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Readings

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Digital Natives, Digital Immigrants by Mark Prensky

Confronting the Challenges of Participatory Culture: Media Education for the 21st Century by Henry Jenkins

Why We Need to Teach 21st Century Skills—And How to Do It by Bob Regan

Study Room 1 – Critical Reading and Summary

Introduction

Reading academic material, whether course work or research material, can sometimes be a daunting task. We don't always find it easy to understand what we're reading, and sometimes we aren't sure why we are reading something or how it will help us.

Luckily, you can develop your reading skills to help you make the most of your academic experience. When we first engage with course work or research material, our first task is to understand and summarize what we have read. From this, we will be able to work with these new ideas in more complex ways.

Overall, this Study Room will help you develop your ability to read and understand a professional article, identify the main arguments and ideas in that article, and express those main ideas clearly and accurately in a well-formatted summary essay.

What is an Academic Summary?

We summarize information all the time, for example by explaining what we did on the weekend or describing a favourite movie. But academic summary is a little more involved.

The goal of academic summary is *to identify and express the most necessary ideas from the work*. As you move through your studies, you will be expected to read and learn from many sources, including articles, textbook chapters, videos and podcasts.

To manage all this, you will need to get good at understanding what you read in order to filter the information, and identify the most important ideas and arguments. These key ideas can be summarized so you can use them in exams and write papers.

Remember, you only truly understand a source if you can summarize it effectively.

How to Start

Study Room 1 offers 3 lessons that guide you through a process of critical reading and the development of a summary essay.

This Study Room works best when you complete the lessons in order. In each lesson, you build on the work completed in the one before it until, finally, you complete a summary essay.

Can't do it all? No problem. Dip in to any lesson to find useful tips, templates and samples on each topic.

Menu

- **Reading to Understand (Lesson A).**

  To summarize an article, you must first be able to understand the ideas it presents.

- **Filtering the Information (Lesson B).**

  Once you understand an article, you must be able to identify the main ideas.

- **Writing the Summary (Lesson C).**

  You must understand the conventions and expectations of an academic summary in order to express the main ideas succinctly and clearly.

You can work progressively through the lesson, or choose a specific section.

Reading to Understand (Lesson A)

Critical reading essentially means reading in such a way as to ensure you truly understand the ideas, arguments and assumptions of the article.

It's easy to skim over articles and textbook chapters and tell ourselves that we've really understood them. But, it's not until you have to apply that information, on a test for example, that you find out if you've really read to understand them.

This lesson will cover three steps: active reading, reading for context, and reading for content.

My readings for class are so boring. I keep checking my phone every 15 seconds. I'm never going to finish!

Have you tried taking notes while you read? It'll keep your brain engaged and help you remember!

Active Reading

Active reading means reading with a purpose. Not everything we read will be exciting to us. But sometimes, we just really need to get through it and understand it. One way to do that is to understand why we are reading something, and to work at staying engaged in the reading to achieve that purpose. Tricks like reading with a pencil, noting down key information while we read, and explaining what you've read to someone else, are useful.

Reading for Context

In addition to active reading, strong critical readers read for context. Before you even begin reading, you can learn a lot about a work just by considering what it is and where it came from.

The questions in Reading for Context (Reference) can help you to evaluate the context of a source and then make decisions about what kind of information you might be getting, how authoritative that information is, and how relevant it might be to your needs.

Reading for Context (Reference)

Ask these questions	What will you learn asking these questions?
What am I reading?	Always consider the source. What kind of information do you have? A well-researched magazine article or a promotional website?
Who is the author?	Investigate the author to understand both their perspective and background on the topic, as well as their authority – are you reading an expert or just someone's personal opinion?
When was it written?	Historical information can be very valuable, but it must be considered in the context of its publication date.
Why was it written?	Can you determine the purpose or goal of the work based on the publication source, title, or abstract?
Tips	
Reliability. Always understand how reliable a source is and never give more value to a source that it deserves. **Authority.** Always understand how much the author knows about the topic and what the underlying purpose of goal of a work is.	

Practice Reading for Context

Now it's your chance to practice reading for context. In this lesson, we will practice on Marcus Wohlsen's 2014 article "Digital Literacy is the Key to the Future, But We Still Don't Know What It Means," published in *WIRED,* an on-line technology journal.

