COURSE DETAILS

course tittle Technical report writting

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Module 4th

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Q1;

Technical writers use design processes to creatively solve complex problems;

they use writing processes to create complex documents. In both cases, there are

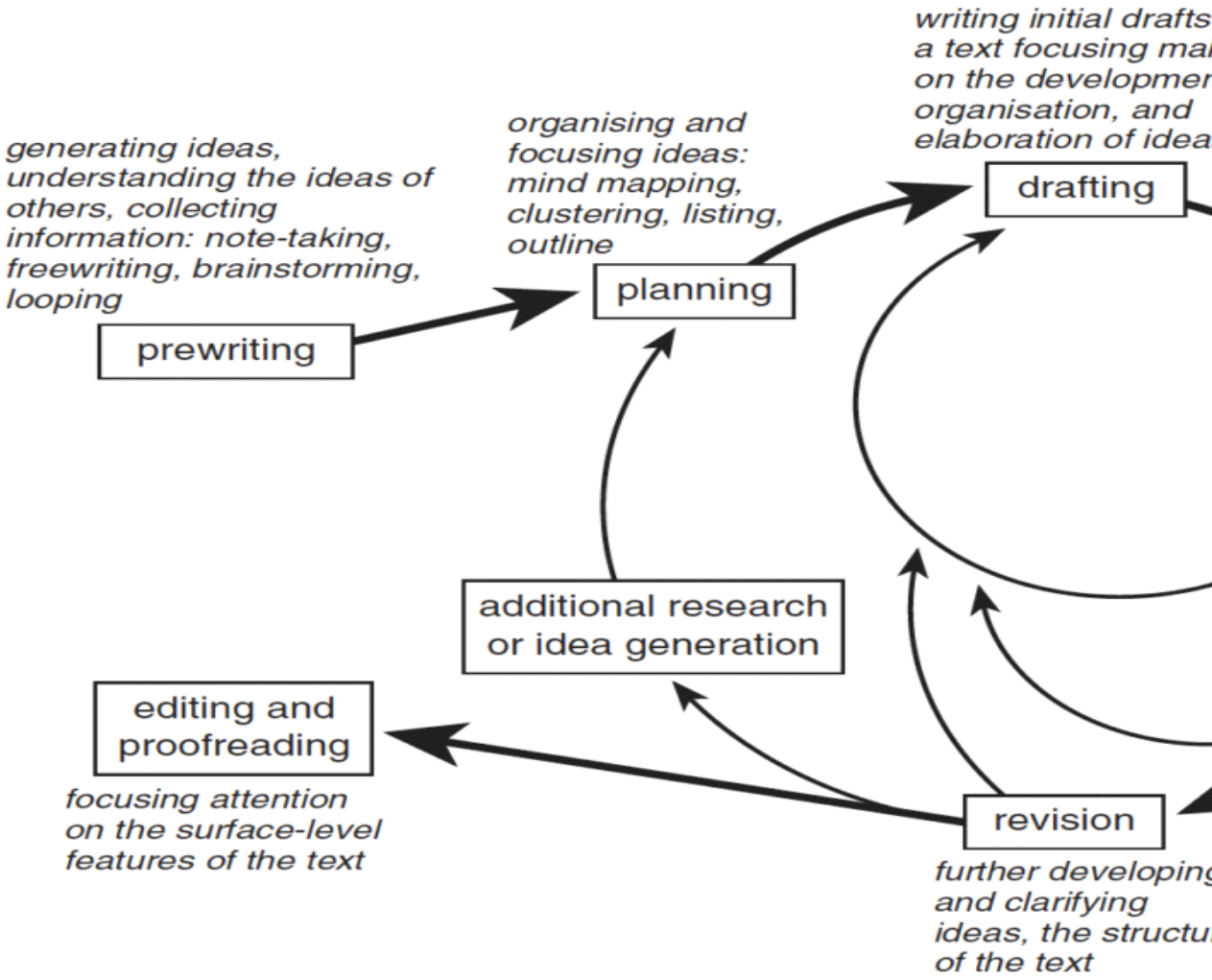
steps or stages. What is the chronological manner to know the technical writing

process?

