addressing the pressing challenges of rapid urbanization, environmental degradation, and inefficient construction practices. As Nepal's cities expand, they face rising energy demands, increased carbon emissions, and unsustainable resource consumption. To counter these issues, this initiative advocates for sustainable architectural solutions that leverage energy-efficient designs, renewable materials, and climate-responsive construction techniques.

The core objective of this initiative is to establish a framework for sustainable urban architecture by incorporating internationally recognized green building standards, passive design principles, and smart technologies. These strategies will not only reduce the environmental impact of urban structures but also enhance cost-effectiveness, durability, and overall urban resilience. Additionally, this proposal emphasizes the importance of incorporating traditional Nepalese architectural elements to ensure cultural and environmental harmony.

A step-by-step implementation approach will be employed to ensure effectiveness and scalability. The initiative will begin with extensive research and feasibility assessments, followed by pilot projects demonstrating the practical application of green building techniques. A thorough evaluation phase will refine strategies and establish best practices for large-scale adoption. Collaboration with government bodies, private developers, and local communities will be crucial in fostering policy reforms and ensuring widespread implementation. By integrating sustainable urban architecture into Nepal's development strategy, this proposal aims to create greener, healthier, and more sustainable cities for future generations.

B. Introduction

Nepal is undergoing rapid urbanization, with its cities expanding to accommodate growing populations and economic activities. However, this urban growth has been accompanied by significant environmental concerns, including inefficient energy use, high carbon emissions, and resource depletion. Traditional construction methods and outdated building practices have contributed to unsustainable urban development, making cities increasingly vulnerable to climate change and environmental stressors.

The need for sustainable urban architecture has never been more urgent than present. By integrating green building strategies, Nepal can transition towards environmentally responsible and energy-efficient urban development. Sustainable architecture prioritizes resource efficiency, reduced ecological impact, and improved quality of life for urban residents. This approach involves the use of renewable materials, passive design techniques to optimize natural lighting and ventilation, and smart technologies to enhance energy conservation and building performance.

This proposal outlines a strategic plan for embedding green building principles into Nepal's urban architectural landscape. It advocates for policies and construction practices that align with global sustainability standards, ensuring that future urban developments are both environmentally and economically viable. Furthermore, this initiative seeks to strike a balance between modernization and the preservation of Nepal's rich architectural heritage by incorporating indigenous materials and climate-responsive designs.

By implementing green building strategies, Nepal has the opportunity to reduce its carbon footprint, improve energy efficiency, and foster a more sustainable urban environment. This proposal aims to serve as a blueprint for the adoption of sustainable urban architecture, ensuring long-term resilience and livability in Nepalese cities.

C. **Problem Statement** Nepal's urban areas face significant challenges due to unsustainable building practices, including:

- High energy consumption due to poor thermal insulation and inefficient building designs.
- Environmental degradation resulting from excessive resource use and construction waste.
- Limited adoption of green building technologies due to lack of awareness and expertise.

- Vulnerability to climate change, including rising temperatures and extreme weather events.

To address these issues, a comprehensive approach integrating sustainable architectural practices is required to promote energy-efficient, eco-friendly, and climate-responsive urban development.

D. **Methodology** The implementation of sustainable urban architecture will follow a systematic, research-driven approach involving the following phases:

i) Design and Planning

- Develop architectural models incorporating passive solar design, natural ventilation, and thermal insulation.
- Utilize eco-friendly building materials such as bamboo, compressed earth blocks, and recycled materials.
- Incorporate renewable energy sources, including solar panels and rainwater harvesting systems.

ii) Site Selection and Analysis

- Identify pilot urban locations suitable for green building projects.
- Conduct climate and environmental impact assessments to inform design choices.
- Assess local material availability to ensure cost-effective and sustainable construction.

iii) Smart Technology Integration

- Implement smart lighting and energy-efficient HVAC systems.
- Utilize IoT-based monitoring systems to track energy consumption and optimize building performance.
- Integrate green roofs and vertical gardens to improve insulation and air quality.

iv) Pilot Project Development

- Construct prototype sustainable buildings in selected urban areas.
- Monitor performance metrics, including energy efficiency, water usage, and indoor air quality.
- Gather stakeholder feedback from architects, city planners, and residents to refine designs.

v) Evaluation and Optimization

- Analyze pilot project data to assess sustainability impact and cost-effectiveness.
- Adjust design strategies based on performance insights.
- Develop guidelines and best practices for future sustainable urban development projects.

E. Project Implementation Plan

The proposed sustainable urban architecture initiative will be implemented over a 12-month period, divided into four phases:

Phase 1 – Research and Planning (3 Months)

- Conduct feasibility studies and site selection.
- Develop architectural designs and select sustainable materials.

Phase 2 – Pilot Project Construction (4 Months)

- Build prototype green buildings in designated urban locations.

- Integrate smart technologies and monitor real-time data.

Phase 3 – Performance Analysis and Optimization (3 Months)

- Evaluate pilot project efficiency in energy use, indoor comfort, and environmental impact.
- Make necessary modifications to enhance sustainability.

Phase 4 – Full-Scale Implementation (2 Months)

- Expand green building principles to broader urban development projects.
- Provide training workshops for architects and urban planners.
- Develop regulatory recommendations for sustainable urban architecture in Nepal.

F. Budget and Cost Estimation

The total estimated cost for implementing the sustainable urban architecture initiative is NPR 40 lakhs, with the following breakdown:

SN	Work Description	Cost (in NPR)
1	Architectural Design and Planning	6,00,000
2	Sustainable Materials and Construction	16,00,000
3	Smart Technology Integration	8,00,000
4	Research, Testing, and Optimization	2,00,000
5	Training and Awareness Programs	2,00,000
6	Contingency Fund	4,00,000
7	Miscellaneous	2,00,000
		Total: 40 lakhs

G. **Conclusion** This proposal highlights the urgent need for sustainable urban architecture in Nepal to address environmental and urban challenges. By integrating green building strategies, the initiative aims to create energy-efficient, climate-responsive, and resource-conscious urban developments. The successful implementation of this project will serve as a model for future architectural advancements in Nepal, promoting long-term sustainability and improved urban living standards. We recommend proceeding with the approval and funding of this initiative to establish a benchmark for sustainable architecture in Nepal.

Sample 3. Proposal for Sustainable Smart Cities: Integrating Green Computing in Nepal's Urban Development

A
PROPOSA
L FOR
SUSTAINABLE SMART CITIES: INTEGRATING GREEN COMPUTING IN NEPAL'S URBAN DEVELOPMENT

SUBMITTED TO
ER. PREM CHANDRA ROY
HEAD OF DEPARTMENT
DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING

SUBMITTED BY
ARPAN BHATTARAI
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13 FEBRUARY 2025

A. **Executive Summary**

This proposal presents a strategic initiative to integrate green computing technologies into Nepal's urban development, with the objective of fostering sustainable and smart cities. As Nepal experiences rapid urban expansion and increased reliance on digital infrastructure, the country faces significant environmental challenges, including high energy consumption, electronic waste accumulation, and inefficient resource management. Without sustainable urban planning, these issues could escalate, leading to long-term environmental and economic repercussions.

This proposal outlines a comprehensive framework for developing smart city infrastructure that incorporates energy-efficient computing solutions, renewable energy sources, and intelligent technologies. Key focus areas include the deployment of green IT strategies, such as energy-efficient data centers, smart grids, and AI-driven urban resource optimization, to minimize environmental impact. Furthermore, it highlights the importance of sustainable electronic waste management policies to mitigate the hazards of e-waste disposal.

A phased implementation approach will be adopted to ensure scalability and effectiveness. The initiative will commence with extensive research and feasibility assessments, followed by pilot projects to demonstrate practical applications of green computing in urban settings. A subsequent evaluation phase will refine methodologies and establish best practices for large-scale adoption. Collaboration with government bodies, private developers, technology firms, and local communities will be integral to ensuring policy reforms and widespread implementation.

By integrating sustainable computing technologies into Nepal's urban planning framework, this proposal aims to build energy-efficient, technologically advanced, and environmentally responsible smart cities. The initiative aligns with global sustainability goals, particularly the United Nations Sustainable Development Goals (SDGs) 11 (Sustainable Cities and Communities) and 13 (Climate Action). This transformation will contribute to a greener, more resilient urban future, ensuring that Nepal's cities are equipped to handle future demands while minimizing their environmental footprint.

B. Introduction

Nepal is undergoing rapid urbanization, with projections indicating that urban areas will accommodate over 60% of the population by 2050 (United Nations, 2023). This urban expansion is driven by economic growth, rural-to-urban migration, and increased infrastructure development. However, traditional urban models are struggling to meet rising demands while minimizing energy consumption, electronic waste, and environmental degradation. Consequently, there is an urgent need to transition toward sustainable and smart urban development strategies that integrate green computing technologies to enhance efficiency, reduce carbon emissions, and optimize resource utilization.

Green computing, also known as sustainable computing, refers to the design, development, and use of environmentally friendly computing systems that minimize energy consumption and electronic waste (Murugesan, 2018). Studies show that data centers alone contribute to nearly 1% of global electricity consumption, and this figure is expected to rise as

digital services expand (Jones, 2022). Additionally, electronic waste (e-waste) is increasing at an alarming rate, with the Global E-Waste Monitor estimating that over 53.6 million metric tons of e-waste were generated globally in 2019, and only 17.4% of it was properly recycled (Forti et al., 2020). Nepal, lacking a structured e-waste management system, faces severe environmental risks due to improper disposal and recycling of electronic components. To address these challenges, this proposal advocates for the integration of green computing strategies into Nepalese urban development. For this, A phased implementation approach will be adopted, beginning with research and feasibility assessments, followed by pilot projects to test sustainable solutions, and concluding with large-scale deployment through public-private partnerships and policy reforms.

By incorporating green computing into Nepal's smart city development, this initiative aligns with global best practices and sustainability frameworks, such as the European Green Deal and the United Nations Sustainable Development Goals (SDGs) (European Commission, 2020; United Nations, 2015). The phased implementation strategy, which includes research, pilot testing, and large-scale deployment, will ensure scalability, feasibility, and long-term sustainability. The proposed initiative not only reduces Nepal's environmental footprint but also enhances its technological infrastructure, positioning the country as a leader in sustainable urban innovation.

C. Problem Statement

Nepal's urban areas face significant challenges due to the inefficient use of technology and high energy consumption**,** which negatively impact sustainability and environmental health. One of the major concerns is excessive energy consumption in data centers and electronic devices**,** contributing to high operational costs and increased carbon emissions. According to the International Energy Agency (IEA), data centers globally consume about 1% of total electricity demand**,** with consumption expected to rise due to increasing digitalization (IEA, 2023). In Nepal, where the energy supply is often unstable, inefficient computing infrastructure further exacerbates power shortages and dependency on fossil fuels (Nepal Electricity Authority [NEA, 2022).

Another critical issue is environmental degradation caused by e-waste and improper disposal practices**.** The Global E-waste Monitor reports that South Asia generated approximately 5.3 million metric tons of e-waste in 2022**,** with only 3% formally recycled (Forti et al., 2022). Nepal lacks a proper e-waste management system, leading to hazardous disposal methods that contaminate soil and water sources, posing severe risks to human health and biodiversity (Bharadwaj et al., 2021). Additionally, limited awareness and adoption of green computing practices in urban planning hinder the transition to sustainable smart cities. Studies indicate that less than 20% of businesses and urban developers in Nepal incorporate energy-efficient computing solutions due to high initial costs and lack of policy incentives (Shrestha & Poudel, 2021). This lack of green technology adoption slows down progress toward eco-friendly urbanization and increases Nepal's environmental footprint.

Furthermore, with the urban population projected to reach 40% of Nepal's total population by 2030 (United Nations, 2023), the demand for smart infrastructure that can handle rapid urbanization efficiently is increasing. However, the current urban framework is not equipped to handle energy demands, digital connectivity, and sustainability needs simultaneously**,** making the integration of green computing technologies imperative for future development (World Bank, 2023). To address these challenges, a comprehensive

approach integrating green computing technologies into urban development is essential. By adopting energy-efficient data centers, AI-driven resource optimization, and sustainable e-waste management strategies**,** Nepal can transition towards smart, eco-friendly, and technologically advanced cities**,** aligning with global sustainability goals and ensuring a greener future.

D. Methodology

The implementation of green computing in smart cities will follow a research-driven, step-by-step approach involving the following phases:

i) Design and Planning

- Develop architectural plans for data centers, communication networks, and smart grid systems using energy-efficient designs.
- Promote the use of renewable energy sources (solar, wind) for powering urban computing infrastructure.
- Design systems that encourage recycling and repurposing of electronic waste.

ii) Site Selection and Infrastructure Analysis

- Identify urban locations suitable for pilot smart city projects.
- Conduct environmental impact assessments and energy demand forecasting.
- Assess the availability of local resources such as renewable energy and waste recycling facilities.

iii) Smart Technology Integration

- Implement energy-efficient computing devices, smart meters, and intelligent traffic management systems.
- Utilize cloud computing and edge computing to reduce energy consumption by optimizing resource allocation.
- Integrate IoT-based solutions to monitor urban energy usage and reduce waste.

iv) Pilot Project Development

- Construct prototype smart city infrastructure incorporating green computing technologies in selected urban areas.
- Monitor real-time energy consumption, system efficiency, and the environmental impact of the technologies.
- Gather feedback from local authorities, residents, and technology experts to refine and optimize the system.

v) **Evaluation and Optimization**

- Analyze data from pilot projects to evaluate energy savings, cost-effectiveness, and environmental benefits.
- Make necessary modifications to enhance sustainability and performance.
- Develop guidelines and best practices for future smart city projects across Nepal.

E. Project Implementation Plan

The proposed green computing initiative will be implemented over a 12-month period, divided into four phases:

Phase 1 – Research and Planning (3 Months)

- Conduct feasibility studies and site selection for pilot projects.
- Develop architectural and system designs, focusing on renewable energy and energy- efficient computing.

Phase 2 – Pilot Project Construction (4 Months)

- Build infrastructure for pilot smart city projects, integrating green computing solutions and smart technologies.
- Implement energy monitoring systems and smart grids to optimize energy distribution.

Phase 3 – Performance Analysis and Optimization (3 Months)

- Evaluate energy efficiency, resource usage, and environmental impact.
- Modify systems to enhance performance and sustainability.

Phase 4 – Full-Scale Implementation (2 Months)

- Expand green computing principles to broader urban development projects.
- Provide training workshops for city planners, engineers, and IT professionals.
- Recommend policy changes to support sustainable technology integration in urban areas.

F. Budget and Cost Estimation

The total estimated cost for implementing the green computing initiative is NPR 45,00,000 with the following breakdown:

SN	Work Description	Cost (in NPR)
1	System Design and Planning	7,00,000
2	Sustainable Infrastructure and Construction	17,00,000
3	Smart Technology Integration	10,00,000
4	Research, Testing, and Optimization	5,00,000
5	Training and Awareness Programs	2,00,000
6	Contingency Fund	2,00,000
7	Miscellaneous	2,00,000
		Total: 45,00,000

G. Conclusion

This proposal highlights the need for integrating green computing technologies into Nepal's urban development to address energy inefficiency, environmental challenges, and the growing demand for smart infrastructure. By adopting sustainable IT solutions, the initiative will help create smarter, more energy-efficient cities that promote sustainability and reduce the carbon footprint. The successful implementation of this project will serve as a model for future green urban development across Nepal. Approval and funding of this initiative are essential to establish a benchmark for sustainable, technology-driven urban growth.

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3.2 Project Proposal, Research Proposal, and Reports

3.2.1 Writing Project Proposal

Definition

A **project proposal** is a formal document that outlines the context, objectives, scope, methodology, timeline, budget, and expected outcomes of a proposed project. It is typically prepared to seek approval, funding, or support from stakeholders, such as sponsors, investors, or decision-makers. A well-structured project proposal clearly defines the problem the project aims to address, the proposed solution, and the benefits of implementing the project.

Elements of a Project Proposal

A well-structured project proposal consists of both **essential** and **optional** elements. The **essential elements** are mandatory components that provide a clear understanding of the project's purpose, implementation, and expected outcomes. The **optional elements** enhance the proposal by providing additional support, justification, and clarity.

Essential Elements

Title Page

- Project title (clear, concise, and descriptive)
- Name of the organization or individual submitting the proposal
- Name of the recipient (funding agency, sponsor, or approving authority)
- Date of submission

Abstract

- A brief overview of the project (one to two paragraphs).
- Summary of the context, problem, objectives, proposed solution, and expected outcomes.
- Key financial and resource needs.
- A concise statement of the project's significance.

Introduction / Background

- Explains the context of the project and its relevance.
- Establishes why the project is necessary and beneficial, i.e. provides description of the problem or need the project aims to address.
- Objectives, Importance and relevance of the project.
- Supporting data, statistics, or references (if applicable).

Problem Statement / Justification

- Clear explanation of the issue or explanation of the existing problems that necessitate the project.
- Evidence-based justification (research findings, case studies, past experiences)
- Consequences of not addressing the problem.
- How Stakeholders are affected by the project.

Objectives of the Project

- **General Objective**: The overall goal of the project.
- **Specific Objectives**: Measurable and achievable steps toward the general objective.
- Must be **SMART** (Specific, Measurable, Achievable, Relevant, Time-bound)

Methodology / Approach

- The strategy or process for implementing the project.
- Data collection and analysis methods (if research-oriented).

- Tools, techniques, and resources required.
- Project phases (planning, execution, monitoring, and evaluation).

Work Plan / Implementation Schedule

- Breakdown of tasks and activities
- Project timeline (Gantt chart or milestone chart)
- Key deliverables at each phase
- Roles and responsibilities of team members

Budget and Resource Allocation

- Estimated total cost of the project.
- Breakdown of expenses (personnel, materials, logistics, etc.).
- Funding sources (if applicable).
- Justification of financial needs.

Conclusion

- Summary of the project's significance.
- Call to action (request for approval, funding, or collaboration).
- Suggestions for future projects.

Optional Elements

These elements add depth and credibility to the proposal, but they may not be mandatory in all cases. They are used when required.

Scope of the Project

- The boundaries and limitations of the project.
- Geographic area, target audience, and key activities covered.
- What is included and excluded in the project.

Expected Outcomes and Impact

- Direct and indirect benefits of the project.
- Long-term impact on stakeholders and the community

Risk Assessment and Mitigation Strategies

- Identification of potential risks and challenges.
- Strategies to minimize or manage risks.
- Contingency plans.

Monitoring and Evaluation Plan

- Criteria for measuring project success.
- Methods of tracking progress (performance indicators, feedback mechanisms).
- Reporting procedures and documentation.

Sustainability Plan

- Plan for long-term impact and continuation of the project.

Legal and Ethical Considerations

- Compliance with regulations, ethical concerns

Partnership and Stakeholder Involvement

- Key collaborators, sponsors, and stakeholders

References

- Citations of sources used in the proposal.

Appendices

- Supporting documents (charts, graphs, maps, letters of support)

While essential elements form the backbone of a project proposal, optional elements enhance its credibility and impact. The inclusion of optional elements depends on the proposal's purpose, audience, and requirements of the funding agency or decision-makers.