Answer the questions in the table to assess the context of the article. When you've finished, view the sample answers.

Reading for Context:

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

Reading for Context (Practice)

1. **What am I reading?** What are your first impressions of the website for *WIRED*? Do you know this online journal? What kind of information do you think you will find here? What do you think the purpose of this journal might be? Marketing? Information? Explore the website and learn about *WIRED.*
2. **Who is the author?** Investigate Marcus Wohlsen. What else has he written? Is he qualified to write an article on digital literacy? What are his research interests? Is his writing generally fun, light or learned?

3. **When was it written?** Do you think the information in this article will still be relevant to the debate around digital literacy today?
4. **Why was it written?** Based on the title and perhaps a quick scan of the article, can you determine the basic purpose of the article? What do you think Wohlsen will discuss?

Reading for Content

An academic summary demonstrates a strong understanding of the main idea and key points of a source. As we read for content, we can use the context for clues to understanding, and we can focus our attention with active reading skills.

When we read for content, we are looking for three main things:

1. The larger topic and focus
2. The main idea
3. A map of the key points

Reading for Content (Reference)

Thinking Process	Parts of the Summary:
1. **Identify the larger topic or focus.** Every work starts with a general topic or focus. Usually a writer is motivated to say something about this topic, which can be a social issue or debate.	Describe the basic topic or focus of a work.
2. **Identify the main idea.** Every work has, at its core, one main idea. This idea is the thing the author most wants us to understand.	Then identify the main idea -- what the author has to say about that topic.
3. **Map the key points.** Every work is developed in a set of key points. Each of these points is offered because it helps us understand the author's main idea.	And finally list the key points the author offers to develop that main idea.

Practice Reading for Content

Now, let's work on reading Wohlsen's article, focusing on the content.

As you read Wohlsen, answer the questions in the Reading for Content (Practice). Remember to take notes while you're reading, marking key points or questions. This marking, or *annotation*, can help you understand the article better.

Critical Reading and Summary

Reading for Content (Practice)

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

TOPIC

Identify the larger topic or focus.

1. What topic or social debate is being addressed in this article?
2. Does the author seem to have a clear focus on a particular question or issue?
3. Does the author seem to offer a particular opinion or stance on a topic or issue?

MAIN IDEA

Identify the main message.

1. Is the author trying to teach us something or persuade us of something? What is it?
2. What do you think Wohlsen most wants us to understand by reading his article?
3. Can you find one place where the article states this main idea? Is it in the introduction or does it come later in the piece?

MAP

Map the key points.

1. Make a list of the key points offered in the article.
2. Note how each point relates to the main idea.
3. Focus on the most necessary ideas.

Filtering the Information (Lesson B)

Once we have read over an article to establish a good understanding of the main topic and ideas, we can begin to filter the information.

Note

This lesson is based on the article by Marcus Wohlsen:

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

If you haven't already, you will want to read the article now.

You do not need to have completed Lesson A to enjoy this lesson. If you haven't completed it, you can use the following resources to help you in this lesson:

- Reading for Content (Sample Answers)

We filter all the information in an article in order to highlight the essential points and illustrate the logic within the author's argument.

This lesson includes two steps:

1. Distinguish the essential information from supporting detail.
2. Create a reverse outline of the article, which means to recreate the outline of ideas the author used to write the article.

Distinguish Key Points from Supporting Details

I'm drowning in information! How do I know what's important?

Perhaps the biggest challenge in producing a summary of an article is forcing yourself to distinguish between key points and supporting detail. Often the examples and anecdotes that make up the supporting detail are the easiest parts of an article to understand and engage.

However, it's essential not to be drawn into the detail. Your task is to find the most important things the author wants you to know. One way to do this is to create a reverse outline.

Don't get lost in detail. Look for the main ideas the author want you to know.

Create a Reverse Outline

To create a reverse outline, you work backwards from the article to produce what the author might have used as an outline.

Now, we will work to refine and filter information to avoid too much detail. Based on a reverse outline, we should be able to see exactly what the author wanted to say, and get a clear sense of how they said it.