ANS;

- **Design *processes to creatively solve complex problems :-***

- ***Using writing processes to create complex documents :-***



-:The Technical Writing Process:-

Technical writing is the practice of documenting processes, such as software manuals or instructional materials. Traditionally, it was limited to user manuals of some sort.

Skills Needed for Technical Writing

To be a successful technical writer, there is a core set of skills that you will want to master. Here are some of the most common skills needed to be successful:

Research

Research is one of the first steps in technical writing. After you have an assignment, you will be responsible for collecting the data (numerical and non-numerical) and turning it into valuable information.

Research can come from a variety of places including:

- On-Site Data

- Online and Intranet Publications
- Interviews
- Libraries and Research Databases

After you have researched, you will need to synthesize and begin planning your document organization.

Audience Perception

The technical information you research and gather has to be shaped for reader interest, understanding, and perception.

Technical writers often have to communicate highly technical information to a non-technical audience.

Therefore, an early step in the most effective technical

writing process is analyzing your audience carefully so you can match information to their needs.

Communication Skills

Communication skills are imperative to be a successful technical writer. You will likely be working with multiple teams and individuals from differing roles. Your ability to listen, record, and communicate will be crucial.

Technical Skills

It is imperative that you understand the technical nature of the content you are writing about.

It is difficult to clearly convey a concept that you have not mastered. Many technical writers have academic

or workplace experience in the topic they are writing about and many technical writers have job titles of engineer, geologist, seismologist, financial analyst, or business analyst. They are employed in technical positions and have to summarize information cross-functionally to other areas of the company.

Technical writing is slightly easier if you come from the technical side and are learning to write. It is sometimes more difficult if your background is in writing and you are trying to learn the technical content.

Writing

Excellent writing skills ensure your documents are easy to read and are free of errors. Writing encompasses many of the other skills on this list.

It is important that you have the correct tone, style, and format for your document.

Often these rules are outlined by the employing organization in a style guide.

Document Design

You may be responsible for **adding graphics** to complement your document.

It is important that the graphics aid the reader in comprehending the information. Graphs, tables, and charts are commonplace in technical reports.

You will also need to be proficient in formatting documents. The formatting should be professional and aid the reader in navigating the document. Headings should be easy to skim, and the content should be organized logically.

A poorly designed document will make it more difficult for the reader to understand the content. Document design is a key aspect of technical writing.

Fluency with Digital Tools

Today writers must use multiple tools during the technical writing process. This often goes beyond basic text editors. Technical writers are expected to be able to create graphics and annotate images and screen captures and extract data from Excel and convey that data in charts and tables.

Additionally, they can utilize planning, writing, and editing tools used by business writers. We have compiled a list of our **top business writing tools here**.

User Research and Testing

Some forms of technical writing may require user research and testing. An example application where detailed research and testing would be appropriate is a

written guide instructing engineers how to fix a faulty mechanism on a deep ocean oil rig.

It is important that the documentation is easy to follow, especially if the application is crucial to a major function. To accurately write the guide, the writer may first observe how engineers solve the problem. They may use recording devices or just notes to write down the research. This type of research is closely related to testing.

Testing is necessary to ensure your document functions as intended.

After the writer has completed a draft of the document, they may give it to a test group to read.

They can then observe the end users following the instructions in real time.

They may follow-up with a focus group or survey to get feedback on the usefulness of the document. They will use these real-world insights as they revise the document.

Even in less complex or critical applications, it is always a good idea to have a third party read over the text. This helps combat the curse of knowledge. The curse of knowledge is a cognitive bias that an individual has when trying to explain something they already understand. As an expert, it is hard to put yourself in the shoes of the learner who is less experienced.

This is why having a second set of eyes look at the document can help alert you to areas that need to be improved.

Industries That Use Technical Writing

Today technology has expanded into every facet of business. Companies continue to develop ever more technical processes in search of higher efficiency and profit.

Below is a list of industries where strong technical writing is required.

- Biotech & Pharmacy
- Consulting
- Energy and Chemical

- Engineering
- Information Technology
- Financial Services
- Government & Nonprofit
- Insurance
- Manufacturing
- Supply chain

Q2;

In research the question leads to a problem that needs to be solved by the

researcher. Clearly explain the parameters within which your proposal must stay.