Sample project proposal 1: <u>Proposal for the construction of an overhead bridge</u>

A
PROPOSA
L FOR
CONSTRUCTION OF AN OVERHEAD BRIDGE AT NEW BANESHWOR CHOWK

SUBMITTED BY
KATHMANDU METROPOLITAN INFRASTRUCTURE DEVELOPMENT OFFICE
NEW BANESHWOR, KATHMANDU

SUBMITTED TO
DEPARTMENT OF URBAN DEVELOPMENT AND BUILDING CONSTRUCTION, NEPAL
SINGHADURBAR, KATHMANDU

25 JANUARY 2025

Abstract
New Baneshwor Chowk, one of the busiest intersections in Kathmandu, faces severe traffic congestion and increasing pedestrian accidents due to the high volume of vehicles and foot traffic. The lack of a safe crossing mechanism has led to frequent road mishaps, endangering lives and disrupting urban mobility. In response to these challenges, this project proposes the construction of an overhead pedestrian bridge to ensure safe crossing, reduce traffic congestion, and enhance overall urban infrastructure. The proposed solution involves a steel-framed pedestrian bridge equipped with modern safety features such as non-slip walkways, proper lighting, and accessibility ramps for differently-abled individuals. The estimated budget for the project is NPR 1,00,00,000, with funding expected from government allocations and local development funds. The project is expected to be completed within one year. By providing a dedicated pedestrian passage, this initiative aims to mitigate traffic hazards, promote sustainable urban mobility, and improve the efficiency of transportation systems in the area.

Introduction / Background
New Baneshwor Chowk is one of the most crucial intersections in Kathmandu, serving as a key transit point for thousands of vehicles and pedestrians daily. The chowk experiences heavy traffic congestion, which is further exacerbated by the lack of a dedicated pedestrian crossing. As a result, pedestrians are often forced to navigate through moving traffic, increasing the risk of accidents and slowing vehicular movement. The Metropolitan Traffic Police Division (MTPD) reports that pedestrian fatalities account for nearly 40% of road accident deaths in Kathmandu, highlighting the urgent need for improved pedestrian safety measures (MTPD, 2022).
Rapid urbanization and population growth have further intensified the problem. Kathmandu's urban population has been steadily rising, with an annual growth rate of 3.3%, leading to increased traffic density and infrastructure challenges (Shrestha & Adhikari, 2021). The existing road network at New Baneshwor Chowk struggles to accommodate both vehicular and pedestrian movement efficiently, leading to frequent bottlenecks and safety concerns. Studies indicate that unregulated pedestrian movement at busy intersections significantly contributes to road congestion and accident rates (World Bank, 2020).
Globally, many cities have successfully implemented pedestrian overpasses to enhance urban mobility and reduce traffic-related fatalities. Research conducted by the World Bank (2020) suggests that pedestrian bridges play a crucial role in reducing conflicts between pedestrians and vehicles, thereby improving overall traffic efficiency and safety. In line with these global urban planning strategies, the construction of an overhead pedestrian bridge at Baneshwor Chowk is a necessary step toward enhancing road safety and sustainable urban development in Kathmandu. This project aligns with Nepal’s broader infrastructure development goals, which prioritize pedestrian-friendly initiatives and improved traffic management solutions.
By implementing this project, the government can significantly reduce pedestrian-related accidents, minimize traffic congestion, and create a safer, more efficient urban transport system. The proposed overhead bridge will not only improve pedestrian mobility but also contribute to the long-term development of Kathmandu’s transportation infrastructure.

Problem Statement / Justification
Baneshwor Chowk experiences significant pedestrian and vehicular traffic, leading to safety concerns and inefficiencies. The key problems include:

- High accident rates: Pedestrian accidents at this intersection have increased by 25% over the last five years (MTPD, 2022).

- Traffic congestion: Daily traffic volume exceeds 50,000 vehicles, leading to delays and economic losses (DoTM, 2023).
- Lack of pedestrian infrastructure: The absence of a pedestrian bridge forces people to cross at unsafe locations, increasing accident risks (Gautam & Sharma, 2021).
- Stakeholder impact: Commuters, students, and local businesses suffer due to inefficient traffic movement (Kathmandu Metropolitan Office, 2023). By constructing an overhead bridge, pedestrian safety will improve, traffic congestion will be alleviated, and urban mobility will be enhanced.

Objectives of the Project

- General Objective**:** To enhance pedestrian safety and traffic efficiency at Baneshwor Chowk by constructing an overhead bridge.
- Specific Objectives**:**
    - Reduce pedestrian-related accidents by 60% within two years.
    - Improve vehicular traffic flow and reduce congestion.
    - Promote sustainable urban mobility solutions.
    - Enhance accessibility for differently-abled individuals.

Methodology / Approach

- Site Survey: Conduct a feasibility study and traffic analysis.
- Design and Planning: Collaborate with engineers and urban planners to develop the bridge design.
- Construction Phases:
    - Phase 1: Site preparation and foundation work.
    - Phase 2: Superstructure assembly and installation.
    - Phase 3: Safety measures and finishing.
- Monitoring and Evaluation: Periodic assessment of project progress and impact analysis post-completion.

Work Plan / Implementation Schedule

The construction of the overhead bridge at Baneshwor will be completed within one year. The time has been allocated as follows:

Phase	Duration	Activities
Planning	3 months	Feasibility study, approval processes
Construction	8 months	Foundation, superstructure, safety installations
Completion	1 month	Final inspections, testing, handover

Budget and Resource Allocation

The total estimated budget of the construction of overhead bridge at Baneshwor Chowk is NPR 1 crore. The allocation of costs for various aspects of the project is as follows:

SN	Description of work	Cost (in NPR)
	Design and engineering	10,00,000
	Construction materials	45,00,000
	Labor and workforce	25,00,000

	Safety installations	10,00,000

	Miscellaneous expenses	10,00,000
		Total: 1,00,00,000

Conclusion

The construction of an overhead pedestrian bridge at Baneshwor Chowk is essential for improving pedestrian safety and reducing traffic congestion in one of Kathmandu's busiest intersections. The bridge will provide a dedicated, safe crossing for pedestrians, significantly reducing accidents and enhancing traffic flow. With modern safety features and accessibility provisions, the project will contribute to a more efficient, inclusive, and sustainable urban transport system. The estimated budget of NPR 1 crore, with one year of timeline for completion, is a valuable investment in the long-term development of Kathmandu’s infrastructure.

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Sample project proposal 2: Computer Vision-based Automated Healthcare Monitoring System for Early Detection of Health Anomalies

A
PROPOSA
L FOR
COMPUTER VISION-BASED AUTOMATED HEALTHCARE MONITORING SYSTEM FOR EARLY DETECTION OF HEALTH ANOMALIES

SUBMITTED TO
ER. RUPESH SHAH
HEAD OF DEPARTMENT
DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING

SUBMITTED BY
AASTHA MAINALI
ACEM080BCT001

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KALANKI, KATHMANDU

13 FEBRUARY 2025

Abstract

This project proposes the development of an Automated Healthcare Monitoring System using Computer Vision (CV) and Artificial Intelligence (AI) to enhance patient care in healthcare facilities. With the increasing demand for efficient and scalable monitoring solutions, traditional methods of manual observation are often insufficient, leading to delayed diagnoses and missed health anomalies. The system will utilize deep learning algorithms to analyze real-time video feeds from cameras in patient rooms, enabling early detection of potential health issues such as respiratory distress**,** abnormal movements**,** or skin condition changes**.** By automating the monitoring process, the system aims to reduce healthcare providers' workload while improving patient outcomes through timely interventions. The proposed solution aligns with the growing need for technology-driven healthcare solutions and addresses the challenges of monitoring large numbers of patients in critical care environments. The estimated budget for the project is NPR 80 lakhs, and the timeline for completion is one year. This initiative has the potential to significantly enhance the efficiency of healthcare delivery and contribute to the global effort of integrating AI into healthcare systems.

Introduction

In recent years, the integration of Artificial Intelligence (AI) and Computer Vision (CV) in healthcare has shown immense potential in improving patient monitoring and early detection of diseases (Smith & Johnson, 2020). Traditional healthcare systems often rely on manual observations, which can lead to delayed diagnoses and errors (Doe & Williams, 2019). With the increasing global population and rising healthcare demands, the need for efficient, scalable, and real-time monitoring solutions has become critical (World Health Organization [WHO, 2021). This project proposes the development of an Automated Healthcare Monitoring System based on Computer Vision to continuously monitor patients for early signs of health anomalies such as respiratory distress**,** abnormal movements**,** or skin condition changes. The system will analyze video feeds from cameras installed in patient rooms, leveraging deep learning algorithms to detect and alert healthcare providers about any potential health issues in real-time (Chen et al., 2020).

Problem Statement

In hospitals and healthcare facilities, continuous monitoring of patients is essential to detect any sudden health deteriorations. However, due to staffing constraints, especially in large hospitals, real-time monitoring often becomes impractical. Manual checks can be missed, leading to delayed interventions (Harrison & Patel, 2021). There is a growing need for an automated and reliable system that can detect potential health anomalies without constant human supervision (Chavez et al., 2020).

Additionally, studies show that patients in critical care settings experience adverse outcomes due to the lack of constant monitoring, with up to 30% of emergency cases being preventable with early detection of symptoms (Brown & Lee, 2018). Thus, there is an urgent demand for more efficient, AI-driven monitoring solutions in healthcare (Morris, 2019).

Objectives of the Project

- **General Objective:**

  To develop an Automated Healthcare Monitoring System utilizing Computer Vision

(CV) and Artificial Intelligence (AI) to improve patient care and safety in healthcare facilities by enabling real-time, continuous monitoring.

- **Specific Objectives:**
    1. **Improve Patient Safety:**
       To enable early detection of potential health issues such as **respiratory distress**, **unusual movements**, and **skin condition changes** through AI-powered video analysis.
    2. **Enhance Efficiency:**
       To reduce the manual workload of healthcare professionals by automating the monitoring process, allowing them to focus on immediate interventions.
    3. **Increase Diagnostic Accuracy:**
       To leverage deep learning algorithms for the accurate recognition of symptoms and anomalies, providing healthcare providers with actionable insights.
    4. **Integrate Real-Time Monitoring:**
       To implement a **real-time monitoring system** that continuously analyzes patient video feeds and triggers alerts when abnormal behavior or conditions are detected.
    5. **Contribute to Technological Advancement in Healthcare:**
       To contribute to the growing trend of using **AI and CV** in healthcare for more efficient and scalable patient monitoring solutions.

Methodology

- **Phase 1: Research and Data Collection**
    - Study existing healthcare monitoring systems and identify the limitations.
    - Collect and prepare datasets (such as patient movements, breathing patterns, and skin conditions) for training the machine learning model.
- **Phase 2: System Design**
    - Design the architecture of the healthcare monitoring system, including camera setup, data processing pipeline, and model integration.
    - Choose appropriate deep learning techniques (e.g., Convolutional Neural Networks) for analyzing visual data.
- **Phase 3: Model Development and Training**
    - Develop and train machine learning models using labeled datasets to detect health anomalies.
    - Test the model accuracy using real-life test cases and fine-tune the models for better precision.
- **Phase 4: System Integration and Testing**
    - Integrate the computer vision models with the healthcare monitoring system.
    - Implement real-time monitoring with alerting functionality (email or SMS notifications) for healthcare providers.
- **Phase 5: Evaluation and Optimization**

- Monitor system performance in a real-world hospital environment and optimize the models based on the collected feedback.
- Improve accuracy and response time for anomaly detection.

Budget and Resource Allocation

The total estimated budget for the project is NPR 8,000,000**.** The allocation is as follows:

SN	Work description	Cost (in NPR)
1	Research and Data Collection	1,000,000
2	Camera and Hardware Setup	2,000,000
3	Deep Learning Software and Tools	1,500,000
4	Model Development and Training	1,500,000
5	System Integration and Testing	1,000,000
6	Labor (Developers, Engineers)	1,000,000
7	Miscellaneous Expenses	500,000
		Total : 8,000,000

Timeline and Milestones

The project will be completed in 9 months, following the phases outlined below:

SN	Category of work	Duration
1	Research and Data Collection	2 months
2	System Design and Architecture	2 months
3	Model Development and Training	3 months
4	System Integration and Testing	2 months
		Total: 9 months

Expected Outcomes

- A fully functional automated healthcare monitoring system capable of detecting health anomalies in real-time.
- A reduction in the burden on healthcare professionals by automating the detection of anomalies.
- Increased patient safety and timely intervention based on real-time alerts for healthcare providers.
- A system that can be further expanded to monitor other health parameters like heart rate, oxygen levels, or blood pressure.

Conclusion

This Computer Vision-based Automated Healthcare Monitoring System aims to revolutionize patient care by leveraging AI and deep learning technologies. It offers a scalable solution to continuously monitor patients, enabling faster detection of potential health risks. By providing real-time alerts to healthcare providers, the system ensures that timely interventions can be made, leading to better patient outcomes and optimized use of healthcare resources. This project aligns

with the ongoing trend toward smart healthcare systems that use cutting-edge technology to improve efficiency, reduce costs, and enhance the overall quality of care.

3.2.2 Writing Research Proposal

Differences between research proposal and project proposal

A **research proposal** and a **project proposal** are both written documents aimed at seeking approval, funding, or support, but they serve distinct purposes and are structured differently. Below are the key differences:

1. Purpose

- **Research Proposal**: Focuses on proposing a study to explore a research problem or answer a specific question. The goal is to contribute to academic knowledge or provide insights.
- **Project Proposal**: Focuses on proposing a plan to implement a specific project or achieve a practical goal, often involving tangible outcomes or solutions.

2. Scope

- **Research Proposal**: Concentrates on academic, theoretical, or exploratory work. It emphasizes investigation, analysis, and generating new knowledge.
- **Project Proposal**: Deals with practical implementation and results, such as building something, providing a service, or solving a defined problem.

3. Audience

- **Research Proposal**: Typically aimed at academic supervisors, funding bodies, or research committees.
- **Project Proposal**: Geared toward stakeholders, sponsors, government agencies, or organizations seeking practical benefits.

4. Content Focus

- **Research Proposal**: Includes sections like problem statement, research questions, literature review, research design, methodology, and expected contributions to knowledge.
- **Project Proposal**: Includes objectives, scope, timeline, budget, resource allocation, and implementation plan.

5. Outcome

- **Research Proposal**: Results in findings, theories, or knowledge published in academic journals or used for further research.
- **Project Proposal**: Results in a product, service, or implemented solution (e.g., building a road, running a community program).

6. Structure

- **Research Proposal**: Emphasizes research methodology, hypothesis testing, and analysis techniques.
- **Project Proposal**: Emphasizes planning, resource management, timelines, risk analysis, and deliverables.

7. Examples

- **Research Proposal**:
  "Assessing the Impact of Artificial Intelligence on Traffic Management Systems in Urban Areas of Nepal**"**
- **Project Proposal**:
  "Proposal for Establishing a Paper Factory in Bara District, Nepal"
  "Development of an AI-Based Predictive Maintenance System for Industrial Equipment"
  "Designing a Drone-Based Delivery System for E-Commerce in Urban Areas"

Sample Research Proposal 1: Assessing the Impact of Artificial Intelligence on Traffic Management Systems in Urban Areas of Nepal

A
PROPOSA
L FOR
ASSESSING THE IMPACT OF ARTIFICIAL INTELLIGENCE ON TRAFFIC MANAGEMENT SYSTEMS IN URBAN AREAS OF NEPAL

SUBMITTED TO

DR. SURAJ SHARMA
PROFESSOR
DEPARTMENT OF CIVIL ENGINEERING
TRIBHUVAN UNIVERSITY
KATHMANDU, NEPAL

SUBMITTED BY BIKASH BISTA
RESEARCHER
DEPARTMENT OF TRANSPORTATION STUDIES
TRIBHUVAN UNIVERSITY
KATHMANDU, NEPAL

13 FEBRUARY 2025

1. Introduction

Urbanization in Nepal has led to significant increases in population density and vehicle ownership, particularly in cities like Kathmandu, Pokhara, and Biratnagar. Consequently, traffic congestion, road safety issues, and rising pollution levels have become critical challenges. Traditional traffic management systems rely on fixed schedules and manual interventions, which are inadequate in addressing the complexities of urban traffic flow. In recent years, Artificial Intelligence (AI) has emerged as a transformative technology in various fields, including transportation. By enabling real-time data collection, analysis, and decision-making, AI has the potential to optimize traffic systems, reduce congestion, and enhance road safety. This research aims to assess the effectiveness of AI-based traffic management systems in Nepal and explore their impact on urban mobility and environmental sustainability.

2. Problem Statement

The increasing traffic congestion in Nepal's urban areas is not only a source of frustration for commuters but also a significant contributor to economic losses and environmental degradation. Traditional traffic systems are static and fail to adapt to changing traffic conditions, leading to delays, accidents, and excessive fuel consumption. Moreover, a lack of real-time data-driven approaches limits the ability of traffic authorities to respond effectively to emerging issues. Despite the global adoption of AI in traffic management, Nepal has yet to explore its potential for addressing urban traffic challenges. This research seeks to bridge this gap by investigating how AI can be effectively implemented in Nepal's context.

3. Objectives

The objectives of this research are as follows:

- To analyze the limitations of current traffic management systems in Nepal.
- To evaluate the potential of AI-based solutions in optimizing urban traffic flow.
- To assess the environmental and economic benefits of AI-driven traffic systems.
- To identify challenges and opportunities for implementing AI-based traffic management in Nepal.

4. Research Questions

- What are the key limitations of existing traffic management systems in Nepal?
- How can AI technologies improve real-time traffic optimization?
- What impact would AI-based systems have on reducing congestion, accidents, and emissions?
- What are the technical, financial, and social challenges of implementing AI in Nepal's urban areas?

5. Literature Review

The integration of Artificial Intelligence (AI) into traffic management systems has gained significant attention in recent years due to its potential to mitigate congestion, enhance road safety, and reduce environmental impacts. AI-driven solutions, such as adaptive traffic signal control, predictive traffic flow analytics, and automated incident detection, have demonstrated remarkable success in various countries. For instance, a study by Zhang and Liu (2020) highlights the deployment of AI-based traffic control systems in Singapore, where real-time traffic data is analyzed to optimize signal timings and reduce delays by up to 20%. Similarly, Los Angeles has successfully implemented AI technologies like machine learning algorithms and

connected vehicle systems, which have improved traffic flow efficiency and decreased travel times by approximately 15% (Litman, 2022).

Despite these advancements, there remains a considerable gap in understanding the application of AI in developing nations like Nepal. Traditional traffic management systems in Nepal rely on fixed-timing signals and manual interventions, which are incapable of addressing dynamic urban traffic conditions (World Bank, 2021). According to a report by the Asian Development Bank (2020), the lack of real-time data and technological infrastructure in South Asia is a significant barrier to adopting modern traffic solutions. However, the potential benefits of AI in this context are promising. Ahmed et al. (2021) emphasize that even low-cost AI interventions, such as traffic flow prediction using machine learning, can lead to substantial improvements in traffic management, particularly in resource-constrained settings.

AI's role in reducing environmental pollution is also noteworthy. Bhosale and Patil (2022) argue that optimizing traffic flow through AI reduces idle times at intersections, leading to lower emissions and fuel consumption. This assertion is supported by a case study in India, where the introduction of AI-driven traffic lights reduced CO2 emissions by 12% (Bhosale&Patil, 2022). However, these systems also face challenges, including high implementation costs, limited technical expertise, and resistance from local stakeholders (Litman, 2022).

Moreover, socio-cultural factors play a significant role in the success of AI-based systems in urban traffic management. Studies by Ahmed et al. (2021) and the World Bank (2021) suggest that public awareness and stakeholder engagement are critical in ensuring the effective adoption of AI technologies. In Nepal, a lack of awareness about the potential of AI and minimal government investment in technological advancements further hinder progress in this area (Asian Development Bank, 2020).

In conclusion, while global studies demonstrate the immense potential of AI in revolutionizing traffic management, its application in Nepal requires addressing unique socio-economic and infrastructural challenges. This research will build on these insights by evaluating the feasibility of AI-based traffic systems in Nepal's urban areas, considering both global best practices and local constraints.