Reverse Outline Template (Reference)

<table>
<tr><td colspan="2">Topic and Main Ideas:
• Capture the core purpose of the article.
• Why did the author write this article? What did they want us to know?</td></tr>
<tr><td>Topic:</td><td>State the topic or question the author is interested in.</td></tr>
<tr><td>Main Idea:</td><td>State the main message or argument. What does the author say about the topic?</td></tr>
<tr><td colspan="2">Key Points:
• Filter the article content until you find the 2 or 3 key points that are developed in the discussion. Each of these key ideas might develop over several paragraphs, but could be summarized in a sentence or two.
You do not need to summarize every detail. You do not need to summarize the information in every paragraph.
• For each of these key points, note the content and the function.
The content is the actual point that the author expresses.
The function is the role that point plays in the article. Is the point an example to help develop the argument? Is the point key background information that we need to understand the argument? To identify the function, ask yourself why the author has included this information in the article.</td></tr>
<tr><td colspan="2">Key Point #1
Content:

Function:</td></tr>
<tr><td colspan="2">Key Point #2
Content:

Function:</td></tr>
<tr><td colspan="2">Key Point #3
Content:

Function:</td></tr>
</table>

Practice Completing the Reverse Outline

Let's use this template now to practice completing a reverse outline of the Wohlsen article.

Type your answers into the boxes provided, and review the sample answers.

Reverse Outline of Wohlsen's Article (Practice)

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/
Topic: State the topic or question the author is interested in.
Main Idea: State the main message or argument. What does the author say *about* the topic?
Now, list the content and function of each key point in the article. Your answers may not match the sample answers exactly, and that's ok. But make sure you haven't missed any key ideas. You may not have 5 key points. That's ok. Just use the space you need.
Key Point #1 Content: Function:
Key Point #2 Content: Function:

Critical Reading and Summary

Key Point #3 Content: Function:
Key Point #4 Content: Function:
Key Point #5 Content: Function:

Writing the Summary (Lesson C)

In this Lesson, we will work to draft a well-written summary.

Note

This lesson is based on the article by Marcus Wohlsen:

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

If you haven't already, you will want to read the article now.

You do not need to have completed Lesson B to enjoy this lesson. If you haven't completed it, you can use the following resources to help you in this lesson:

- Reading for Content (Sample Answers)
- Reverse Outline of Wohlsen's Article (Sample Answers)

This lesson provides 3 tips to help you produce the summary. First you will consider a suitable writing style for a summary. Next, you will consider the value of a language of attribution to introduce the author in the summary. And, finally, you will consider the conventional structure of a summary.

Writing Style

Once you have completed the reverse outline of an article, you are ready to write your summary. Remember, the purpose of a summary is to capture an article's essential information in a clear and simple way. When we read your summary, we should understand the author's main idea and have a basic sense of how that idea is developed in the article.

Focus on the following tips for writing style:

- Use short paragraphs to indicate the key ideas of the original article, capturing its main *content*.
- Try to capture how the article moved from point to point to develop its argument. You can represent the logical development of the argument by looking at the *function* of each key point.
- Write the summary in your own words and avoid quoting chunks of text from the original article.

Language of Attribution

While you are writing the summary in your own words, you still need to indicate that the ideas and arguments come from the author of the original article.

To do this, you will use attribution, which is a fancy way of saying you will indicate that the author is behind the ideas.

Compare these examples:

☹ *We risk oversimplifying our understanding of digital literacy unless we define how and why our young people should learn to code.*

☺ ***Wohlsen states that*** *we risk oversimplifying our understanding of digital literacy unless we define how and why our young people should learn to code.*

Because we are writing a summary of Wohlsen, we know that the idea belongs to him. But, the summary will be more effective and professional if we use a language of attribution throughout, indicating that all the ideas are his and not ours.

Structure

To write the summary, we can use the following Summary Template Reference. After you have completed a reverse outline, you will write the information up into proper sentences and paragraphs, remembering to use the language of attribution.

Summary Template (Reference)

Introductory Paragraph

Your introduction must include the following 3 components or features. (They can be combined into complex sentences.)

1. One sentence introducing the title, author, date and source of the article.
2. One sentence statement of the topic or question being addressed.
3. 1-2 sentences *summarizing* the author's main message (overall, what does the article say?).

Body Paragraphs

Develop your summary in short paragraphs. Generally, write one short paragraph for each of the key points, but these can be combined.