ANS;

A research problem is a statement about an area of concern, a condition to be improved, a difficulty to be eliminated, or a troubling question that exists in scholarly literature, in theory, or in practice that points to the need for meaningful understanding and deliberate investigation. In some social science disciplines the research problem is typically posed in the form of a question. A research problem does not state how to do something, offer a vague or broad proposition, or present a value question.The purpose of a problem statement is to:

THE PURPOSE OF A PROBLEM STATEMENT ;

Introduce the reader to the importance of the topic being studied. The reader is oriented to the significance of the study and the research questions or hypotheses to follow.

Places the problem into a particular context that defines the parameters of what is to be investigated.

Provides the framework for reporting the results and indicates what is probably necessary to conduct the study and explain how the findings will present this information.

HOW TO WRITE A RESEARCH PROPOSAL

Abstract;

Writing the proposal of a research work in the present era is a challenging task due to the constantly evolving trends in the qualitative research design and the need to incorporate medical advances into the methodology. The proposal is a detailed plan or 'blueprint' for the intended study, and once it is completed, the research project should flow smoothly. Even today, many of the proposals at post-graduate evaluation committees and application proposals for funding are substandard. A search was conducted with keywords such as research proposal, writing proposal and qualitative using search engines, namely, PubMed and Google Scholar, and an attempt has been made to provide broad guidelines for writing a scientifically appropriate research proposal.