6. Methodology

This study will employ a mixed-methods approach, combining both quantitative and qualitative data collection techniques, to provide a comprehensive analysis of traffic management systems and the potential for AI-based solutions.

- **Data Collection:**
    - **Quantitative Data:** Traffic flow data will be collected from sensors, CCTV footage, and vehicle GPS systems in selected urban areas. Surveys will be conducted among commuters to gather feedback on traffic conditions and challenges.
    - **Qualitative Data:** Interviews with traffic management officials, urban planners, and AI experts will provide insights into existing systems and the feasibility of implementing AI-based solutions.
- **Case Study:** A pilot AI-based traffic management system will be implemented in a selected urban area, such as a busy intersection in Kathmandu, to test its effectiveness in real-world conditions.

- **Data Analysis:** Statistical tools and simulation software (e.g., MATLAB, SUMO) will be used to analyze traffic patterns, evaluate system performance, and predict future scenarios.

7. Expected Outcomes

The research is expected to produce the following key outcomes:

- A detailed analysis of the limitations of current traffic systems in Nepal.
- Evidence-based insights into the benefits of AI-based traffic management, including reduced congestion, improved safety, and lower emissions.
- Practical recommendations for implementing AI systems in Nepal, considering technical, financial, and social factors.
- A roadmap for policymakers and urban planners to adopt technology-driven solutions for sustainable urban development.

8. Significance of the Study

This study will provide valuable insights into the potential of AI in addressing urban traffic challenges in Nepal. By optimizing traffic flow and reducing congestion, the proposed solutions will improve the quality of life for commuters, reduce economic losses due to delays, and contribute to environmental sustainability. Furthermore, the findings will serve as a guide for policymakers, engineers, and urban planners to integrate AI into Nepal's transportation infrastructure, paving the way for smarter and more efficient cities.

9. Timeline

Work	Description	Duration
Literature Review	Review of existing studies and reports.	1 month
Data Collection	Collection of traffic data and stakeholder interviews.	2 months
Case Study Implementation	Pilot testing of the AI-based system.	3 months
Data Analysis	Statistical and qualitative analysis of collected data.	2 months
Report Writing and Dissemination	Preparation of the final research report and recommendations.	1 month
		Total: 9 months

10. Cost Estimation

Cost Component	Description	Estimated Cost (in NPR)
Hardware Costs	IoT sensors, cameras, servers, and other equipment for data collection.	NPR 10,00,000
Software Development	Development of AI algorithms and traffic management software.	NPR 1,00,000

Installation and Deployment	Setup of sensors and infrastructure for the pilot study.	NPR 5,00,000
Personnel Costs	Salaries for researchers, developers, and support staff.	NPR 5,0000
Pilot Testing and Analysis	Testing and evaluation of the system.	NPR 2,00,000
Contingency Fund	Reserved for unforeseen expenses.	NPR 1, 00,000
		Total cost: NPR 24,00,000

References

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Writing Reports

A professional report is a tool of communication extensively employed across various sectors, including government entities, business industries, corporations, and diverse organizations. It plays a pivotal role in fields such as science, engineering, medicine, and business. This instrumental document serves as a means to present comprehensive and authoritative information to a well-defined audience, with the primary objective of fulfilling a specific purpose. Importantly, a professional report embodies a sense of impartiality and objectivity in its content, ensuring the integrity of the information shared.

At its core, a professional report encompasses an array of formats tailored to distinct contexts and requirements. These formats encompass progress reports, trip reports, project completion reports, event/program reports, investigation reports, evaluation reports, feasibility studies, and research reports. Each of these report types serves to address specific needs and objectives within their respective domains.

Crucially, the purpose of a report is rooted in the identification of a pertinent issue or challenge that necessitates attention. The report, in turn, becomes a vehicle through which this issue is analyzed, discussed, and ultimately addressed. It serves as a repository of insights, data, and findings that culminate in well-informed recommendations, where applicable.

Reports can vary in their formal or informal nature, contingent upon factors such as the scope of the subject matter, the intended audience, and the length of the document. This flexibility allows reports to be tailored to suit the specific context in which they are utilized.

In essence, a professional report stands as a cornerstone of effective communication and informed decision-making across a multitude of professional landscapes. Its ability to distill complex information into a coherent and actionable format makes it an indispensable tool of communication in the modern world.

Informal Reports

An informal report is a brief account of a specific business or professional activity. This type of report is often written to provide introductory information about a routine affair. Informal reports are generally short. They may be either informative or analytical and may use either oral or written form. Since informal reports are not elaborate, they may contain only a few elements, such as note on authorization, methods, findings, conclusions and recommendation. These reports are in two forms:

a) Letter report
b) Memo report

Letter Report:

The letter report follows the format of business letter. A letter format contains all the elements of a letter along with some additional sections. A letter report contains the following parts:

i) Letterhead
ii) Date
iii) Superscription (full address of the receiver)
iv) Subject line
v) Salutation
vi) Body

-why you are writing the report
- what the report is about

- Introduction: provide background to the report and introduce method of data collection
- Discussion/Findings: measures to be taken to solve the existing problems or improve the current situation
- Conclusion: quick synopsis of findings and expected action

vii) The ending
viii) The subscription or complementary close
ix) Signature, name and the post
x) Enclosure

Layout of a Letter Report

Letterhead

Date :.....

Superscription

Subject : .....
Salutation

Main Body
- Introduction: Purpose, Context, background, method
- Findings: Supporting text with topic headings, analysis, illustration, etc.
- Conclusion or recommendations: quick synopsis of the findings and expected action,
- etc.

The ending
Complementary close
Signature, name and the post
Enclosure

Exemplary

Junction Question:

As an Administrative Officer of Advanced College of Engineering and Managament located in Kalanki Kathmandu, Nepal, prepare a report in a letter format addressing the concern raised by the Academic Director regarding the poor participation of students in recent "Himalaya Exhibition 2023."

ADVANCED COLLEGE OF ENGINEERING AND MANAGEMENT
KALANKI, KATHMANDU

Date: 15 September 2023

To: Mr. Purna Bhadra Aryal

Academic Director

Subject: Report on Students' Poor Participation in "Himalaya Exhibition 2023"

Dear Sir,

This is the report on Students' Poor Participation in Himalaya Exhibition 2023 in response to your request made on 10th September 2023. The report addresses the causes behind lack of students' participation in the Exhibition and strategic measures to be undertaken for enhancing their participation in such events in the future. The report collected relevant data by conducting interviews with a cross-section of 100 students and 20 faculty members.

FINDINGS

Following comprehensive discussions with 100 students and 20 faculty members, the following key factors contributing to the inadequate student participation in the exhibition were identified:

i) Insufficient Promotion: Approximately 45% of the students noted that the lack of robust advertising and relatively modest prize incentives for the events hindered their motivation to participate.
ii) Faculty Engagement: A significant 70% of the faculty expressed challenges in dedicating time to guide students in projects due to excessive administrative responsibilities. This dearth of mentorship negatively impacted student involvement in academic activities.

iii) Timing Constraints: Both students (55%) and faculty (30%) acknowledged that inconvenient scheduling was a deterrent to active participation.

RECOMMENDATIONS

In light of the findings, following recommendations are proposed to improve students' participation in various events organized by the college.

1. Enhanced Promotion: The College should ensure widespread dissemination of notices pertaining to academic activities, fostering better awareness among all the students.
2. Optimized Workload Distribution: Administrative tasks should be distributed equitably across faculty members, preventing an undue burden on some members only. This would afford faculty more time to engage in academic initiatives and provide proper guidance to students' projects.

Your attention to these recommendations will aid in revitalizing student engagement and enriching the academic environment of the college.

Thanking You.

Best Regards,

……..

Jivan Devkota

Administrative Officer

Memo Report

A memo report, also known as the memorandum report or memo-style report, is a concise and well-structured document that presents information, analysis, or recommendations on a specific topic. Memos are typically used for internal communication within an organization. Memos are designed to provide essential details and insights in a clear and straightforward manner. A memo report contains the following parts:

i) Letterhead
ii) To: name, position
iii) From: name, position
iv) Date
v) Subject line
vi) Body
    - Introduction

-why you are writing the report
-what does the report focus on

- Methods
- Findings
- Conclusion
- Recommendations

The main body of the memo report includes headings appropriate to the discussed matter. It basically includes findings and recommendation.

vii) signature of the person writing the report(optional)

Layout of a Memo Report

Letterhead MEMORANDUM To: name, position From: name, position Date: Subject : ..... Main Body What does the report focus on? Findings: Supporting text with topic headings, analysis, illustration, etc. Recommendations: suggest expected action to overcome the problems or solve them, etc. Signature (optional)

Exemplary

Junction Question:

As an Administrative Officer of Himalaya College of Engineering located in Lalitpur, Nepal, prepare a memo-style report addressing the concern raised by the Academic Director regarding the poor participation of students in recent “Himalaya Exhibition 2023.”

ADVANCED COLLEGE OF ENGINEERING AND MANAGEMENT

KALANKI, KATHMANDU

MEMORANDUM

To: Ajay Ojha, Academic Director

From: Saurav Pandit, Administrative

Officer Date: 15 September 2023

Subject: Report on Students' Poor Participation in "Himalaya Exhibition 2023"

INTRODUCTION

With reference to your request dated 11 September 2023, through memo no. RN 2234, I am pleased to submit a report addressing the causes behind lack of students' engagement in the "Himalaya Exhibition 2023," and strategic measures to be undertaken for enhancing their participation in such events in the future.

PROCEDURE

Conducted interviews with a cross-section of 100 students and 20 faculty members.

FINDINGS

Following comprehensive discussions with 100 students and 20 faculty members, the following key factors contributing to the inadequate student participation in the exhibition were identified:

iv) Insufficient Promotion: Approximately 45% of the students noted that the lack of robust advertising and relatively modest prize incentives for the events hindered their motivation to participate.

v) Faculty Engagement: A significant 70% of the faculty expressed challenges in dedicating time to guide students in projects due to excessive administrative responsibilities. This dearth of mentorship negatively impacted student involvement in academic activities.

vi) Timing Constraints: Both students (55%) and faculty (30%) acknowledged that inconvenient scheduling was a deterrent to active participation.

RECOMMENDATIONS

There are some critical factors behind inadequate student participation in the Himalaya Exhibition 2023. They include insufficient promotion, limited faculty engagement, and timing constraints. To create engaging environment to foster active student involvement in such events, the college should ensure widespread dissemination of notices pertaining to academic activities, fostering better awareness among all the students. Moreover, administrative tasks should be distributed equitably across faculty members, preventing an undue burden on some members only. This would afford faculty more time to engage in academic initiatives and provide proper guidance to students' projects.

Best Regards,

……

Signature

Formal Reports

Research Report

A research report is a formal and structured document that presents the results, analysis, and findings of a research study or investigation. It is a detailed account of the research process, methods used, data collected, and the conclusions drawn from the study. It also includes recommendations when deemed necessary. Research reports are typically written by researchers, scholars, or professionals in various fields to share their research findings with a wider audience, such as peers, colleagues, or the general public.

Key Elements of a Research Report

The structure of a report depends on its type. A well-structured research report typically consists of the following key elements, each contributing to the clarity, comprehensiveness, and validity of the information presented:

1. **Cover Page**: The cover page of a research report typically includes essential information about the report's title, authors, affiliations, and other relevant details. It is the first page of the document and serves as a visual introduction to the research. The design and formatting of the cover page may vary depending on the specific style guide or requirements of the institution or publication. It is important to follow any guidelines provided by your institution, publisher, or the specific style guide (such as APA, MLA, Chicago, etc.) that you are using for your research report.
2. **Title Page**: The title page includes the title of the research report, the author(s) names and affiliations, date of publication, and often the name of the institution or organization associated with the research.
3. **Letter of transmittal**: The letter of transmittal as its name suggests is a letter that transmits the report to the reader. This includes statement of transmittal, background to the report/what the report focuses on and acknowledgements in brief.
4. **Preface**: Preface is one of the important elements of a formal report. It includes the following information:
    - Background to the report
    - The necessity of the report-why the report is prepared

- Description of the work
- Implications
- Acknowledgements

5. **Acknowledgments**: A section where the authors express gratitude to individuals or organizations that provided support, funding, or assistance during the research. Following is the list of frequently used expressions to convey our appreciation for the help, assistance, and guidance extended by others:

- I am grateful to……
- I am indebted to…….
- We are profoundly grateful to...
- We wish to express our heartfelt thanks to.....
- I must express my gratitude to ……..
- I acknowledge my indebtedness to……..
- I am highly thankful to……
- We are wholeheartedly thankful to...
- I am particularly grateful to……
- I wish to record my appreciation to…….

The reasons for thanking the person or organization also should be stated like:

- I am grateful to XYZ Shrestha for his invaluable advisory insights
- I must express my gratitude to Hari Maharjan for meticulously reviewing the initial draft of the report and offering insightful recommendations that greatly contributed to its completion.
- I am indebted to the Ministry of Physical Infrastructure and Transport for their invaluable dedication of time and financial support, which played a pivotal role in the successful completion of this report.

6. **Abstract**: A concise summary of the research report, highlighting the context, objectives, scope, methods, key findings, conclusion and recommendation. It provides readers with a quick overview of the study's main points.

7. **Table of Contents**: A list of all the major sections and subsections within the report, along with their corresponding page numbers. It is an optional element in the short reports but it is an essential part in the long reports. This allows readers to navigate through the report easily.

8. **Introduction**: This section provides context for the research by discussing the background, problem statement, research objectives, scope and limitation, and significance of the study. It sets the stage for the rest of the report.

9. **Literature Review**: A comprehensive review of relevant literature and previous research related to the topic. This section demonstrates the researcher's understanding of the existing body of knowledge and helps to identify research gaps.

10. **Methodology**: A detailed explanation of the research design, data collection methods, sample selection, and instruments used. This section should enable other researchers to replicate the study.
11. **Results**: The presentation of the raw data collected during the research, often in the form of tables, charts, graphs, and descriptive text. This section should be objective and it should avoid interpretation.
12. **Discussion**: Interpretation and analysis of the results in the context of the research objectives. Researchers discuss the implications of their findings, compare them to existing literature, and explore potential limitations.
13. **Conclusion**: A summary of the key findings and their implications, restating the research objectives and indicating whether they were achieved. This section often suggests avenues for further research.
14. **Recommendations**: If applicable, suggestions for actions that could be taken based on the research findings. These may be directed toward policymakers, practitioners, or other relevant stakeholders.
15. **References**: A comprehensive list of all the sources cited within the report. This section allows readers to access the original works from where necessary information has been taken to make the research authentic and credible.
16. **Appendices**: Additional supplementary materials that support the content of the report, such as survey questionnaires, raw data, detailed methodology descriptions, or any other relevant documents.

By incorporating these elements into a research report, researchers can ensure that their work is well-organized, informative, and contributes meaningfully to the body of knowledge in their field.

Exemplary Junction

Question:

Write a report on increasing accidents on the highways in Nepal. Show only title page, preface, table of contents, introduction, methodology and findings of your report.

Cover Page

A
REPORT
ON
CAUSES OF INCREASING ACCIDENTS ON THE HIGHWAYS

IN NEPAL

SUBMITTED TO:
HARI ADHIKARI
CHIEF ENGINEER

SUBMITTED BY:
RAHUL BHATTRAI
ENGINEER

MINISTRY OF PHYSICAL INFRASTRUCTURE AND TRANSPORT
BANESHWOR, KATHMANDU
15 SEPTEMBER 2023

Title Page

A
REPORT
ON
CAUSES OF INCREASING ACCIDENTS ON THE HIGHWAYS
IN NEPAL

SUBMITTED TO:
HARI ADHIKARI
CHIEF ENGINEER

SUBMITTED BY:
RAHUL BHATTRAI
ENGINEER

APPROVED BY:
SAURABH PANDEY
DIRECTOR

MINISTRY OF PHYSICAL INFRASTRUCTURE AND TRANSPORT
BANESHWOR, KATHMANDU
15 SEPTEMBER 2023

Letter of Transmittal

15 September 2023

Er. Hari Adhikari
Chief Engineer
Ministry of Physical Infrastructure Development
Kathmandu, Nepal

Respected sir,

I hereby submit the report entitled “Causes of Increasing Accidents on the Highways in Nepal” in response to your request made on 1 September 2023.

With the increasing production of the automobile, the people buying personal vehicle are also increasing and with it the road accidents are increasing drastically. In the major cities like Pokhara, Kathmandu, Biratnagar etc., many small vehicles cause accident. However, on the highways outside the cities various accidents take place due to the heavy vehicle like overloaded trucks, buses and private cars. This report tries to find the reasons behind these accidents. Besides, it aims to highlight the role of the central and local governments to minimize the accidents on the highways in Nepal.

I would like to express my deep gratitude to my committee chair, Professor SamitThapa for his guidance and suggestion throughout the journey. I also thankful to the members of police headquarter Naxal for their its kind support and time for interaction. I am grateful to them for all the data and information they provided. In addition, I would like to thank my friendSmarika for the fruitful discussions around the date. Moreover, I would like thank Thapathali Campus for giving me an opportunity and providing financial support to carry out this research.

Sincerely,
……
… Rahul
Bhattrai
Engineer

Preface

Road accidents pose a significant challenge to public safety and well-being, with far-reaching impacts on individuals and communities. In Nepal, the escalating rate of road accidents on highways has raised serious concerns about the safety of road users and the need for effective interventions. This report, titled "Causes of Increasing Road Accidents on the Highways in Nepal," aims to delve into the root causes of these accidents, identify accident-prone areas, address broader road safety challenges, analyze different types of accidents, and propose strategies to minimize risks.

The study's primary objective is to shed light on the factors contributing to the rising incidence of road accidents on Nepalese highways and to offer actionable recommendations for improving road safety. By understanding these causes and their implications, policymakers, local authorities, and stakeholders can develop targeted measures to reduce accidents and enhance the overall safety of the road transportation system in Nepal.

The significance of this report lies in its potential to inform policy decisions, guide infrastructure development, and contribute to public health and economic well-being. It aims to serve as a valuable resource for policymakers, researchers, and practitioners working in the field of road

safety, offering insights into the complex dynamics of road accidents in Nepal and proposing evidence-based strategies for improvement.

I would like to express my sincere gratitude to Professor SamitThapa for his invaluable guidance and support throughout this research endeavor. I am also thankful to the members of the police headquarters in Naxal for their generous assistance and provision of essential data. Special thanks are due to my friend Smarika for her insightful discussions and to Thapathali Campus for their financial support, which made this study possible.

Sincerely,

Rahul Bhattrai

Engineer

Acknowledgements

I would like to express my deep gratitude toward my committee chair, Professor SamitThapa formeticulously reviewing the initial draft of the report and offering insightful recommendations that greatly contributed to its completion. Without his advice and support, this report could not be completed. I express my sincere thankful to the members of police headquarter in Naxal for their kind support in data collection and time for interaction. I am grateful to them for all the data and information they provided. I would like to thank my friend Smarikafor the fruitful discussions around the date. I am highly indebted to Thapathali Campus for providing financial support which played a pivotal role in the successful completion of this report. I am grateful to everyone else who helped along the way.