Key words: Guidelines, proposal, qualitative, research

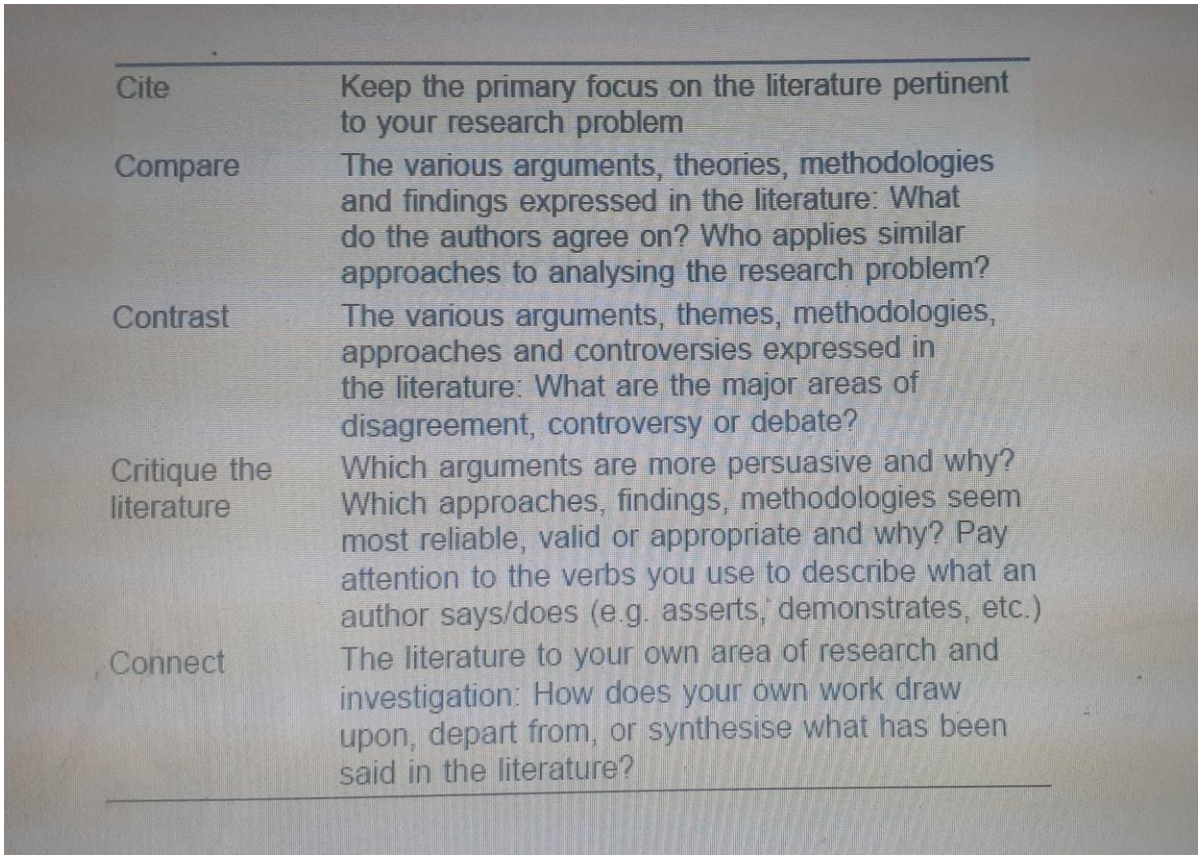
INTRODUCTION

A clean, well-thought-out proposal forms the backbone for the research itself and hence becomes the most important step in the process of conduct of research.[1] The objective of preparing a research

proposal would be to obtain approvals from various committees including ethics committee [details under 'Research methodology II' section [Table 1] in this issue of IJA) and to request for grants. However, there are very few universally accepted guidelines for preparation of a good quality research proposal. A search was performed with keywords such as research proposal, funding, qualitative and writing proposals using search engines, namely, PubMed, Google Scholar and Scopus.

Table 1

Five 'C's while writing a literature review



Cite	Keep the primary focus on the literature pertinent to your research problem
Compare	The various arguments, theories, methodologies and findings expressed in the literature: What do the authors agree on? Who applies similar approaches to analysing the research problem?
Contrast	The various arguments, themes, methodologies, approaches and controversies expressed in the literature: What are the major areas of disagreement, controversy or debate?
Critique the literature	Which arguments are more persuasive and why? Which approaches, findings, methodologies seem most reliable, valid or appropriate and why? Pay attention to the verbs you use to describe what an author says/does (e.g. asserts, demonstrates, etc.)
Connect	The literature to your own area of research and investigation: How does your own work draw upon, depart from, or synthesise what has been said in the literature?

BASIC REQUIREMENTS OF A RESEARCH PROPOSAL

A proposal needs to show how your work fits into what is already known about the topic and what new paradigm will it add to the literature, while specifying the question that the research will answer, establishing its significance, and the implications of the answer.[2] The proposal must be capable of convincing the evaluation committee about the credibility, achievability, practicality and reproducibility (repeatability) of the research design.[3] Four

categories of audience with different expectations may be present in the evaluation committees, namely academic colleagues, policy-makers, practitioners and lay audiences who evaluate the research proposal. Tips for preparation of a good research proposal include; 'be practical, be persuasive, make broader links, aim for crystal clarity and plan before you write'. A researcher must be balanced, with a realistic understanding of what can be achieved. Being persuasive implies that researcher must be able to convince other researchers, research funding agencies, educational institutions and supervisors that the research is worth getting approval. The aim of the researcher should be clearly stated in simple language that describes the research in a way that non-specialists can comprehend, without use of jargons. The proposal must not only demonstrate that it is based on an intelligent understanding of the existing literature but also show that the writer has thought about the time needed to conduct each stage of the research.[4,5]

CONTENTS OF A RESEARCH PROPOSAL

The contents or formats of a research proposal vary depending on the requirements of evaluation

committee and are generally provided by the evaluation committee or the institution.

In general, a cover page should contain the (i) title of the proposal, (ii) name and affiliation of the researcher (principal investigator) and co-investigators, (iii) institutional affiliation (degree of the investigator and the name of institution where the study will be performed), details of contact such as phone numbers, E-mail id's and lines for signatures of investigators.

The main contents of the proposal may be presented under the following headings: (i) introduction, (ii) review of literature, (iii) aims and objectives, (iv) research design and methods

Q3;

Assume that your manager wants to create a Web page/ Facebook page/

YouTube channel. Investigate the situation, and write a report explaining the

feasibility of creating and maintain a Web page/Facebook page/ YouTube

channel

ANS;

Summary

This report is all about how a web-page is better than a facebook page and why are we preferring a pre-paid project over a free project(facebook doesn't cost you to build your personal page or channel instead they charge their advertisers and even pay you if you've sufficient subscribers)

The possibilities:

The above project is very simple and easy to made.

- we'll hire a freelancer who will make us a tweb-page in no time and easily.
- Also there are a whole lot of websites through which we can build our web-page with their guidance.

We can contact a software company and they'll do it for us.

- It can be perfectly done under our project budget.
- This project will be completed in the allocated time.
- It is totally legal to create a web-page through the above mentioned sources.

Financial Viability:

- The above project should be done because it'll fulfill all our needs.
- it'll have long terms benefits that'll outweigh the costs because it is a life time project.
- This project is very affordable and it'll provide us the expected result.
- This is the need of our company and we must do it.
-

Q4;

The report is generally written for the purpose of solving a problem. There are

many different types of reports. Define different types of reports and explain the

particular requirements for the Formal report.

ANS;

REPORT;

A report is a specific form of writing that is organised around concisely identifying and examining issues, events, or findings that have happened in a physical sense, such as events that have occurred within an organisation, or findings from a research investigation.

DIFFERENCE TYPE OF REPORT;

there are eight type of report

Formal or Informal Reports:

Formal reports are carefully structured; they stress objectivity and organization, contain much detail, and are written in a style that tends to eliminate such elements as personal pronouns. Informal reports are usually short messages with natural, casual use of language. The internal memorandum can generally be described as an informal report.

Short or Long Reports:

This is a confusing classification. A one-page memorandum is obviously short, and a twenty page report is clearly long. But where is the dividing line? Bear in mind that as a report becomes longer (or what you determine as long), it takes on more characteristics of formal reports.

Informational or Analytical Reports:

Informational reports (annual reports, monthly financial reports, and reports on personnel absenteeism) carry objective information from one area of an organization to another. Analytical reports

(scientific research, feasibility reports, and real-estate appraisals) present attempts to solve problems.

Proposal Report:

The proposal is a variation of problem-solving reports. A proposal is a document prepared to describe how one organization can meet the needs of another. Most governmental agencies advertise their needs by issuing "requests for proposal" or RFPs. The RFP specifies a need and potential suppliers prepare proposal reports telling how they can meet that need.

Vertical or Lateral Reports:

This classification refers to the direction a report travels. Reports that more upward or downward the hierarchy are referred to as vertical reports; such reports contribute to management control. Lateral reports, on the other hand, assist in coordination in the organization. A report traveling between units of the same organization level (production and finance departments) is lateral.

Internal or External Reports:

Internal reports travel within the organization. External reports, such as annual reports of companies, are prepared for distribution outside the organization.

Periodic Reports:

Periodic reports are issued on regularly scheduled dates. They are generally upward directed and serve management control. Preprinted forms and computer-generated data contribute to uniformity of periodic reports.

Functional Reports:

This classification includes accounting reports, marketing reports, financial reports, and a variety of other reports that take their designation from the ultimate use of the report. Almost all reports could be included in most of these categories. And a single report could be included in several classifications.

Although authorities have not agreed on a universal report classification, these report categories are in common use and provide a nomenclature for the study (and use) of reports. Reports are also classified on the basis of their format. As you read the classification structure described below, bear in mind that it

overlaps with the classification pattern described above.

Requirements of Formal Report;

Report

Transmittal Memo

Bound

Front Matter

❑ Cover (no page number; includes report title, group members names, graphic)

❑ Title Page (report title, submitted to, submitted by, date, brief summary, page

number counted, but suppressed)

❑ Table of Contents (outlines report, page #s match TOC page, indicates

heading levels)

❑ Informative Abstract/Executive Summary (Most important section.

Should be a concise, to-the-point summary of the report's contents—

readable, not choppy, numbered as page ii)

❑ Project Summary (Opt.)

❑ List of Illustrations

❑ List of Symbols (Opt.)

Body

❑ Introduction (establishes context, background, purpose, objectives, scope of

report, page 1)

❑ Background, Problem Description, Needs Assessment (some of this

information may be included in subsections of the introduction)

❑ Materials and Methods (discusses the materials and methods used during

your experiment, study or project)

❑ Results and Discussion (explains results, offers appropriate visuals to help

communicate findings. Most likely the longest section.)

❑ Recommendations (makes recommendations based on conclusions,

demonstrates how solution meets established criteria)

❑ Conclusions (summarizes report and effectively ends communication; grows

out of information presented in report; informs audience you have achieved

your objectives)

End Matter

Glossary (Opt.)

Bibliography

Appendix (Opt.)