Abstract

This study investigates the root causes of the increasing road accidents on highways in Nepal and proposes strategies to mitigate the risks and improve road safety. The research reveals that multiple factors contribute to the escalating accidents, including distracted driving, speeding, unsafe road environments, non-compliance with safety measures, and traffic rule violations. The study employs a mixed-method approach, combining quantitative analysis of road accident data with qualitative insights gathered through interviews with key stakeholders, including government officials, law enforcement agencies, road safety experts, and members of the local communities. Challenges in addressing these issues include the lack of a long-term roadway safety plan, political instability affecting funding, and data record negligence. Based on the findings, recommendations are proposed, such as promoting ignition interlock devices, imposing heavy penalties for speeding, strengthening driving tests, installing road dividers, enforcing traffic rules, and enhancing road signage. These recommendations aim to address specific causes identified and contribute to a comprehensive road safety strategy. The study concludes that

urgent action is needed to improve road infrastructure, enforce regulations, and raise awareness to reduce the growing toll of road accidents in Nepal.

Table of Contents

Table of contents

Introduction

1.1 Context/ Background of the Study

Road transportation is considered as the most reliable mode of transportation until we face the fact that road accidents are considered to be major causes of death, injury and disability in all over the world. In Nepal, road accidents have been on a sharp upward trajectory since the early 2000s.

According to the CBS report 2016, the total road network in Nepal covers 26900 kilometers, where as many as 1995400 vehicles ply along the road network. Most of the people in Nepal rely on road transportation. But nowadays, due to various factors road transportation is kind of a gateway to heaven for thousands of people and this rate is increasing enormously. In Nepal, long-term impacts of traffic injury are poorly documented and the impact assessment of the accidents is quite insufficient. Persons involved in road traffic incidents may develop psychological symptoms PTSD (posttraumatic stress disorder). This can lead to impairment in everyday life. The patient may perceive a subjective threat to life in the long term. Drivers also face many threats from physical assault to legal persecution when accidents occur.

There are a few roads in Nepal that are badly maintained with massive potholes and many are constructed round the terrain which includes winding roads, hairpin bends and steep recipes with no safety barriers. There are many challenges regarding road safety in Nepal. But every problem comes with solutions.

1.2 Statement of the Problem

The road transportation system in Nepal, while crucial for the country's connectivity and economy, is plagued by a significant rise in road accidents, leading to fatalities, injuries, and disabilities. Despite being a vital mode of transportation for the majority of the population, the safety of road users has been compromised due to various factors contributing to the alarming increase in accidents. The lack of comprehensive data on the long-term impacts of traffic injuries, inadequate assessment of accident impacts, and the potential psychological trauma experienced by those involved in accidents further exacerbate the problem. Additionally, poorly maintained roads, including those with hazardous conditions such as potholes, winding routes, and steep inclines without safety barriers, pose significant risks to drivers and passengers. These challenges underscore the pressing need to address road safety issues in Nepal. Therefore, this research aims to identify the root causes of the escalating road accidents on highways in Nepal and develop a probabilistic model to assess accident reduction factors. It also seeks to pinpoint

accident-prone areas, address road safety challenges, recognize the reasons for different types of accidents, and propose measures to mitigate these risks. Ultimately, the goal is to decrease the rate of road accidents and promote a safer road transportation system in Nepal.

1.3 Objectives of the Study

The primary objective of this report is to reduce the rate of road accidents on the highways of Nepal by achieving the following specific objectives:

- To explore the causes of increasing road accidents on the highways in Nepal.
- To identify and highlight accident-prone areas on the highways.
- To address the broader road safety challenges in Nepal.
- To analyze the reasons for different types of street mishaps on the highways.
- To raise awareness among residents about the effects of street mishaps and promote well-being measures.
- To propose effective strategies to minimize accidents on the highways in Nepal.

The research is guided by these objectives to understand the underlying causes of road accidents, identify high-risk areas, address broader road safety challenges, analyze specific reasons for mishaps, and propose actionable measures for improving road safety in Nepal.

1.4 Scope and Limitation of the

Study Scope of the Study:

This research focuses on the road transportation system in Nepal, with a specific emphasis on the country's highways, which are vital for connectivity and economic development. The study aims to comprehensively investigate the increasing rate of road accidents on these highways, including an analysis of the causes of accidents and the identification of accident-prone areas. Additionally, the research addresses broader road safety challenges in Nepal. It seeks to analyse the various reasons for different types of accidents, raise awareness about them, and propose strategies to minimize accidents, thus contributing to a safer road transportation system in the country.

Limitations of the Study:

Availability of Data: The study may encounter limitations due to the availability and quality of data related to road accidents, particularly concerning long-term impacts and psychological trauma experienced by individuals involved in accidents.

i) Geographic Focus: While the research primarily focuses on the highways of Nepal, it may not encompass all aspects of road transportation in other regions or types of roads within the country.

ii) Resource Constraints: The study may be constrained by resources such as time, funding, and access to specific data or locations, which could impact the depth and breadth of the research.

iii) Generalizability: The findings and recommendations of the study may be specific to the context of Nepal and its road infrastructure, and they may not be directly applicable to other countries or regions with different road systems and cultural dynamics.

1.5 Significance of the Study

The study is significant due to its multifaceted effort on addressing the causes of increasing road accidents on the highways in Nepal and suggesting strategies to minimize them in the days to come. Thus, the study is important for the policy makers, local government and the central government. Broadly, the significance of the study can be presented as follows:

i) Public Health Impact: Road accidents are a leading cause of death, injury, and disability. By identifying the causes behind the increasing rate of accidents on Nepalese highways, the study can contribute to reducing the loss of life and improving public health outcomes.
ii) Economic Implications: Road accidents have significant economic costs, including healthcare expenses, loss of productivity, and damage to infrastructure. Understanding the causes of accidents can help in devising cost-effective preventive measures, thus leading to potential economic savings.
iii) Infrastructure Development: Highways are crucial for Nepal's connectivity and economic development. Addressing the causes of accidents can lead to improvements in highway infrastructure and safety features, benefiting transportation efficiency and reliability.
iv) Policy Relevance: The study's findings can inform policy decisions related to road safety regulations, infrastructure development, and enforcement strategies. This can lead to the implementation of targeted measures to address specific causes of accidents on highways.
v) Research Contribution: By focusing on the specific context of Nepalese highways, the study can contribute valuable insights to the broader field of road safety research. It can serve as a reference for similar studies in other regions facing similar challenges.
vi) Community Well-being: Understanding the causes of accidents can help raise awareness among the public about the risks associated with certain behaviors or conditions on highways. This awareness can contribute to safer road usage and overall community well-being.

In summary, the study's significance lies in its potential to save lives, reduce economic burden, improve infrastructure, inform policies, advance research in road safety, and enhance the well-being of communities using highways in Nepal.

2. Methodology

To investigate the causes of the increasing road accidents on highways in Nepal and suggest the strategies to minimize them, a mixed-method approach was employed to ensure a comprehensive understanding of the issues. Both quantitative and qualitative analyses were conducted to gather and analyze data from diverse sources.

Quantitative Analysis:

Quantitative data related to road accidents, including factors such as location, time, weather conditions, types of vehicles involved, and severity of accidents, were collected from official records, police reports, and other relevant sources.

Qualitative Analysis:

In addition to quantitative data, qualitative insights were gathered through interviews with key stakeholders, including government officials, law enforcement agencies, road safety experts, and members of the local communities. These interviews provided valuable qualitative data on factors such as road infrastructure, enforcement of traffic laws, driver behavior, and public

awareness campaigns, which were analyzed to gain a deeper understanding of the underlying causes of the increase in road accidents.

Integrated Analysis:

The findings from both the quantitative and qualitative analyses were integrated to develop a comprehensive understanding of the multifaceted nature of the problem. This integrated approach allowed for the identification of specific factors contributing to the increasing road accidents on highways in Nepal, providing a solid foundation for developing targeted interventions and strategies to address the issue.

3. Literature Review

Road traffic accidents (RTAs) represent a significant public health concern in Nepal, with substantial human and economic costs. In the fiscal year 2017–18, the country officially reported 2,541 road deaths, translating to a fatality rate of 8.59 per 100,000 populations (Government of Nepal, 2018). However, contrasting with this official figure, the World Health Organization (WHO) estimated a higher fatality rate of 15.9 per 100,000 populations in 2016, nearly double the official estimate (World Health Organization, 2016).

Vulnerable road users, including pedestrians, cyclists, and motorcyclists, accounted for approximately 72% of all road fatality victims in Nepal in 2016, with pedestrians comprising half of this figure (World Health Organization, 2016). Notably, road accidents disproportionately impact the young working-age population, as approximately 40% of those killed on Nepal's roads in 2017–18 were under 26 years old (Government of Nepal, 2018). This trend is consistent with data showing transport injuries as the second leading cause of death among men aged 15–49 years in 2016 (World Health Organization, 2016).

Geographically, Nepal's casualty rate per accident increases as one moves westward, with the far-western region reporting nine deaths per ten accidents (Government of Nepal, 2018). Additionally, statistics from the Metropolitan Traffic Police Division indicate an upward trend in road accident fatalities, with 166 deaths in fiscal year 2015–16, 182 deaths in 2016–17, and 149 deaths in 2017–18 (Metropolitan Traffic Police Division, 2018). Furthermore, the age profile of individuals involved in road fatalities highlights the vulnerability of those aged 17 to 35 years (Metropolitan Traffic Police Division, 2018).

Driver-related errors account for a significant portion of fatal road crashes in Nepal, contributing to over 60% of such incidents (Government of Nepal, 2018). These errors encompass various factors, including traffic law violations, drink-driving, overloading, and speeding (Government of Nepal, 2018).

In summary, the literature indicates that road accidents in Nepal pose a considerable threat to public health and safety, particularly affecting vulnerable road users and the young population. Understanding the causes and patterns of road accidents is crucial for developing effective interventions to mitigate this growing problem.

4. Findings and Discussion

Overview of Road Accidents in Highways of Nepal:

The study investigated the causes of increasing road accidents on the highways of Nepal. It was found that accidents occur under various circumstances, with multiple factors contributing to their occurrence. The major causes identified include negligence of drivers, speeding, drunk-driving, mechanical glitches, haphazard overtaking, negligence of pedestrians, poor and

congested roads, weather conditions, and stray animals. Additionally, the absence of engineering standards for roads was found to play a significant role in these accidents.

Causes of Increasing Road Accidents:

The findings of this report shed light on the complex and multifaceted nature of road accidents on the highways of Nepal. Several key factors contribute to the increasing rate of accidents, each presenting unique challenges to road safety efforts in the country.

i) **Negligence of Drivers:** Driver-related errors, such as traffic law violations, drink-driving, overloading, and speeding, account for a significant portion of fatal road crashes in Nepal. This highlights the need for stricter enforcement of traffic laws and initiatives to promote responsible driving behavior among motorists.

ii) **Speeding:** The high incidence of speeding as a cause of accidents underscores the importance of speed management measures, including the implementation of speed limits, speed enforcement mechanisms, and public awareness campaigns highlighting the dangers of excessive speed.

iii) **Unsafe Road Environments:** Factors such as poor road conditions, inadequate safety facilities, visibility impairment due to darkness, and pedestrian negligence contribute to accidents. Improving road infrastructure, enhancing visibility, and promoting pedestrian safety measures are critical to addressing these challenges.

iv) **Lack of Seat Belts and Helmets:** The non-use of seat belts and helmets by drivers and passengers is a major concern. Efforts to promote the use of safety equipment and enforce regulations regarding their usage can significantly reduce the severity of injuries in accidents.

v) **Traffic Rule Violations:** Disobeying traffic rules and improper overtaking were identified as root causes of road accidents. Strengthening traffic enforcement measures and promoting adherence to traffic regulations are essential for improving road safety.

Challenges in Addressing the Problem:

Followings are the challenges faced by the concerned in addressing the increasing accidents on the highways of Nepal:

i) **Lack of Long-Term Roadway Safety Plan:** The absence of a comprehensive long-term roadway safety plan with measurable targets is a significant impediment to effective road safety management. Developing such a plan, with a focus on preventive measures and sustainable interventions, is crucial for reducing the incidence of accidents.

ii) **Political Instability and Funding:** Political instability and insufficient funds pose challenges to the implementation of effective road safety measures. Stable governance and adequate financial resources are essential for sustaining road safety initiatives and infrastructure development.

iii) **Data Record Negligence:** Negligence in maintaining accurate data records hinders the formulation of evidence-based policies and interventions. Improving data collection and management systems is essential for informed decision-making and monitoring of road safety initiatives.

5. Conclusion

Road transport is a vital aspect of Nepal's infrastructure despite the challenges posed by the poor condition of roads. The country's road network is extensive, accommodating a large number of vehicles. However, this accessibility comes at a high cost, with hundreds of lives lost annually in road traffic accidents. The impact of these accidents extends beyond fatalities, often resulting in severe injuries and long-term consequences for the victims and their families.

The rate of road accidents and fatalities in Nepal is on the rise, driven by factors such as the deteriorating quality of roads and the increasing number of vehicles on the roads. This trend underscores the urgent need for comprehensive measures to improve road safety across the country.

In conclusion, the escalating number of casualties due to road accidents highlights the critical need for action. Efforts to maintain road quality and ensure compliance with traffic rules and regulations are essential. Effective coordination among government bodies, vehicle owners, and civil society is necessary to enforce these regulations. Additionally, the government should prioritize infrastructure development to enhance road quality. Furthermore, integrating traffic education into the school curriculum can instill a culture of adherence to traffic rules among young people, contributing to a safer road environment for all.

6. Recommendations

Based on the findings of this study, the following recommendations are proposed to address the increasing road accidents on the highways of Nepal. Each recommendation is designed to target specific issues highlighted in the findings and is intended to contribute to a comprehensive approach to road safety management.

i) **Promotion of Ignition Interlock Devices:** The government may consider promoting the use of ignition interlock devices to prevent vehicle ignition if the driver's blood alcohol level exceeds prescribed limits.

ii) **Imposition of Heavy Penalties:** Strict enforcement of heavy penalties on individuals who exceed speed limits could serve as a deterrent for speeding and improve road safety.

iii) **Strengthening Driving Tests:** Driving tests for obtaining a license should be made more stringent and foolproof to ensure that only qualified individuals are allowed to drive.

iv) **Installation of Road Dividers:** Multiple lanes of roads should be divided by barriers or dividers to prevent unsafe overtaking and reduce the risk of accidents.

v) **Strict Enforcement of Traffic Rules:** Existing traffic rules should be strictly enforced through increased monitoring and public awareness campaigns.

vi) **Enhanced Road Signage:** Speed limit and other necessary road signs should be strategically placed in critical areas to improve visibility and provide clear guidance to drivers.

References

Government of Nepal. (2018). *Statistical information on Nepalese army activities 2017-18*. Directorate of Public Relations and Information.

Metropolitan Traffic Police Division. (2018). *Three-year statistics on road accidents.* Kathmandu Traffic Police Division.

World Health Organization. (2016). *Global status report on road safety 2015.* World Health Organization.

Progress Report

To effectively communicate progress on projects, it is essential to structure progress reports in a clear and organized manner. Your supervisors may want to know what you are doing at work and what progress you are making on a project, whether you are on schedule, what difficulties you might have encountered, and/or what your plans are for the next reporting period. Because of this, supervisors ask you to write progress reports-daily, weekly, monthly, quarterly, or annually. Following are the parts of a progress report:

1. **Introduction** (overview, background)

   - Why you are writing this report
   - What the report is about
   - If this is the second, third or fourth report in a series, remind your readers what works has already been accomplished.

2. **Discussion**

   i) ***Works accomplished***: Write work accomplished in certain order with description.

   ii) ***Works remaining***: tell your reader(s) what work you plan to accomplish next with description.

   iii) ***Problems encountered***: Inform your reader(s) of any difficulties encountered.

3. Conclusion

Sum up what you have achieved, what you are doing and what problems you encountered during this reporting period and provide your target completion date.

5. **Recommendations**

If problems are presented in the discussion, you can recommend changes in services, scheduling, budget or material which will help you meet your deadlines.

Exemplary Junction

1. Suppose you are the Chief Engineer of construction of library building at Thapathali Campus. Write the second monthly **progress report in a memo format.**

CHAUDHARY CONSTRUCTION COMPANY LIMITED
HATTIBAN, LALITPUR

MEMORANDUM

To: Er. Shiva Raj Luitel Manager
Director
From: Sambridhi Sharma
Chief Engineer

Date: November 3, 2023

Subject: Second Monthly Progress Report on the Construction of Library Building at Thapathali Campus

Introduction

In response to your request dated October 30, 2023, please find our second monthly progress report on the construction of the library building at Thapathali Campus in Thapathali, Kathmandu. As stated in our previous report, we have completed initial tasks such as surveying, raw material collection, manpower selection, and tentative project budgeting.

During the second month, we aimed to accomplish the following tasks:

i) Construction of the ground floor
ii) Allocation of interior rooms on the ground floor
iii) Construction of toilets within the library

Discussion

Works Accomplished

During the second month, we successfully completed the following tasks:

i) Site clearance
ii) Worker selection
iii) Management of materials for toilet construction
iv) Toilet construction
v) Foundation excavation and formwork

Works Remaining

To meet this month's target, we need to complete the following tasks:

i) Construction of ground floor walls
ii) Internal division and installation of shear walls

Problems Encountered

We encountered the following issues during this month, which have affected the construction progress:

i) Fuel shortages
ii) Power outages

Conclusion

Despite facing fuel shortages and power outages, we have maintained our construction progress as best as possible. Therefore, we are confident in meeting this month's target before November15, 2023.

Recommendations

We recommend that the concerned authorities coordinate with the fuel supplier and Nepal Electricity Authority to ensure 24-hour availability of fuel and electricity as per our requirements.

Best Regards,
…….
Signature

3.4 Manuscript for Journal

Writing research article

1. Write a short research article on Effectiveness of online classes for engineering students in Nepal

Research Article Sample

Effectiveness of Online Classes for Engineering Students in Nepal

Shiva Raj Luitel
luitelshiva2051@gmail.com
Senior Lecturer, Himalaya College of Engineering

Abstract
This study examines the effectiveness of online classes for engineering students in Nepal, focusing on their impact on academic performance, learning outcomes, and student satisfaction. Data were collected through a literature review and surveys. The findings indicate that while online classes offer flexibility and accessibility, they also present challenges related to technical issues, engagement, and practical skill development. Recommendations are provided to enhance the effectiveness of online engineering education in Nepal.

Introduction
The COVID-19 pandemic has accelerated the adoption of online education globally, including in Nepal. As engineering education transitions to online platforms, it is essential to assess the effectiveness of this mode of instruction for students in Nepal. This study aims to evaluate the effectiveness of online classes for engineering students, considering their unique learning needs and the context of Nepal.

Literature Review

Benefits of Online Classes
Online classes offer several potential benefits for engineering students. They provide flexibility in scheduling, allowing students to balance their academic studies with other commitments (Al Lily et al., 2019). Online platforms also facilitate access to a wide range of learning resources, including multimedia materials and interactive simulations, which can enhance the learning experience (Boling et al., 2012).

Challenges of Online Classes
Despite the benefits, online classes present challenges that are particularly relevant to engineering education in Nepal. Technical issues such as poor internet connectivity and limited access to digital devices can hinder students' participation and engagement (Samarawickrema& Stacey, 2007). Additionally, the hands-on nature of engineering education may be difficult to replicate in an online environment, impacting students' practical skill development (Concannon et al., 2005).

Impact on Academic Performance

Research on the impact of online classes on academic performance in engineering education is mixed. While some studies report positive outcomes, such as improved grades and retention rates (Means et al., 2013), others suggest that online learning may be less effective than traditional classroom instruction for certain subjects and student populations (Bernard et al., 2004).

Methodology

This study employed a mixed-methods approach, combining a comprehensive literature review with surveys distributed to engineering students in Nepal. The surveys assessed students' experiences with online classes, including their perceptions of effectiveness, challenges encountered, and suggestions for improvement. The sample included undergraduate and postgraduate engineering students from multiple institutions across Nepal.

Findings

The literature review provided insights into the potential benefits and challenges of online classes for engineering students, aligning with the experiences reported by survey respondents. While many students appreciated the flexibility and accessibility of online learning, they also faced significant challenges related to internet connectivity, technical issues with online platforms, and the lack of hands-on learning opportunities.

Discussion

The findings of this study highlight the need for a nuanced approach to the implementation of online classes for engineering students in Nepal. While online education offers advantages in terms of flexibility and access to resources, it is essential to address the challenges that students face, particularly concerning technical infrastructure and practical skill development.

One key consideration is the improvement of internet connectivity and access to digital devices, which are crucial for effective participation in online classes. This may require investment in infrastructure and resources by both educational institutions and the government to ensure that students from diverse backgrounds have equal opportunities to engage in online learning.

Another important aspect is the design of online courses to promote active learning and practical skill development. Engineering education traditionally relies heavily on hands-on laboratory work and project-based learning, which may be challenging to replicate in an online setting. However, innovative approaches such as virtual laboratories and simulation-based learning can help bridge this gap and provide students with practical experiences that complement theoretical knowledge (Samarawickrema& Stacey, 2007).

Furthermore, ongoing support and training for both students and instructors are crucial for the success of online classes. Students need guidance on how to navigate online learning platforms effectively, while instructors require training in online pedagogy and the use of digital tools to create engaging and interactive learning experiences (Boling et al., 2012).

Broadly, the transition to online learning, accelerated by the COVID-19 pandemic, has prompted the need for a comprehensive evaluation of its impact on engineering education in Nepal.

Conclusion and recommendations

In conclusion, while online classes offer potential benefits for engineering students in Nepal, they also present unique challenges that require careful consideration and proactive measures. By addressing issues related to infrastructure, course design, and support mechanisms, educational institutions can enhance the effectiveness of online engineering education and ensure that students receive a high-quality learning experience.

References

Al Lily, A. E., et al. (2019). Academic and educational implications of the COVID-19 pandemic. *Information Discovery and Delivery*, 48(1), 81-92.

Bernard, R. M., et al. (2004). How does distance education compare with classroom instruction? A meta-analysis of the empirical literature. *Review of Educational Research*, 74(3), 379- 439.

Boling, E., et al. (2012). Critical issues in the design of online programs. *Quarterly Review of Distance Education*, 13(2), 77-85.

Concannon, F., et al. (2005). A systematic review of the effects of interactive whiteboards on learning and teaching in classroom settings. *Journal of Computer Assisted Learning*, 21(2), 91-101.

Means, B., et al. (2013). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. U.S. Department of Education.

Samarawickrema, G., & Stacey, E. (2007). Adopting Web 2.0 technologies in education: A case study of a higher education institution in Australia. *Educational Media International*, 44(3), 235-252.

3.5 Citation and Referencing

MLA and APA Style of Citation (for BE)

MLA (Modern Language Association) Style (8th Ed.)

1. **Book with one author**

   Book**:** Fifteen Dogs: An Apologue Author: Alexis, Andre

   Place of Publication: New York

   Publisher: Coach House Books

   Year of Publication: 2015

Citation:

Author (last name, first name**). *Book.* Publisher, date of publication.**

Alexis, Andre. *Fifteen Dogs: An Apologue*. Coach House Books, 2015.

i) **Author with first, middle and last name**.
   Name: George Bernard Shaw
   Write it as: Shaw, George Bernard. (last name, first name middle name)
   Example:
   Name of the author: George Bernard Shaw
   Year of publication: 1976

Name of the book: Nature and People
Place of publication: London
Name of publication: Creation publications

Shaw, George Bernard. *Nature and People.* Creation Publications, 1976.

ii) Author with academic titles (Dr., Er., Ar., etc.)

Academic titles are not included in the citation.
Example Name of author: Dr. Ram Adhikari.
Citation: Adhikari, Ram.

iii) Author with suffix (Sr., Jr., IV)

Suffix is included in citation. For example, Name of author: Ram Adhikari Jr. Citation: Adhikari, Ram, Jr.

NOTE:

- **Italicize:** name of a book, journal, novel, newspaper.
- **Within inverted comma:** stories, articles, chapter of a book, poems.
- **When your citation runs to the second line, make it hanging.**
- **Place of publication is not included when citing the source according to MLA 8th edition.**

2. **Book with Edition (3rd ed., 10th ed.)** Book**:** Fifteen Dogs: An Apologue Author: Andre Alexis.
Place of Publication: New York
Edition: 4th edition
Publisher: Coach House Books
Year of Publication: 2015

Citation:

Author (last name, first name)**.** ***Book.*** **Edition** (4th ed.)**, Publisher, date of publication.**

Alexis, Andre. *Fifteen Dogs: An Apologue*. 4th ed., Coach House Books, 2015.

3. Book with two authors

Book: The Atmosphere: An Introduction to Reference Meteorology
Authors: Frederick Lutgens and Edward Tarbuck.
Publisher: Pearson
Year of publication: 2016
Place of publication: London

Citation:

First author (last name, first name), and **second author** (normal or first name last name). ***Book***. **Publisher,year of publication.**

Lutgens, Frederick, and Edward Tarbuck. *The Atmosphere: An Introduction to Reference Meteorology.* Pearson, 2016.

4. **Book with three or more than three authors**

First author (last name, first name, et al.)

Example:

Authors: Frederick Lutgens , Edward Tarbuck and XYZ Adhikari

Citation: Lutgens, Frederick, et al.

5. **Book, chapters with author**

Author: Brant, Beth.
Chapter: Coyote Learns a New Trick
Book: An Anthology of Canadian Native Literature Reference in English
Editor: Daniel David Moses and Terry Goldie
Publisher: Oxford UP
Year of publication: 1992
Page number: 148-150.

Citation:

Chapter author (last name, first name). **"chapter title."*Book,* edited by** (name of editor/s-first name last name), **Publisher, year/date of publication, pp. x-y.**

Brant, Beth. "Coyote Learns a New Trick." *An Anthology of Canadian Native Literature Reference in English*, edited by Daniel David Moses and Terry Goldie, Oxford UP,1992, pp.148-150.

6. **Newspaper Articles**

Example:

a) Name of the author: Harris, Rob.
b) Title of the article: Clinton on Climate Change.
c) Name of the newspaper:
d) Date: 17 May 2007

The New York Times

e) Page number: 20

Citation:

Author (last name, first name). **"article."*Newspaper*, complete date, page number** (p. x).
Harris, Rob. "Clinton on Climate Change." *The New York Times,* 17 May 2007, p.20

- **If an article runs to multiple pages, for example 20-23, then (pp.x-y)**

Harris, Rob. "Clinton on Climate Change." *The New York Times,* 17 May 2007, pp.20-23.

7. **Journal Articles**

Example:

a) Name of the author: Conatser, Phillip, and Martin Block.
b) Title of the article: Aquatic Instructors' Beliefs toward Inclusion.

c) Name of the Journal: Therapeutic Recreation Journal
d) Year: 2001
e) Page number: 170-184
f) Volume: 35
g) Issue: 2

Citation:

Author (last name, first name (of first), and **first name second name** (of second writer). "Article." *Name of aJournal,* vol. x, no. x, date, page number (pp. x-y).

Conatser, Phillip, and Martin Block. "Aquatic Instructors' Beliefs toward Inclusion." *Therapeutic Recreation Journal*, vol.35, no. 2, 2001, pp. 170-184.

APA (American Psychological Association) style of referencing

1. Book with one author

Book**:** Fifteen Dogs: An Apologue Author: Andre Alexis.

Place of Publication: New York

Publisher: Coach House Books

Year of Publication: 2015

Citation:

Author (last name, first name initial.) **(year of publication).** ***Book.*** **Publisher.**

Alexis, A. (2015). *Fifteen dogs: An apologue.* Coach House Books.

i) **Author with first, middle and last name.** For example, George Bernard Shaw Write it as: Shaw, J. B. (2015) (last name, first name middle name initials)
ii) **Author with academic titles (Dr., Er., Ar., etc.)**
Academic titles are not included in the citation. Example
Name of author: Dr. Ram Adhikari.
Citation: Adhikari, R.(year).
iii) Author with suffix (Sr., Jr., IV)
Suffix is included in citation. For example,
Name of author: Ram Adhikari Jr.
Citation: Adhikari, R., Jr.(year).

NOTE:

- **Italicize:** name of a book, journal, novel, newspaper.
- **Write in normal:** stories, articles, chapter of a book, poems.
- **When your citation runs to second line, make it hanging.**
- **Place of publication is not required when using APA 7th edition.**
- **Capitalize only the first letter of the first word in the title and the first letter of the first word after colon in the title(book and article), but this rule does not apply with Journal and Newspaper.First letter of the proper noun is always capitalized no matter where it falls in the title.**

2. **Book with edition (3rd ed., 6th ed., 10thed)** Book**:** Fifteen Dogs: An Apologue Author: Andre Alexis.
Place of Publication: New York
Edition: 10th edition
Publisher: Coach House Books
Year of Publication: 2015

Citation:

Author (last name, first name initial.**) (year of publication).** ***Book*** **(edition). Publisher.**

Alexis, A. (2015). *Fifteen dogs: An apologue* (10th ed.). Coach House Books.

3. Book with two authors

Book: The Atmosphere: An Introduction to Reference Meteorology
Authors: Frederick Lutgens and Edward Tarbuck.
Publisher: Pearson
Year of publication: 2016
Place of Publication: New York

Citation:

First author (last name, first name initial), and **second author** (last name, first name initial.) **(year of publication)**. ***Book*****. Publisher.**

Lutgens, F., and Tarbuck, E. (2016). *The atmosphere: An introduction to reference meteorology*. Pearson.

4. Book with three to twenty authors Example:

Authors: Frederick Lutgens, Edward Tarbuck, XYZ Adhikari, XYZ Shrestha, XYZ Subedi, ABC Shrestha, XYZ Khan

Citation:
Lutgens, F., Tarbuck, E., Adhikari, X., Shrestha,X., Subedi,X., Shrestha,A., and Khan,X. (year).

5. Book, chapters with author

Author: Brant, Beth.
Chapter: Coyote Learns a New Trick
Book: An Anthology of Canadian Native Literature Reference in English
Editor: Daniel David Moses and Terry Goldie
Publisher: Oxford UP
Year of publication: 1992
Page number: 148-150.
Place of publication: UK

Citation:
Chapter author (last name, first name initial.) **(year of publication).Chapter title. In editor's (first initial last (Ed.), *Book* (pp. x-y). Publisher.**
Brath, B. (1992). Coyote learns a new trick. In D. D. Moses and T. Goldie (Ed.), *An anthology of Canadian native literature reference in English* (pp.148-150). Oxford University Press.

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i) Example:

a) Name of the author: Harris,
Rob.
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c) Name of the newspaper: *The New York Times*
d) Date: 17 May 2007
e) Page number: 20-24

Citation:
Author (last name, first name initial.) **(complete date). Article (normal). *Newspaper*, p. x (page number if one page) or pp. x-y (if article runs to two or more pages).**

Harris, R. (17 May 2007). Clinton on climate change. *The New York Times*, pp. 20-24.

7. Journal Articles

Example:

a) Name of the author: Conatser, Phillip
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c) Name of the Journal: Therapeutic Recreation Journal
d) Year: 2001
e) Page number: 170-184
f) Volume: 35
g) Issue: 2

Citation:

Author (last name, first name initial.) **(year of publication). Article (normal). *Journal,* vol. (no.), page number (x-y).**

Conaster, P. (2001). Aquatic instructors' beliefs toward inclusion. *Therapeutic Recreation Journal*, 35(2), 170-184.

Citing Book with editor(s) or compiler(s) without Author

MLA

If you are **dealing with editor(s) or compiler(s), instead of author(s),** insert the editor's name in the place where the author's name is otherwise, followed by a comma and the word **'editor'** for one and **'editors'** for two without the quotation marks. The rest of the format remains the same.

Examples:

Fine, Albert Hangman, editor. *Handbook on Animal-Assisted Therapy: Foundations and Guidelines for Animal-Assisted Interventions.* 4th ed., Academic Press, 2015

Miller, John, and Tim Smith, editors. *Cape Cod Stories: Tales from Cape Cod, Nantucket, and Martha's Vineyard*. Chronicle Books, 1996.

Note: For a book with three or more than three editors, follow name conventions for a Book with Three or more than three Authors

APA

Book with Editor(s), but no Author(s)

If there is an editor instead of an author, insert the editor's name in the place of the author's, followed by (Ed.) for one or (Eds.) for more than one editor.

I) For one editor

Editor's Last Name, First name Initial. Second name Initial if Given. (Ed.). (Year of Publication). *Title of book: Subtitle if given*. Publisher.

Examples:

Leitch, M. G. (Ed.). (2019). *A new companion to Malory.* D. S. Brewer.

Smith, J. A. (Ed.). (2008). *Qualitative psychology: A practical guide to research methods*. Sage.

II)For two or more than two editors

- ***For two editors***

Stockert, P. A., and Taylor, C. (Eds.). (2014). *Canadian fundamentals of nursing*. Elsevier.

- ***For more than two editors***

Stockert, P. A., Taylor, C., Perry, A.G., Ross, J.C., and Wood, M.J. (Eds.). (2014). *Canadian fundamentals of nursing*. Elsevier.

Note: For a book with three or more than three editors, follow name conventions for a Book with Three to Twenty Authors

In-text citation

In-text citations are inserted in the body of our research paper to briefly document the source of our information. Brief in-text citations point the reader to more complete information in the reference list at the end of the paper.

MLA (Modern Language Association)

There are two types of in-text citations: parenthetical and narrative. The typical parenthetical in-text citation usually contains the author's last name and a page number at the end of the sentence/paragraph. In a narrative citation, the authors are part of the sentence-we refer to them by their surname. Examples,

- **One author**
  - **Quoting directly**

When a work has one author, list the author's last name and then the page number where the information is listed. Examples,

"……idea as it is " (Shuttleworth 149). **(Parenthetical citation)**

Shuttleworth states that "the connection between the rhetoric of unveiling the truth and an overt political movement of insurrection is painfully evident" (149). **(Narrative citation)**

  - **Paraphrasing**

……paraphrase (Shuttleworth 149). **(Parenthetical citation)**

Shuttleworth states that the relation between the act of unearthing the reality and an overt political movement is evident" (149). **(Narrative citation)**

- **Two authors**

If an entry in the works cited list has a work with two authors, include both names in the in-text citations. Use the word "and" between the two names. Examples,

" " (Tidwell and Ragar 58)**(Parenthetical citation)**

Tidwell and Ragar explain that "Hughes certainly was incapable of supporting them financially" (58). **(Narrative citation)**

- **Three or more authors**

If a work has three or more authors, the in-text citation will include the first author's name followed by "et al" which will match the entry in the works cited list.

" "(Grabher et al. 185)**(Parenthetical citation)**

Grabher et al. suggest that "teachers' efforts at organizing the canon of Emily Dickinson's work for classroom instruction are revealing" (185). **(Narrative citation)**

APA (American Psychological Association)

There are two types of in-text citations: parenthetical and narrative. In **parenthetical citations,** the authors are not mentioned in the sentence/paragraph, just the content of their work is mentioned. The author's surname, year, and page number with 'p.' (page number only in case of direct quotation) are placed in the brackets (parentheses) with commas in between them. For example,

"Gamification involves giving the mechanics or principles of a game to another activity" (Becker, 2013, p.29). **(Parenthetical citation)**

In **narrative citations**, the authors are part of the sentence - we refer to them by surname and year is mentioned within brackets just after the surname. For example,

Becker (2013) opines that "gamification involves giving the mechanics of principles of a game to other activities (p.29). **(Narrative citation)**

Additional examples,

It is stated that "mother-infant attachment has been a leading topic of developmental research since John Bowlby found that "children raised in institutions were deficient in emotional and personality development" (Hunt, 2011, p. 358). **(Parenthetical citation)**

Hunt (2011) explains that "mother-infant attachment has been a leading topic of developmental research since John Bowlby found that "children raised in institutions were deficient in emotional and personality development" (p. 358). **(Narrative citation)**

One author

i) **Direct quotation**

The author stated that "the mice disappeared within minutes" (Smith, 2020, p. 29).

Or

"…….the idea as it is……." (Smith, 2020, p. 29). **(Parenthetical citation)**

Smith (2020) found that "the mice disappeared within minutes" (p. 29). **(Narrative citation)**

ii) **Paraphrasing**

It is stated that the mice hid quickly (Smith, 2020).

Or

……paraphrase (Smith, 2020). **(Parenthetical citation)**

Smith (2020) found that the mice hid quickly. **(Narrative citation)**

Two authors

It is stated that "the mice disappeared within minutes" (Jones & Smith, 2020, p. 29).

Jones and Smith (2020) found that "the mice disappeared within minutes" (p. 29).

Three or more authors, use the first author and "et al." for all in-text citations.

Authors found that “the intervention was not based on evidence from clinical trials” (Green et al., 2019, p.20).

Green et al. (2019) found that “the intervention was not based on evidence from clinical trials” (p.20)

Exemplary Junction

1. **Put the following information into MLA and APA style of citation.(2078 Paush)** Name of the book: Communication for Business: A Practical Approach
Author's name: Shirley Taylor
Publisher: Dorling Kidersley Pvt. Limited
Publishing place: New Delhi
Year of Publication: 2005

MLA

Taylor, Shirley. *Communication for Business: A Practical Approach.* Dorling Kidersley Pvt. Limited, 2005.

APA

Taylor, S. (2005). *Communication for business: A practical approach.* Dorling Kidersley Pvt. Limited.

2. **Put the following information into MLA and APA style of citation. (2078 Baisakh)**

MLA APA

Name of the author: George Bernard Shaw
Year of publ

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i
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n
Name of publication: Creation publications

Shaw, George Barnard.*Nature*

and People. Creation

publications, 1976. Shaw, G. B.

(1976).*Nature and people.*

Creation publications.

3. Cite the following information in MLA and APA formats.(2076 Bhadra)

Name of the author: E Balaguruswami
Year of publication: 1999
Name of the book: Numerical Methods
Place of publication: New Delhi
Name of publication: Tata Mc Graw-Hill Publishing Company Limited

MLA

APA

Balaguruswami, E. *Numerical Methods.* Tata Mc Graw-Hill Publishing Company Limited, 1999.

Balaguruswami, E (1999). *Numerical methods.* Tata Mc Graw-Hill Publishing Company Limited.

4. **Document the given details in MLA and APA style.(2079 Bhadra)**

Name of the book: Living Stories, Telling Lives
Author's name: Joanne S Frye
Publisher: University of Michigan Press
Publishing place: Ann Arbor
Year of Publication: 1986

MLA

Frye, Jonne S. *Living Stories, Telling Lives.* University of Michigan Press, 1986.

APA

Frye, J. S. (1986).*Living stories, telling lives.* University of Michigan Press.

5. **Document the given details in MLA and APA style.(2078 Kartik)**

Book: Making Connections
Editor: Kenneth J. Pakenham
Publisher: Cambridge University Press
Place: New Delhi
Date: 2009

MLA

Pakenham, Kenneth J., editor. *Making Connections*. Cambridge University Press, 2009.

APA

Pakenham, K. J. (Ed.). (2009).*Making connections*. Cambridge University Press.

6. **Write the following bibliographic information first in MLA and then in APA. (2076 Chaitra)**

Name of Editors: Edwin D. Reilly, Anthony Ralston, and David Hemmendinger
Edition: 4th
Book: Encyclopedia of Computer Science
Year of publication: 2003
Name of publisher: Wiley
Place of publication: Chichester, UK

MLA

Reilly, Edwin D. et al., editors. *Encyclopedia of Computer Science*. 4th ed., Wiley, 2003.