Style

Clear and concise

Specific details and description

Effective written communication

Effective graphics

Q5;

It is considered illegal to reproduce someone else's expression of ideas or

information without permission. Define the term which is used for this literary

crime and explain how to protect any “Fact” that have been considered the

intellectual property of the author.

ANS;

How To Avoid Plagiarism

Whether you’re interviewing a subject matter expert or introducing key findings from a report, third-party sources can lend extra authority to your work. There’s a difference, however, between weaving external sources into your writing for clout and misrepresenting the source’s ideas or words as your own.

Here’s why avoiding plagiarism is so important and how to avoid plagiarism in your work.

What is plagiarism?

According to the Merriam-Webster dictionary, the verb “to plagiarize” means:

“to steal and pass off (the ideas or words of another) as one’s own : use (another’s production) without crediting the source”

The inclusion of the word “steal” in this definition, includes instances when another’s ideas or words are

intentionally used without crediting the source. Even accidentally using another's ideas or words without proper citation, due to carelessness, falls under this definition since your work tries to "pass off" another's work as your own.

In our tech-forward culture, the simple act of copy-and-paste can seem harmless, but it has serious consequences in academic and professional settings.

Why should you avoid plagiarism?

At its core, plagiarism is an ethical issue. A writer who submits plagiarized work is committing theft with the hope of benefiting from that theft. This is true whether you're turning in a school paper to get an "A" or are a writer by trade expecting monetary compensation.

Avoiding plagiarism is paramount as a writer because it compromises your integrity. Aside from losing the respect of your mentors and peers, it could cost you valuable professional referrals and future career advancement. If you're still in school, plagiarism may result in lost financial aid or leadership roles.

Additionally, it takes credit or profit away from the original creator of the work which may mean more trouble if the source takes legal action against you.

Here's a tip: Grammarly offers a plagiarism checker that detects plagiarism in your text and checks for other writing issues.

5 ways to avoid plagiarism

Fortunately, it's not all scary. Avoiding plagiarism is actually easy to do now that you have a foundational understanding of what it is. To help you steer clear of this taboo, here's how to avoid plagiarism in your writing.

1 Cite your source

When alluding to an idea or wording that's not your own, add a citation in your writing that identifies the full name of the source, the date it was published, and any other citation element that's required by the style guide you're adhering to.

2 Include quotations

If you insert a source's words into your writing, verbatim, one of the most simple yet obvious ways to avoid plagiarism is by using quotation marks around the text to denote that the words aren't your own. A direct quote should also cite the source so that readers know who the quote is from.

3 Paraphrase

Paraphrasing is rewriting a source's ideas or information into your own words, without changing its meaning. But be careful—paraphrasing can slip into plagiarism if done incorrectly.

Successfully paraphrasing without plagiarizing involves a bit of a dance. Reword and format your writing in an original way, and try to avoid using too many similar words or phrases from the source. The key is to do so without altering the meaning of the idea itself. Remember, you're still using another's idea so you'll need to include a citation to the source.

4 Present your own idea

Instead of parroting the source's ideas or words, explore what you have to say about it. Ask yourself what unique perspective or point you can contribute in your writing that's entirely your own. Keep in mind that if you're alluding to a source's ideas or words to frame your own point, you'll still need to apply the guidelines above to avoid plagiarizing.

If you're writing on the same topic for multiple assignments, it can be tempting to recycle some of your previous words—this is called "self-plagiarism".

The risk involved with self-plagiarism is just as high if the publisher or your instructor didn't give you permission to reuse your old work.

5 Use a plagiarism checker

While conducting your research on a topic, some phrases or sentences might stick with you so well that you inadvertently include them in your writing without a citation. When in doubt, using an online plagiarism checking tool can help you catch these issues before submitting your work.

There are several plagiarism checkers online, such as the one offered by Small SEO Tools. Grammarly also offers a plagiarism checker that scans your text for borrowed content for free. These tools let you know whether or not parts of your writing are plagiarized—and some even highlight the specific words or sentences of concern and identify where the text originated from.

These suggestions can be helpful in avoiding plagiarism in your work and is worth the effort. In addition to being more aware of what constitutes plagiarism, figuring out how to avoid plagiarism ultimately takes daily practice.