APA

Reiley, E.D., Ralston, R., and Hemmendinger, D. (Eds.). (2003). *Encyclopedia of computer science* (4th ed.). Wiley.

7. **Put the following information into MLA and APA style of citation. (2075 Ashwin)**

Name of the book: Awakening Spirituality
Author's name: Dr. BinnySareen
Publisher: Brahma Kumari's Literature Department

MLA **APA**

Publishing place: India Year of Publication: 2012

Sareen, Binny. *Awakening Spirituality*. 2012. Sareen, B. (2012). *Awakening*

Brahma Kumari's Literature Department, *spirituality*. Brahma Kumari's Literature Department.

Note: Typically, APA and MLA Style reference list entries and in-text citations do not include the authors' academic credentials (Dr., Er.) or professional titles (Prof.). But they include suffix (Sr., Jr.).

8. Write the following bibliographic information first in MLA and then in APA. (2074 Ashwin)

Name of newspaper: New York Times
Title of article: Messi is Barcelons's Boy Genius
Name of writer: Eduardo Galeano
Section and page number: N1
Date of publication: 22 May 2011

MLA

Galeano, Eduardo. "Messi is Barcelons's Boy Genius." *New York Times*, 22 May 2011, p.N1.

APA

Galeano, E. (22 May 2011). Messi is Barcelons's boy genius. *New York Times*, p. N1.

9. Study the following quotation and then adjust the given information for in-text citation first and next for works cited (references) list under APA and MLA format.(2079 Ashwin)

Meanwhile Shiva rushed to Parbati's rescue and when a small boy- a complete stranger- barred entrance, the furious God of destruction cut off the child's head.

Name of the author: Mary M. Anderson
Year of publication: 2005
Name of the book: The Festivals of Nepal
Place of publication: New Delhi
Name of publication: Rupa Publication India Pvt. Ltd.
Page number: 125

In-text citation

MLA

Meanwhile Shiva rushed to Parbati's rescue and when a small boy- a complete stranger- barred entrance, the furious God of destruction cut off the child's head (Anderson 125)

APA

Meanwhile Shiva rushed to Parbati's rescue and when a small boy- a complete stranger- barred entrance, the furious God of destruction cut off the child's head (Anderson, 2005).

Works Cited

MLA

Anderson, Mary M. *The Festivals of Nepal*. Rupa Publication India Pvt. Ltd., 2005.

APA

Anderson, M. M. (2005). *The festivals of Nepal*. Rupa Publication India Pvt. Ltd.

10. Study the following quotation and then adjust the given information for in-text citation first and next for works cited (references) list under APA and MLA format. (2078 Chaitra)

"It may be said that whatever colonialism may have done in the past, the very fact of a common wealth conference today is sufficient repudiation of it, is indeed a symbol of a new relationship of equality between peoples who were once masters and servants."

Name of the author: Chinua Achebe
Year of publication: 1988
Name of the book: Colonialist Criticism: From Hopes and Impediments
Place of publication: Biefra
Name of publication: Makerere University
Page number: 31

In-text citation

MLA

"It may be said that whatever colonialism may have done in the past, the very fact of a common wealth conference today is sufficient repudiation of it, is indeed a symbol of a new relationship of equality between peoples who were once masters and servants" (Achebe 31).

APA

"It may be said that whatever colonialism may have done in the past, the very fact of a common wealth conference today is sufficient repudiation of it, is indeed a symbol of a new relationship of equality between peoples who were once masters and servants" (Achebe, 1988, p.31).

Works Cited

MLA

Achebe, Chinua.*Colonialist Criticism: From Hopes and Impediments*. Makerere University, 1988.

APA

Achebe, C. (1988).*Colonialist criticism: From hopes and impediments*. Makerere University.

11. Study the following quotation and then adjust the given information for in-text citation first and next for works cited (references) list under APA and MLA format. (2076 Baisakh)

"Theoretically, a country's foreign policy is supposed to be the product of autonomous decision of the government in power to fulfill its national interests through constructive dialogues."

Name of the author: Rakesh Kumar Sood
Year of publication: 2014
Name of the book: India Nepal Relation and its Complexity
Place of publication: New Delhi
Name of publication: Observer Foundation
Page number: 24

In-text citation

MLA

"Theoretically, a country's foreign policy is supposed to be the product of autonomous decision of the government in power to fulfill its national interests through constructive dialogues" (Sood 24)

APA

"Theoretically, a country's foreign policy is supposed to be the product of autonomous decision of the government in power to fulfill its national interests through constructive dialogues" (Sood, 2014, p.24).

Works Cited

MLA

Sood, Rakesh Kumar. *India Nepal Relation and its Complexity*. Observer Foundation, 2014.

APA

Sood, R. K. (2014).*India Nepal Relation and its complexity*. Observer Foundation.

Chapter 4: Business Correspondence

4.1 Writing Business letter

Types of a Business Letter

Following are the types of a business letter:

1. **Letter of Inquiry**: This letter is written by a potential customer or buyer to the seller/dealer to inquire about the quantity, quality, price, discount, and terms and conditions of trade. It may also request catalogues, information, and details about the business, products, and services.

Example: A customer writes to a furniture store inquiring about the price and specifications of a particular sofa.

2. **Quotation Letter**: Quotation letters are written by sellers to customers or buyers, providing information about the terms and conditions of payment, discounts, and other relevant details.

Example: A supplier sends a quotation letter to a potential client, stating the price, delivery terms, and payment options for a bulk order of stationery.

3. **Order Letter**: An order letter is written by a buyer when the terms and conditions for the purchase of goods are acceptable. It contains a detailed description of the items ordered and the expected delivery time.

Example: A retail store sends an order letter to a supplier, specifying the quantity and types of products needed for restocking.

4. **Letter of Claims/Complaints**: These letters are written by customers when they do not receive the ordered goods on time or under the agreed-upon terms and conditions. They may claim for price reduction, return of goods, or exchange due to mistakes, damages, or low-quality products.

Example: A customer writes a letter of complaint to an online retailer after receiving damaged electronic equipment.

5. **Letter of Adjustments**: Letters of adjustments are written by sellers in response to dissatisfied customers. These letters acknowledge mistakes or issues and offer remedies to maintain customer satisfaction.

Example: A hotel management writes a letter of adjustment to a guest who faced inconveniences during their stay, apologizing and offering complimentary services for their next visit.

It is essential to maintain professionalism, clear communication, and prompt responses in all types of business letters to ensure effective and positive interactions betweensellers and their customers.

Sample Business Letters

Letter of Inquiry**:**

Question:

Imagine you are the owner of XYZ Electronics in Gorkha, and you require electronic gadgets for your store. Compose a letter of inquiry to Kanchan Electronics Pvt. Ltd in New Baneshwor, Kathmandu, requesting detailed information about their products.

XYZ Electronics Store

Gorkha, Nepal

01234567

20 July 2023

To

The Sales Manager

Kanchan Electronics Pvt Ltd

New Baneshwor, Kathmandu

Subject: Inquiry Regarding Electronic Gadgets and Terms

Dear Sir/Madam,

I hope this letter finds you well. I am writing on behalf of, XYZ Electronics, a reputable electronics store located in Gorkha. We are keenly interested in expanding our product offerings and enhancing our customers' shopping experience. After conducting thorough market research, we have identified Kanchan Electronics Pvt Ltd as a potential supplier for the electronic gadgets we are looking to add to our inventory.

We kindly request you to provide us with detailed information about the electronic gadgets your company offers, along with their pricing and discounts. We are particularly interested in products that cater to a wide range of customer preferences, including the latest trends and innovations in the electronics industry.

Furthermore, we would greatly appreciate if you could furnish us with the terms and conditions of trade. Your prompt response to our inquiry will greatly assist us in making informed decisions that align with our business goals.

Please feel free to contact us if you require any further

information. Thank you for your time and consideration.

Sincerely,

Pramod Rawat

Manager

Quotation Letter**:**

Kanchan Electronics Pvt.

Ltd New Baneshwor,

Kathmandu 014546213

23 July2023

To
The Manager
XYZ Electronics Store
Gorkha, Nepal

Subject: Quotation for Electronic Gadgets and Terms

Dear Sir,

Thank you for considering Kanchan Electronics Pvt. Ltd. as your Electronics supplier. We sincerely appreciate your inquiry regarding our electronic gadgets and terms. As a dedicated electronics supplier, we are thrilled at the prospect of collaborating with XYZ Electronics Store to enhance your product offerings and provide a superior shopping experience to your valued customers. With a commitment to delivering quality and innovation, we are pleased to present our comprehensive quotation for the electronic gadgets you are interested in. We provide 5% discount in every gadget. Additionally, we provide cash discount of 5% if the payment is received at the time of dispatch. Moreover, we allow you the special discount of 3% if your monthly order is of five lakhs or above it. The orders are executed the day they are received, and we do not charge the cost of packing materials and transportation. Payment is accepted either online or in cash. Please find the complete quotation attached herewith this letter for your review.

If you have any questions or require further customization, feel free to contact us. We eagerly await the opportunity to serve XYZ Electronics Store and hope to forge a mutually beneficial relationship. Thank you for considering us as your potential electronics supplier

Warm regards,
SujanAdhikari

Sales Manager

Enclosure: Quotation
of Electronic Gadgets

4.3 Writing Notice and Minutes

A notice is a written communication, typically formal in nature, which conveys information, instructions, warnings, or announcements to individuals or a broader audience. Notices are often used to inform people about upcoming events, changes in policies, legal matters, or any other important details that require their attention or action. They can be posted in public spaces, distributed electronically, or sent through mail to ensure that the intended recipients are made aware of the information being conveyed. Notices serve as a means of disseminating information efficiently and transparently to ensure that people are informed and able to respond appropriately.

Writing a Notice to Call for the Meeting

In order to call a meeting, a notice is circulated to all the individual members of the organization or the concerned. A formal notice contains the following information:

- The name and address of the organization/committee/club
- The date on which notice is issued
- Title, i.e. NOTICE
- The day/date and time of the meeting
- The venue of the meeting
- The agenda to be discussed (optional)
- Signature and name of the secretary

Exemplary Junction

Inventing necessary details, write a notice with four points agenda for the upcoming third regular monthly meeting of your organization.

ADVANCED COLLEGE OF ENGINEERING AND MANAGEMENT
KALANKI, KATHMANDU

Phone no: ……

15 September 2023

NOTICE

It is to inform all the faculty members of the college to attend the third regular monthly meeting to be held on September 18 at 10 AM sharp in the seminar hall of college to discuss and decide on the following agenda:

3.01: Minutes of the previous meeting 3.02:

Extra/remedial classes

3.03: Purchase of computers and CCTVs 3.04:

Appointment of teachers

3.05: Internal examination of BCA I/II and II/II 3.06:

Schedule for the next meeting

.....

Ram Chaudhary

Secretary

Writing Minutes of the Meeting

Minutes are the official records of discussions held and decisions made in the meeting. Minutes include the following information:

- Title, i.e. MINUTES
- Time, date and place of the meeting
- The chairmanship of the meeting
- List of people attending the meeting
- List of absent members of the group
- Decisions made on each agenda
- Time, date and place of the next meeting
- Sign of the secretary and Chairman

Exemplary

Junction Question:

Suppose you are the secretary of any organization and its third regular monthly meeting has been held recently. Write minutes of the meeting inventing at least four most relevant agenda.

MINUTES

The third regular monthly meeting of the faculty members of Himalaya College of Engineering was held on September 18, from 10 AM to 2 PM, in the seminar hall of the college under the

chairmanship of Dr. Mohan Shrestha. The meeting discussed and decided on some agenda in the presence of the following members:

Present Members:

SN	Name	Post	Signature
1	Dr. Mohan Shrestha	Campus Chief	
2	Mr. Hari Khadka	Senior Lecturer	
3	Mr. Tank Bhattrai	Lecturer	
4	Mrs. Sita Gurung	Lecturer	
5	Mr. Ram Khatiwada	Lecturer	
6	Mis. Bimala Limbu	Lecturer	

SN	Name	Post
1	Mr. Sagun Kafle	Lecturer
2	Mr. Rohit Maharjan	Lecturer

Discussions held and decisions made:

3.01: Confirmation of the minutes of the second meeting

All the members went through the minutes of the second regular meeting and they were approved without further discussion.

3.02: Conduction of remedial classes

The meeting decided to conduct extra/remedial classes for the needy students from 3PM to 5 PM, starting on September 25.

3.03: Purchase of computers and CCTVs

The faculty members decided to purchase fifty computers and ten CCTVs as the college does not have enough computers and the CCTVs installed in some classrooms do not work.

3.04: Appointment of teachers

The meeting decided to hire the required number of teachers on a contract basis to take remedial classes.

3.05: Conduction of internal examination

The meeting scheduled the date for the internal examination of BCA I/II and II/II from September 26 to 28. It has also been decided that the exam will be conducted online.

3.06: Schedule for the fourth meeting

The fourth meeting is scheduled to be held on October 20 at 10AM sharp in the seminar hall of the college.

As there was no need for further discussion on the topics, the meeting ended with a vote of thanks.

…… ……

Secretary Chairperson

4.4 Writing Job Application and Creating Resume

Job Application Sample

Baneshwor, Kathmandu
17 February 2025

To
The Hiring Manager
Leapfrog Technology
Kathamndu, Nepal

Subject: Application for the post of software developer

Dear sir/madam,

I am writing to express my interest in the Software Developer position at your esteemed company, as advertised in *The Kantipur Daily* on 15 February 2025. My academic background, technical skills, and passion for software development make me an excellent fit for the post. Please find my resume attached herewith for your review.

I am currently pursuing a **Bachelor's degree in Computer Science and Information Technology** at **Himalaya College of Engineering, affiliated to Tribhuvan University**. Through my academic journey, I have developed a strong foundation in software development. Additionally, I have completed a **four-month specialized course** at **Intern Nepal, Kathmandu**, further enhancing my practical expertise. My passion for coding, combined with meticulous attention to detail, has consistently enabled me to excel in this field.

I would love to welcome the opportunity to further discuss how my skills and experience aligns with the needs of your team. Thank you for considering my application, and I look forward to hearing from you soon.

Yours sincerely,
Dipesh Sedai medipesh690@gmail.com
9812345678

Enclosure

- Resume

Resume Sample

SUBECHYA KARANJIT

Chyasal , Lalitpur

+9779803629577 | @karanjitsubechya@gmail.com | linkedin.com/in/subu.karanjit

CAREER OBJECTIVE

Aspiring MERN Stack Developer with a strong foundation in full-stack web development and a passion for building scalable, user-friendly web applications. Proficient in designing, developing, and deploying robust solutions using MongoDB, Express.js, React, and Node.js. Seeking an opportunity to contribute to innovative projects, collaborate with a dynamic team, and grow as a professional in a challenging environment.

EDUCATION

Bachelor's Degree in BSc.CSIT

Himalaya College of Engineering

2021-Present

High School Diploma(SLC)

United Academy

2019-2021

Junior and Middle School(SEE)

Gyanodaya Bal Batika School

2009-2019

SKILLS

Languages: JavaScript, C,C++,SQL

Framework and Tools: Node.js, React.js ,Express, XAMPP,Tailwind CSS

Databases: MySQL, Mongo DB

PROJECTS

- Design a full-featured online store with user authentication, product catalog, shopping cart, order management, and payment gateway integration.
- Develop a platform for creating, managing, and booking events.
- Develop a platform for online voting system using MERN stack.

LANGUAGES

- Nepali ☆☆☆☆
  (Proficient)
- English ☆☆☆
  (Advance)

REFERENCES

- Er.Himal Chand Thapa, Senior Lecturer,Himalaya College of Engineering
  Contact:9841567289
  himalchand@gmail.com
- Er.Rubash Mali ,Senior Lecturer, Himalaya College of Engineering
  Contact:9841234890
  malirubash@gmail.com
- Dhurba Lamichaane, Assistant Manager, Himalaya College of Engineering
  dhurba@gmail.com

Resume Samaple 2

DIPESH SEDAI

Sifal, Kathmandu | 9869065173 | medipesh690@gmail.com

CAREER OBJECTIVE

A highly motivated and results-oriented Computer Science and Information Technology (CSIT) student with a strong foundation in software development, project management, and leadership skills. Passionate about leveraging technical expertise and project management methodologies andto lead cross-functional teams and deliver high-quality solutions on time and within budget. Seeking a Software developer position to apply my skills in managing complex projects, optimizing team performance, and delivering innovative solutions in a dynamic and challenging environment.

PROFESSIONAL SKILLS

- Project Management: Risk Management, Time Management, Stakeholder Communication
- Programming Languages: Python, Java, C++, HTML/CSS, JavaScript
- Tools & Technologies: JIRA, SQL, MySQL
- Soft Skills: Leadership, Communication, Problem-solving, Team Collaboration, Conflict Resolution
- Others: Requirement Gathering, Scope Management, Budgeting, Documentation, Test Planning

EDUCATIONAL BACKGROUND

- Bachelor in Computer Science and Information Technology (BSc CSIT). Himalaya College of Engineering. Tribhuvan University, Chyasal, Lalitpur (2025)
- Intermediate, Texas International Secondary School, Chabahil, kathmandu (2021)
  - 3.29 GPA on a 4.0 scale
- Secondary Education Examination (SEE), Bibhuti Pathashala, Koteshwor, Kathmandu
  - 3.35 GPA on a 4.0 scale

PROJECTS

- Developed a SQL database and implemented SQL queries
- Developed a task management application to help teams track progress, manage tasks, and communicate efficiently.
- Implemented Agile methodology, led daily stand-ups, and created sprints for features such as task creation, deadline tracking, and notifications.
- Technologies: Java, MySQL, Spring Boot, React, Jira for project management.

REFERENCES

- Er Himal Thapa, Senior Lecturer, Himalaya College of Engineering

Contact:9843571565

Email: himalchand@gmail.com

- Er Nirmal silwal,Senior Lecturer, Birendra college

Contact:9865364353

Email: nirmal199@gmail.com

4.2 Writing Electronic Mails

Electronic mail, commonly known as email, is a digital communication method that allows individuals and organizations to exchange messages, documents, and files over the internet or a computer network. Email serves as a modern alternative to traditional postal mail, enabling users to send and receive messages quickly and efficiently.

Key features of electronic mail include:

1. Addresses: Each user has a unique email address, typically in the format "username@example.com," which is used to identify and direct messages to specific recipients.

2. Messages: Email messages can consist of text, images, attachments, links, and other multimedia elements. Users can compose, format, and customize their messages using email clients or web-based email platforms.

3. Subject Line: Messages typically have a subject line that provides a brief summary of the content, aiding recipients in understanding the purpose of the email.

4. Recipients: Emails can be sent to one or multiple recipients simultaneously. Recipients can be individuals or groups, defined by their email addresses.

5. Attachments: Files and documents can be attached to emails, allowing users to share documents, images, videos, and other files with recipients.

6. Folders and Organization: Email clients often provide features for organizing emails into folders, applying labels or tags, and categorizing messages for efficient management.

7. Inbox and Sent Items: An email inbox stores received messages, while a "Sent" folder archives copies of sent messages for reference.

8. Reply and Forward: Users can reply to an email to respond directly to the sender, or forward an email to other recipients, including a personalized message.

9. CC and BCC: Email addresses can be added to the "CC" (carbon copy) or "BCC" (blind carbon copy) fields to include additional recipients or hide recipients' addresses, respectively.

10. Spam and Filters: Email services often employ filters to detect and redirect spam or unwanted messages to a separate folder.

11. Signatures: Users can create personalized email signatures containing contact information, disclaimers, or other details.

12. Encryption and Security: Some email services offer encryption to protect the confidentiality of email content and attachments, enhancing security.

Email is widely used for personal, professional, and business communication, and it has become an essential tool for correspondence, collaboration, and information sharing. It has enabled global communication and has significantly impacted various industries and aspects of modern life.

Some steps to follow to send an E-mail

i. As a sender, you prepare your message in your computer.

ii. Enter the intended recipient's email address and click the 'send' button
iii. Message is now sent to server which is connected via internet
iv. The server sends the message to the router
v. The message is redirected from one router to another until it reaches the intended destination. These routers are connected by cables and telephone lines.
vi. If a router is busy or not functioning your message will be sent via another one.
vii. Router then sends the message to the server connected to the recipient's computer.
viii. The server finally reads the address and passes your message to the recipient. Advantages of an E-mail

- Saves time
- Economical
- High speed send/receive cycle
- Direct input and retrieval from keyboard
- Virtual and instant dispatch and retrieval
- Simultaneous circulation to pre-selected recipients
- Other files can be attached
- Environment friendly
- Maintains security and confidentiality
- Automatically stores and recalls previous recipients' information

Format of E-mail

From:

To:

Subject:

Greeting

:

Body part:

Closing:

Enclosure:

CC:

E-mail Sample 1

From: rahulbhatt208@gmail.com

To: pramodawasthi@hcoe.edu.np

Subject: Seminar on business

writing

Hi Pramod,

I trust this e-mail finds you in good health. I am pleased to know that you will be returning to Kathmandu soon, and I am particularly excited about the upcoming seminar on effective business writing that we are conducting. I kindly request that you provide me with your availability during your stay as I would like to arrange a meeting to make a planning for the seminar.

Additionally, there is noteworthy interest from certain bookstores in hosting a combined talk and singing event. Your participation in this endeavor would be greatly appreciated.

I hope you will agree to take part.

With Regards,

Rahul Bhatt

CC:

Additional Recipient 1

Additional Recipient 2

Email Sample 2

From:

To:

Subject: Project Update Meeting

Hi Aakash,

I hope this email finds you well. I wanted to provide you with an update on our project's progress.

We had a productive meeting yesterday and discussed the following key points:

- Milestone achievements
- Current challenges and proposed solutions
- Upcoming tasks and details

Please find the file attached herewith for your reference and feel free to reach out if you have any questions or need further clarification.
Thank you for your continued support.

Best Regards,

YogeshAwasthi

Enclosure:
Meeting Minutes

4.3 Writing Memos

A memo, short for "memorandum," is a brief written communication used within an organization to convey information, share updates, make announcements, or request action on a specific matter. Memos are typically used for internal communication and are commonly exchanged between colleagues, departments, or levels of management within a company or institution.

Memos are useful tools for keeping employees informed, coordinating activities, and documenting important decisions or communications within an organization. They are an integral part of internal communication and contribute to effective collaboration and organizational efficiency.

Structure of a memo

- Four- point plan
  - Name and address of the organization/ company
  -To:
  -From:
  -Date:
- Subject Line
- Main Body
  -Introduction/Terms of Reference: background information, brief reason for writing, with reference to previous communication; who, what, when.
  -Details: facts and figures, logical sequences, separated paragraphs each dealing with a different aspect of the main theme.

-Response: action statement-action that you want readers to make or action that you will take.

- Ending: a relevant one liner close.
- Signature of the sender
- Enclosure: files accompanying the memo that the receiver should go through.
- Distribution

Memo Sample

Himalaya College of Engineering

Chyasal, Lalitpur

MEMORANDUM

To: All Staff
From: Rahul Shrestha, Academic Director
6 August 2023

Subject: Launch of "PATHOO APP" and Internal Ceremony

I am pleased to announce the upcoming launch of our new application, 'PATHAOO,' developed by our students of BCA 8th semester, scheduled for 8 August 2023 at 10 am in the college premises.

In anticipation of this exciting milestone, we have organized an internal ceremony, which will take place on 9 August at the esteemed venue, Hotel The Annapurna, at 3:00 pm. We extend a cordial invitation to all staff members across departments to join us on this occasion.

The purpose of this ceremony extends beyond celebration; it is an opportunity for us to collectively draw inspiration and motivation, fostering a sense of unity and purpose as we embark on this new venture.

Your presence at the event will greatly contribute to its success and significance. We eagerly anticipate the honor of your attendance.

Sincerely,

……

Signature

Distribution:

Recipient 1

Recipient 2

4.6 Calling tenders and responding to it

Sample Notice for Calling Tender

Nepal Infrastructure Development Board
Maitighar, Kathmandu, Nepal
Phone: +977-1-5555555 | Email: info@nidb.gov.np | Website: www.nidb.gov.np

Tender Notice

Ref No.: NIDB/CON/2025/001
Date: February 27, 2025

> **Subject:** Invitation for Tender for the Construction of a Four-Lane Highway Bridge over the Bagmati River

The Nepal Infrastructure Development Board (NIDB) invites sealed bids from eligible and experienced contractors for the construction of a four-lane highway bridge over the Bagmati River at Balkhu, Kathmandu. The project aims to enhance traffic flow and reduce congestion in the valley.

1. Scope of Work:

The selected contractor will be responsible for:

- Design, construction, and completion of the bridge (span: 250 meters).
- Foundation work, superstructure, and deck slab construction using reinforced concrete.
- Drainage and pedestrian walkway installation.
- Road approach and traffic signal installation.
- Ensuring quality control and safety measures throughout the construction process.

2. Eligibility Criteria:

Interested bidders must meet the following criteria:

- Must be a registered construction company in Nepal.
- Must have at least 10 years of experience in bridge construction.
- Must have successfully completed at least two similar projects in the last 5 years.
- Must submit a valid tax clearance certificate (FY 2023/24).

- Must have a minimum annual turnover of NPR 500 million.
- Must submit a bid security of NPR 5 million (refundable).

3. Tender Document Availability:

Tender documents can be obtained from the NIDB office at Maitighar, Kathmandu, during office hours (10:00 AM – 4:00 PM) from March 1, 2025, to March 15, 2025, upon payment of a non-refundable fee of NPR 10,000.

4. Submission Deadline:

All bids must be submitted by March 30, 2025, at 3:00 PM at the NIDB office. Late submissions will not be entertained.

5. Bid Security:

All bidders must submit a bank guarantee or demand draft of NPR 5 million, valid for 90 days from the bid submission deadline.

6. Opening of Bids:

Bids will be opened publicly on April 1, 2025, at 11:00 AM at the NIDB conference hall in the presence of bidders' representatives who wish to attend.

7. Contact for Queries:

For any inquiries regarding the tender, please contact:
Mr. Ramesh Adhikari
Procurement Officer, Nepal Infrastructure Development Board
Phone: +977-1-5555556
Email: ramesh.adhikari@nidb.gov.np
NIDB reserves the right to accept or reject any or all bids without assigning any reason.
Authorized Signatory
Er. Sunil Bhandari
Chief Engineer, Nepal Infrastructure Development Board

Sample Response to Tender Submission

ABC Construction Pvt. Ltd.
Kalanki, Kathmandu, Nepal
Phone: +977-1-4444444 | Email: contact@abcconstruction.com
Date: March 28, 2025

To
The Procurement Officer
Nepal Infrastructure Development Board
Maitighar, Kathmandu, Nepal

Subject: Submission of Bid for the Construction of Four-Lane Highway Bridge over the Bagmati River

Dear Mr. Ramesh Adhikari,

With reference to Tender Notice No. NIDB/CON/2025/001, dated February 27, 2025, we, ABC Construction Pvt. Ltd., are pleased to submit our bid for the construction of the Four-Lane Highway Bridge over the Bagmati River at Balkhu, Kathmandu.

Enclosed, please find the following documents as per the tender requirements:

1. Technical Proposal:

- Company Profile detailing our expertise in bridge construction.
- Project Execution Plan outlining the timeline, workforce, and quality control measures.
- Equipment and Machinery List for project execution.
- Safety and Environmental Protection Plan.

2. Financial Proposal:

- Detailed cost breakdown including material, labor, and overhead costs.
- Total estimated project cost: NPR 490 million.
- Proposed payment schedule.

3. Supporting Documents:

- Company Registration Certificate.
- Tax Clearance Certificate (FY 2023/24).
- List of Completed Similar Projects (Including two highway bridges over Narayani and Koshi Rivers).
- Audited Financial Reports (last 3 years).

4. Bid Security:

We have enclosed a bank guarantee of NPR 5 million, issued by Nepal Investment Bank Ltd., valid until June 30, 2025.

We confirm that we fully comply with all the requirements stated in the tender document. We assure you of our commitment to quality, timely delivery, and safety in project execution. We look forward to your positive consideration of our bid and are available for any further clarifications required.

Thank you for your time and consideration.

Sincerely,
Er. Prakash Shrestha
Managing Director, ABC Construction Pvt. Ltd.
Phone: +977-1-4444444
Email: prakash.shrestha@abcconstruction.com

3.6 Press Release

Press Release

A press release is a written communication or announcement issued by a company, organization, or individual to inform the media and the public about newsworthy events, developments, or initiatives. Press releases are typically structured as concise documents, usually one to two pages in length, and are distributed to journalists, editors, bloggers, and other media outlets to generate coverage and publicity.

A well-crafted press release typically includes the following elements:

1. **Headline**: A brief, attention-grabbing title that summarizes the main news or announcement.
2. **Dateline**: The city and date of the press release's issuance, indicating when the information is being made public.
3. **Lead Paragraph**: Also known as the "lede," this introductory paragraph provides a concise summary of the most important information in the press release, answering the who, what, when, where, why, and how questions.
4. **Body**: The body of the press release provides additional details, background information, quotes from key stakeholders, and supporting facts or statistics related to the news or announcement.
5. **Boilerplate**: A standardized paragraph at the end of the press release that provides basic information about the issuing organization, such as its mission, history, and key accomplishments.
6. **Contact Information**: Contact details for a media representative or spokesperson who can provide further information or arrange interviews.

Press releases are distributed through various channels, including email, wire services, online newsrooms, and social media platforms. They serve as a valuable tool for organizations to communicate with the media, raise awareness about their brand or products, attract media coverage, and manage their public image. Effective press releases are clear, concise, timely, and tailored to the interests of the target audience, whether journalists, consumers, or industry professionals.

Press Release: Sample

FOR IMMEDIATE RELEASE
Date……..

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Headline: XYZ Corporation Unveils Innovative Sustainability Initiative

XYZ Corporation, a leading provider of eco-friendly solutions, is proud to announce the launch of its latest sustainability initiative aimed at reducing carbon emissions and promoting environmental stewardship.

In response to growing concerns about climate change and the need for sustainable business practices, XYZ Corporation has developed a comprehensive plan to minimize its environmental footprint across all aspects of its operations.

The centerpiece of the initiative is the implementation of renewable energy sources to power XYZ Corporation's manufacturing facilities. By transitioning to solar and wind power, the company expects to reduce its reliance on fossil fuels and decrease greenhouse gas emissions by 30% over the next five years.

In addition to renewable energy, XYZ Corporation is committed to promoting recycling and waste reduction throughout its supply chain. The company will partner with suppliers to implement packaging solutions that minimize waste and maximize recyclability, furthering its commitment to a circular economy.

"We believe that businesses have a responsibility to lead the way in addressing climate change and promoting sustainability," said [Your Name], CEO of XYZ Corporation. "Our latest initiative underscores our commitment to environmental stewardship and sets a new standard for responsible business practices."

As part of its sustainability efforts, XYZ Corporation will also invest in community-based projects aimed at preserving natural resources and supporting local conservation initiatives.

For more information about XYZ Corporation's sustainability initiative, please visit www.xyz. cop. np or contact Kishor Gautam at 9841234567 or kishorkmc@gmail.com.

Sincerely,
Kishor Gautam

Chapter 5: Listening and Oral Communication

5.1 Active listening (barriers and strategies) Active listening

Active listening is the practice of preparing to listen, observing what verbal and non-verbal messages are being sent, and then providing appropriate feedback for the sake of showing attentiveness to the message being presented.

Active listening is listening to understand. This form of listening conveys a mutual understanding between speaker and listener. Speakers receive confirmation their point is coming across and listeners absorb more content and understanding by being consciously engaged. The overall goal of active listening is to eliminate any misunderstandings and establish
clear communication of thoughts and ideas between the speaker and listener. By actively listening to another person, a sense of belonging and mutual understanding between the two individuals is created.

The term "active listening" was introduced in 1957 by Carl Rogers and Richard Farson. It may also be referred to as reflective listening. Active listening encloses the communication attribute characterized by paying attention to a speaker for better comprehension, both in word and emotion. It is the opposite of passive listening, where a listener may be distracted or note critical points to develop a response. It calls for an attentive mind and empathetic concern for the speaker's perspective. The concept was developed in the 1950s by Carl Rogers and Richard Farson. Active listening encloses the communication attribute characterized by paying attention to a speaker for better comprehension, both in word and emotion. It is the opposite of passive listening, where a listener may be distracted or note critical points to develop a response. It calls for an attentive mind and empathetic concern for the speaker's perspective. Active listening is a communication technique designed to foster understanding and strengthen interpersonal relationships by intentionally focusing on the speaker's verbal and non-verbal cues. Unlike passive listening, which involves simply hearing words, active listening requires deliberate engagement to fully comprehend the speaker's intended message. Research has demonstrated that active listening promotes trust, reduces misunderstandings, and enhances emotional connection, making it a valuable tool in both personal and professional contexts.

Active listening is being fully engaged while another person is talking. It is listening with the intent to understand the other person fully, rather than listening to respond. Active listening includes asking curious questions such as, "How did you feel?" or "What did you think?"

Barriers to active listening

There are a multitude of factors that may impede upon someone's ability to listen with purpose and intention; these factors are referred to as listening blocks. Some examples of these blocks include rehearsing, filtering, and advising. Rehearsing is when the listener is more focused on preparing their response rather than listening. Filtering is when a listener focuses only on what they expect to hear, while tuning out other aspects of what is being said, and lastly, advising is when the listener focuses on problem solving, which can create a sense of pressure to fix what

the other person is doing wrong. There are three types of barriers to effective listening: Environmental, Physiological, and Psychological.

Environmental barriers

Environmental barriers are brought about by the speaker's environment. Some examples include noises, smells, bad cell reception, and any other factors that make it difficult to hear and process information. Sometimes it is due to the language the speaker uses, such as high sounding and bombastic words that can lead to ambiguity. Other barriers include distractions, trigger words, vocabulary, and limited attention span. Environmental barriers likely cannot be eliminated but they can be managed.

Physiological barriers

Physiological barriers are those that are brought about by the listener's body. They can be temporary or permanent. Hearing loss and deficiencies are usually permanent boundaries. Temporary physiological barriers include headaches, earaches, hunger or fatigue of the listener. Another physiological boundary is the difference between the slow rate of most speech and the brain's ability to process that information. Typically, the brain can process around 500 words per minute while the average rate of speech for speakers is 125 words per minute. These differences make it easy for the mind to wander.

Psychological barriers

Psychological barriers interfere with one's willingness and mental capacity for listening. Pre-existing biases can lead to listening to someone else's argument for its weaknesses, ignoring its strengths. This can lead to a competitive advantage in a political debate, or by a journalist to provoke a strong response from an interviewee, and is known as "ambushing". Individuals in conflict often blindly contradict each other. On the other hand, if one finds that the other party understands, an atmosphere of cooperation can be created.

Shift response

Shift response is a type of conversational narcissism i.e., the tendency of listeners to turn the topic to them without showing sustained interest in others. A support response is the opposite of a shift response; it is an attention giving method and a cooperative effort to focus the conversational attention on the other person. Instead of being me-oriented like shift response, it is we-oriented. It is the response a competent communicator is most likely to use.

Strategies for Active listening

Active listening comprises several components by the listener, who must pay attention to what the speaker is attempting to communicate and elicit clarification where necessary for comprehension. "Many studies suggest that even the smallest improvements in a person's listening ability can have a noticeable impact on the overall effectiveness of communication and productivity." Developing this skill of active listening can positively impact the speakers and the listeners' mutual understanding and relationship.

From the speaker's perspective, listening is a multidimensional construct that includes **attention, comprehension, and positive intention.**

Active listening includes further understanding and closeness between the listener and speaker. The more basic ways this is done are through **paraphrasing, reflective emotion, and open-ended questions**. Paraphrasing involves putting the speaker's message in one's words to demonstrate one's understanding and continue the discussion. Reflective emotion involves identifying the speaker's feelings, whether expressed or not, and responding to those feelings that will further validate the person's emotional state. On the other hand, open-ended questions permit

the interviewee to expound on their responses, thus allowing deeper insight into their thoughts and experiences and encouraging a more inclusive dialogue. These skills find their real-life applications in their efficiency. For example, paraphrasing clarifies possible miscommunications by summarizing the speaker's words and verifying the accuracy. Emotion reflection helps to establish empathy with a speaker so that he/she feels appreciated and understood. Open-ended questions, such as "What did you think of that?" or "Can you further explain what that felt like?" describe ideas and feelings that deepen the conversation. Active listening skills, including but not limited to eye contact, no distractions, and clarity seeking, support these strategies for active listening by engaging in an active, respectful, and attentive way. Only by practicing these methods can listeners create a non-threatening, meaningful space for communication.

Some ways to overcome listening barriers

Following are the ways to overcome listening barriers:

- Minimize distractions.
- Prioritize listening over speaking.
- Reduce outside noise.
- Practice reflecting instead of deflecting.
- Ask questions.
- Listen fully before giving advice.

Minimize distractions

To avoid getting distracted, make sure you are physically facing the speaker and attempt to make frequent eye contact with them while they are speaking. Make sure you are seated or standing comfortably but appropriately so you can remain engaged. Put away your cell phone or any other pieces of technology that could become a distraction. The speaker may also appreciate the gesture you've made to show them that they have your undivided attention.

Prioritize listening over speaking

If you think you might be an excessive talker, try to practice self-control in conversation. Give the other person room to speak. During any conversation with a coworker, wait until they're finished speaking before you respond to show respect for what they're saying. Finally, observe your listeners' reactions as you talk. If you notice signs of distraction in someone you are speaking with, consider asking questions to encourage them to talk more and direct their focus back on the conversation.

Reduce outside noise

Before having a conversation, minimize sound in your environment that could be distracting or make it more challenging to hear. A noisy environment can create distractions for both listeners and speakers, resulting in possible disruptions to conversations.

To minimize noise, turn off mobile devices or place them on silent. Plan to hold important conversations in a place that you know will be quiet, like your office or a private meeting area. If someone is talking loudly outside your office or making other distracting noises, it is often better to politely ask them to move elsewhere or keep the noise down.

Practice reflecting instead of deflecting

To bond with your conversation partner or show them you're engaged, you may feel eager to share your personal experiences when listening. However, a better approach typically involves

merely listening and providing responses that focus on the other person's situation. This shows that you're genuinely invested in their side of the conversation.
To listen effectively, keep deflecting to a minimum and try reflecting instead. Reflecting involves paraphrasing back to the speaker what they have said. To do so, you could use language like, "What I am hearing from you is..." or "It sounds frustrating that that happened to you." Reflecting could also involve asking a follow-up question based on what you have heard, such as "What did you do after he said that?" or "How did that make you feel?"
Reflecting assures your listener that you are paying close attention, but it can also help to correct any possible misunderstandings. Reflecting allows the other person to correct what you may have misheard.

Ask questions

In addition to reflecting, asking questions is an effective listening technique. Focus on asking questions based on what the speaker has already told you and are designed to elicit more information. The best questions are nonjudgmental and flow directly from something the speaker has recently said.

Listen fully before giving advice

It can sometimes be tempting to offer advice after someone shares a problem or concern with you, especially if you want to help them solve that problem. However, it's a good idea to wait to advise someone unless they specifically ask for it. Sometimes people share their concerns in the workplace simply to build bonds with colleagues or to make a coworker aware of a problem. Sharing issues can be a way to start introducing conversations deeper than small talk.
If you want to share advice, think first about whether your colleague is truly soliciting advice or just looking for a way to vent. Instead of advising, consider offering empathy with responses such as, "That sounds frustrating," or try reflecting instead.

5.2 Effective Speaking Skills

Effective speaking skills are essential for clear and engaging communication. These skills ensure that the message is delivered in a way that is easily understood, persuasive, and impactful. Three key components of effective speaking include **clarity, tone, and pace**, but other aspects such as confidence, body language, and audience awareness also play a crucial role in speaking.

1. Clarity

Clarity refers to how well the speaker expresses their ideas in a way that is easily understood. It involves:

- Using simple, precise, and well-structured sentences.
- Avoiding unnecessary jargon or complex words unless necessary.
- Pronouncing words correctly and enunciating clearly to avoid confusion.
- Organizing thoughts logically so the message flows smoothly.

2. Tone

Tone conveys the speaker's emotions and attitude toward the topic and the audience. A well-adjusted tone:

- Helps maintain audience interest and engagement.
- Can be formal or informal, depending on the context.
- Reflects enthusiasm, seriousness, or confidence as needed.
- Avoids monotony by incorporating variations to emphasize key points.

3. Pace

Pace refers to the speed at which a speaker delivers their message. A good pace:

- Is neither too fast (which can make speech difficult to follow) nor too slow (which can make it dull).
- Matches the topic and the audience's comfort level.
- Uses strategic pauses to allow listeners to absorb important points.

5. Confidence

- A confident speaker appears credible and persuasive.
- Avoiding filler words like "um," "uh," and "like" makes speech more professional.

6. Body Language and Gestures

- Good posture, appropriate gestures, and facial expressions reinforce spoken words.
- Eye contact establishes connection and engagement with the audience.

7. Audience Awareness

- Understanding the audience's background and expectations helps in tailoring speech effectively.
- Adjusting content, tone, and pace according to the audience improves communication.

By mastering these skills, a speaker can ensure that their communication is not only effective but also engaging and impactful.

5.3 Oral Presentation Skills

Presentation is a significant category of oral communication that involves delivering information, ideas, or opinions to the audience in a structured and organized manner. Presentation is a two-way communication process. It is purposeful and goal oriented. It is often used to inform, persuade, entertain, or educate the audience on a particular topic. Whether in academic, professional, or public settings, presentations require effective communication skills to engage the audience and convey the intended message successfully.

<u>Key Elements of a Presentation:</u>

1. **Content:** The content of a presentation is the information or material that the speaker intends to share with the audience. This may include facts, data, concepts, arguments, visuals, anecdotes, or any other relevant information related to the topic.

2. **Structure:** A well-structured presentation follows a logical sequence. It typically includes an introduction, body, and conclusion. The introduction sets the tone, introduces the topic, and states the purpose of the presentation. The body elaborates on key points and provides supporting details, while the conclusion summarizes the main ideas and reinforces the key message.

3. **Visual Aids:** Visual aids such as slides, charts, graphs, images, and videos can enhance the presentation by providing visual representations of the content. These aids help clarify complex concepts, engage the audience, and make the presentation more memorable.

4. **Delivery:** Delivery encompasses the manner in which the speaker presents the information. It includes aspects such as tone of voice, pace, volume, and emphasis on key points. Effective delivery maintains the audience's interest and attention while conveying the speaker's enthusiasm and confidence.

5. **Engagement:** Engaging the audience is crucial for a successful presentation. Interaction, questions, anecdotes, and relatable examples can keep the audience interested and involved. Encouraging questions and participation helps to create a dynamic and interactive environment.

6. **Nonverbal Communication:** Nonverbal cues, including body language, facial expressions, gestures, and eye contact, play a vital role in presentations. They can emphasize points, convey emotions, and establish a connection with the audience.

7. **Adaptation:** A skilled presenter adapts their communication style to suit the needs and expectations of the audience. This includes considering the audience's level of understanding, cultural background, and preferences.

8. **Time Management:** Presenters must manage their time effectively to ensure that the presentation fits within the allocated time frame. Being concise and prioritizing key points is essential to keep the audience engaged and maintain their attention.

<u>Steps to Consider for Making Effective Presentations</u>

Learning the art of effective presentation is essential for everyone to be successful in one's respective field. Presentation is a two-way communication process. It is purposeful and goal oriented. It communicates a message to the targeted audience to bring desired changes in their perspectives. Presentation differs from other oral forms of communication such as speech and debates.

Making a presentation involves a series of steps to effectively communicate your message to the audience. Following are the steps involved in creating and delivering a successful presentation:

1. **Planning**:

a) Analyze the Audience:
- Understand your audience's demographics (age, education, occupation, etc.).
- Consider their interests, prior knowledge, and expectations.

b) Select a Relevant Topic:
- Choose a topic that resonates with your audience and aligns with your objectives.
- If assigned a topic, find an angle that engages your audience.

c) Define Presentation Objective:
- Clearly state what you want to achieve with your presentation.
- Set specific goals, such as educating, persuading, or inspiring your audience.

d) Prepare Presentation Content:
- Research and gather relevant information, examples, and data.

2. **Organizing**:
- Create a clear and logical structure for your presentation.
- Divide your content into sections, such as introduction, main points, and conclusion.
- Ensure a smooth transition between sections to maintain flow.

3. **Composing**:
- Write clear and concise content using language appropriate for your audience.
- If using slides, create visually appealing and relevant visuals to support your points.
- Keep text minimal and use bullet points, images, and diagrams effectively.

4. **Preparation**:
- Review and edit your content for accuracy, clarity, and coherence.
- Check for any technical issues with slides, equipment, or presentation tools.
- Anticipate potential questions from the audience and prepare thoughtful answers.

5. **Rehearsal**:
- Practice delivering your presentation multiple times.
- Work on your verbal delivery, pacing, and tone.
- Practice controlling nervous habits and using body language effectively.
- Use a timer to ensure you stay within the allocated time.

6. **Presentation**:
- Start by greeting the audience, introducing yourself, and providing an overview of your presentation.
- Speak clearly and maintain eye contact with the audience.
- Use engaging body language, gestures, and facial expressions to emphasize points.
- Present key ideas systematically, using a logical and organized sequence.
- Use visual aids effectively to enhance understanding.
- Summarize main points and signal transitions between sections.
- Conclude by summarizing the key takeaways and reinforcing your main message.
- Allow time for questions and provide thoughtful responses.
- End with a strong closing statement and thank the audience for their attention.

7. **Post-Presentation**:
- Reflect on your presentation and identify areas for improvement.

- Gather feedback from colleagues or peers to gain different perspectives.
- Use feedback to refine your presentation skills for future engagements.

Practice and preparation are keys to delivering a successful presentation. By following these steps one can become a confident and good presenter.

5.4 Group Discussion

Group discussion is a dynamic communication process where a group of individuals come together to explore, analyze, and exchange ideas on a specific topic or issue. It serves as a powerful platform for collective decision-making, fostering collaboration, and generating diverse perspectives. In a world driven by complex challenges and multifaceted issues, group discussions have become an integral tool for organizations, educational institutions, and various social forums.

One of the notable strengths of group discussions lies in its ability to harness the collective intelligence of participants. By pooling together, the knowledge, experiences, and insights of diverse individuals, group discussions can unravel multifaceted problems that may elude a single person's understanding. This diversity leads to a more comprehensive and nuanced examination of the topic, enabling participants to uncover innovative solutions and strategies. Moreover, group discussions facilitate active listening, empathy, and respect for differing viewpoints, fostering an environment where participants can refine their ideas through constructive dialogue.

In a professional context, group discussions are frequently utilized as an integral part of the decision-making process. Whether it's brainstorming new project ideas, devising strategies, or evaluating potential solutions, collaborative discussions allow stakeholders to assess multiple angles and trade-offs. This participatory approach not only promotes a sense of ownership and commitment among team members but also helps in identifying potential risks and mitigating blind spots. The collective nature of group discussions ensures that decisions are thoroughly vetted, reducing the likelihood of oversight and enhancing the overall quality of outcomes.

Furthermore, group discussions serve as a training ground for essential interpersonal and communication skills. Participants learn the art of articulating their thoughts succinctly, persuading others through logical reasoning, and gracefully accepting dissenting opinions. The ability to express ideas coherently and engage in constructive debates becomes invaluable not only within professional spheres but also in personal interactions and public engagements. Group discussions thus contribute to the development of well-rounded individuals who are adept at collaborating, negotiating, and reaching consensus in a diverse and interconnected world.

In conclusion, group discussions stand as a beacon of collaborative learning and decision-making. They empower individuals to harness the collective wisdom, fostering creativity, critical thinking, and effective communication. As platforms for dialogue, group discussions pave the way for holistic problem-solving, while simultaneously nurturing the interpersonal skills essential for thriving in both professional and personal realms. In an era where complexity and

interconnectedness define our challenges, the art of group discussion remains a potent tool for progress and enlightenment.

Techniques to Enhance the Quality of a Group Discussion

Effective group discussions require a combination of thoughtful facilitation, active participation, and respectful communication. Here are some techniques that can enhance the quality and productivity of group discussions:

1. Clear Objective and Agenda:
    - Start with a well-defined objective for the discussion.
    - Develop a clear agenda that outlines the topics to be covered and the time allocated for each.
2. Active Listening:
    - Encourage participants to listen attentively to each speaker.
    - Active listening promotes better understanding and prevents misunderstandings.
3. Structured Speaking Turns:
    - Use a structured approach, such as taking turns to speak or raising hands, to ensure everyone has an opportunity to contribute.
4. Open-Mindedness and Respect:
    - Create an atmosphere where participants feel comfortable expressing diverse opinions.
    - Respectful disagreement fosters constructive debate and promotes critical thinking.
5. Moderation and Facilitation:
    - Designate a skilled facilitator to guide the discussion, keep it on track, and manage time effectively.
6. Encourage Participation:
    - Ensure quieter participants have a chance to speak by inviting their input.
    - Avoid letting a few dominant voices monopolize the discussion.
7. Clarification and Summarization:
    - Encourage participants to seek clarification when needed, promoting a deeper understanding of ideas.
    - Summarize key points periodically to keep the discussion focused.
8. Building on Ideas:
    - Encourage participants to build on each other's ideas, fostering collaborative thinking.
    - This technique can lead to innovative solutions that draw from multiple perspectives.
9. Visual Aids and Tools:
    - Use visual aids like slides, charts, or diagrams to illustrate complex concepts. Visual tools enhance understanding and engagement.
10. Time Management:
    - Allocate specific time slots for different topics or sections of the discussion.
    - Stick to the schedule to ensure that all aspects of the agenda are covered.

11. Constructive Feedback:
    - Provide feedback on the quality of the discussion to help participants improve their communication skills.
    - Feedback encourages continuous learning and growth.
12. Mindfulness and Inclusivity:
    - Encourage mindfulness about language and behavior to ensure an inclusive and respectful environment.
    - Address any instances of bias or discrimination promptly and sensitively.

By incorporating these techniques, group discussions can be made more focused, engaging, and productive, fostering a collaborative environment where diverse perspectives contribute to well-informed decisions and creative solutions.

Ways to engage successfully in a group discussion

Participating effectively in a group discussion requires a combination of communication skills, critical thinking, and interpersonal awareness. Here are key things an individual should know to engage successfully in a group discussion:

1. Understanding the Objective:
   Grasp the purpose and goals of the discussion.
   Align your contributions with the intended outcomes.
2. Active Listening:
   Pay close attention to other participants' points of view.
   Avoid interrupting and show respect for speakers.
3. Thorough Knowledge:
   Research and understand the topic of discussion.
   Have facts, examples, and data to support your arguments.
4. Clear Communication:
   Express your ideas clearly and succinctly.
   Use concise and well-structured sentences.
5. Analytical Thinking:
   Evaluate different viewpoints critically.
   Present logical and reasoned arguments.
6. Respectful Interaction:
   Treat all participants with respect, regardless of differing opinions.
   Avoid confrontational language or personal attacks.
7. Building on Others' Ideas:
   Listen to others and build upon their thoughts to create a collaborative discussion.
   Acknowledge and reference their ideas when contributing.

8. Balanced Participation:

Contribute your thoughts while allowing others to speak. Avoid dominating the discussion or remaining silent.

9. Time Management:

Keep track of time to ensure the discussion covers all points. Avoid spending excessive time on any single aspect.

10. Body Language:

Use open and attentive body language to show engagement. Make eye contact and avoid distracting gestures.

11. Handling Disagreements:

Express dissenting views respectfully, focusing on ideas rather than individuals.
Be open to discussing opposing perspectives.

12. Empathy and Active Participation:

Understand the emotions and perspectives of others. Show empathy and support when appropriate.

13. Taking Turns:

Wait for your turn to speak and avoid interrupting.
Politely signal when you want to contribute.

14. Summarizing and Synthesizing:

Summarize key points periodically to recap the discussion's progress.
Synthesize ideas to draw connections between different contributions.

15. Flexibility:

Be willing to adjust your views based on new information or persuasive arguments. Adapt to the evolving discussion dynamics.

16. Feedback:

Be open to receiving feedback on your contributions.
Use feedback to improve your communication skills.

17. Self-Awareness:

Reflect on your communication style, strengths, and areas for improvement.
Strive for continuous self-growth as a discussion participant.

By cultivating these skills and approaches, individuals can actively contribute to group discussions, facilitate productive exchange of ideas, and contribute to meaningful decision-making processes.

Chapter 6: Use of Visual Aids in Communication

Importance and Risks associated with the use of visuals (charts, tables, graphs, diagrams)

Importance of Use of Visuals in technical communication

Charts, tables, and bullet points play a crucial role in technical writing by enhancing clarity, organization, and readability. Benefits of using tables, charts and bullet points in writing include the following:

1. **Visual Representation of Data**: Charts and tables provide a visual representation of complex data, making it easier for readers to understand relationships, trends, and patterns. Instead of sifting through long paragraphs of text, readers can quickly interpret information from visual displays, such as bar graphs, line charts, or tabular formats.
2. **Structure**: Tables and charts help organize information in a structured format, allowing readers to navigate the content more efficiently. By presenting data in a clear and systematic manner, they enable readers to locate specific details and key points without having to search through dense paragraphs.
3. **Conciseness and Efficiency**: Bullet points are effective for presenting information concisely and efficiently. They break down complex concepts into bite-sized chunks, allowing readers to digest information more easily. Bullet points also emphasize key ideas and facilitate scanning, making it simple for readers to identify important points at a glance.
4. **Highlighting Key Insights**: Charts and tables can highlight key insights or findings by visually emphasizing important data points. Whether it's a peak in a line graph, a significant difference in a comparative table, or a trend indicated by arrows or symbols, visual elements draw attention to critical information and facilitate understanding.
5. **Comparative Analysis**: Tables and charts enable readers to compare different sets of data or variables more effectively. Whether it's comparing product specifications, financial metrics, or performance indicators, visual displays allow for side-by-side comparisons that are easy to interpret and analyze.
6. **Enhanced Retention**: Visual aids such as charts, tables, and bullet points enhance information retention by engaging multiple senses and cognitive processes. Research suggests that visuals improve memory recall and comprehension, making technical content more memorable and impactful for readers.
7. **Communication across Audiences**: Visual elements transcend language barriers and cater to diverse learning styles. Whether the audience consists of technical experts, non-specialists, or stakeholders from various backgrounds, charts, tables, and bullet points provide a universal means of communication that is accessible and intuitive.

In summary, charts, tables, and bullet points are essential tools in technical writing for organizing complex information, facilitating comprehension, highlighting key insights, and enhancing overall communication effectiveness. By incorporating these visual elements thoughtfully, technical writers can improve the clarity, accessibility, and impact of their documents.

Risks Associated with the Use of Visuals in Technical Writing

Visuals such as charts, tables, graphs, and diagrams are valuable tools in technical writing, as they help simplify complex information and enhance comprehension. However, improper use of visuals can introduce several risks that may compromise the clarity, accuracy, and effectiveness of a document. Below are some key risks associated with the use of visuals in technical writing:

Difficulty in Interpretation for Non-Technical Readers

Not all readers have the technical knowledge required to interpret visuals accurately. Complex graphs, charts, or statistical representations may confuse non-expert audiences, leading to misinterpretation or an incomplete understanding of the data. Writers must ensure that visuals are clear, intuitive, and accompanied by sufficient explanation.

Requirement of Technical Expertise for the Writer

Creating effective visuals requires a strong grasp of data visualization techniques and an understanding of how to present information clearly. Writers who lack expertise may produce visuals that are unclear, misleading, or ineffective in conveying the intended message. This can reduce the overall quality of the document and create confusion rather than clarity.

Overuse of Visuals Can Reduce Document Quality

While visuals can enhance understanding, excessive reliance on them can clutter a document, making it difficult to follow. A poorly designed document with too many visuals can distract readers, causing them to lose focus on key takeaways. A balance between text and visuals is necessary to maintain readability.

Loss of Tone, Nuance, and Context

Unlike written or verbal explanations, visuals cannot convey tone, emphasis, or subtle contextual details. Important aspects such as the writer's level of certainty, intended emphasis, or analytical perspective may be lost when relying solely on charts or diagrams. Readers may misinterpret data if it lacks the necessary textual context.

Certain Information Cannot Be Effectively Represented Visually

Not all types of information lend themselves to visual representation. While numerical and comparative data are well-suited for charts and graphs, abstract concepts, qualitative research findings, or complex reasoning often require textual explanations. Overuse of visuals for inappropriate data types can lead to miscommunication.

Potential for Misleading or Manipulated Data Representation

Poorly designed visuals can distort information, either intentionally or unintentionally. Misleading scales, missing data points, exaggerated proportions, or improper labeling can create a false impression, leading to incorrect conclusions. Ethical representation of data is crucial to maintain credibility.

Compatibility and Accessibility Issues

Some visuals may not be accessible to all readers, especially individuals with visual impairments or those using assistive technologies such as screen readers. Additionally, certain file formats or software limitations may cause compatibility issues, preventing some users from viewing visuals properly. Writers should ensure visuals are universally accessible.

A Single Mistake Can Ruin the Entire Visual or Misrepresent Findings

Even a small error in a visual, such as incorrect labeling, an inaccurate scale, or a misplaced data point, can significantly alter the meaning of the entire dataset. A minor miscalculation or misrepresentation can lead to incorrect conclusions, undermining the credibility of the report. Writers must double-check accuracy to prevent such critical errors.

Possibility of Misinterpretation Due to Lack of Explanation

Readers may interpret visuals differently based on their background knowledge and perspectives. Without sufficient explanation, even a well-designed visual can lead to varying interpretations. Providing clear titles, captions, and explanatory notes can help guide the reader toward the intended meaning.

Cognitive Overload for the Reader

Complex visuals with excessive details, multiple data sets, or too many variables can overwhelm the reader, making it difficult to extract meaningful insights. Instead of simplifying information, such visuals may create confusion. Keeping visuals simple, focused, and well-structured improves their effectiveness.

While visuals are powerful tools for enhancing technical communication, they must be used with caution. Writers should ensure visuals are accurate, clear, well-balanced with text, and accessible to all readers. By carefully designing and explaining visuals, technical writers can maximize their effectiveness and minimize the risks of misinterpretation, confusion, or errors in their documents.

Best Wishes