For each paragraph on a key point:

1. Describe the content of the point.
2. Indicate its function in the article as a whole.
3. Use language of attribution.
4. Use transitions between points to capture the logical development of the author's discussion .

Conclusion

Write a short closing that reinforces the significance of the article.

1. Why is this article important?
2. How does it add to our knowledge of the topic?

Practice Writing a Summary

Let's practice writing a summary of the Wohlsen article. Use your notes from the reverse outline to help you. If you need, you can use the sample answer for the reverse outline. When finished, compare your answer to the sample.

Using the template as a guide, write a summary of the Wohlsen article in the boxes provided.

I think I'll get a lot more out of my reading now.

Good. Because you need to understand what you read very well before you can move forward.

Summary (Practice)

Introductory Paragraph

Your introduction must include the following 3 things. (They can be combined into complex sentences):

1. One sentence introducing the title, author, date and source of the article.
2. One sentence statement of the topic or question being addressed.
3. 1-2 sentences *summarizing* the author's main message (overall, what does the article say?)

Body Paragraphs

Develop your summary in short paragraphs. Generally, write one short paragraph for each of the key points, but these can be combined.

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3. Use language of attribution.
4. Use transitions between points to capture the logical development of the author's discussion.

Conclusion

Write a short closing that reinforces the significance of the article.

1. Why is this article important?
2. How does it add to our knowledge of the topic?

Sample Answers

Reading for Context (Sample Answers)

1. **What am I reading?**

   What are your first impressions of the website for *WIRED*?

   Do you know this online journal?

   What kind of information do you think you will find here?

   What do you think the purpose of this journal might be? Marketing? Information?

   Explore the website and learn about *WIRED.*

WIRED is a reputable online journal that explores the impact of technology across many areas of human experience. According to its website, "the WIRED conversation illuminates how technology is changing every aspect of our lives – from culture to business, science to design."

When we explore the website, we learn that WIRED offers research and insight from a variety of experts across a wide range of disciplines. The information is journalism based, rather than academic, but clearly captures and investigates current trends and debates in its field.

The journal may be of significant use when doing further research for assignments in this course.

2. **Who is the author?**

   Investigate Marcus Wohlsen. What else has he written?

   Is he qualified to write an article on digital literacy?

   What are his research interests? Is his writing generally fun, light or learned?

Marcus Wohlsen is the senior editor for WIRED Business. As an experienced journalist, he has written many articles and a book investigating the intersections of business and technology.

While his work traces and investigates key themes and events in this field, we can distinguish it from more traditional academic analyses which would require more primary research and peer review.

3. **When was it written?**

   Do you think the information in this article will still be relevant to the debate around digital literacy today?

This article was written in 2014 meaning that the ideas about digital literacy and coding are probably still very current and relevant.

Sample Answers

4. **Why was it written?**

   Based on the title and perhaps a quick scan of the article, can you determine the basic purpose of the article?

   What do you think Wohlsen will discuss?

Based on the title of the article, it seems that Wohlsen will explore a debate around the concept of "digital literacy."

The title of Wohlsen's article gives us clues to the debate: having digital literacy will be crucial to success in the future, but as a society we don't really agree about what that includes. What is the best way to define it? Or, another way to say this: what digital skills do we need in the future?

- Now, we can think of a few questions we might have while we read the content of the article:
- Are there different opinions about what digital skills we need?
- Why are digital skills going to be so important?
- Does Wohlsen finally define what he thinks digital literacy should be?

Reading for Content (Sample Answers)

Wohlsen, M. "Digital Literacy is the Key to the Future."

TOPIC

Identify the larger topic or focus.

A. What topic or social debate is being addressed in this article?

B. Does the author seem to have a clear focus on a particular question or issue?

C. Does the author seem to offer a particular opinion or stance on a topic or issue?

- Success in the future depends on digital literacy.
- Digital literacy is "the idea that the world's citizens, and kids in particular, will benefit if they're skilled in the ways of information technology".

Wohlsen engages with a particular social debate or problem: What does it mean to be digitally literate? How well should we be able to use information technology? What does "learning to code" really include?

MAIN IDEA

Identify the main message.

A. Is the author trying to teach us something or persuade us of something? What is it?

B. What do you think Wohlsen most wants us to understand by reading his article?

C. Can you find one place where the article states this main idea? Is it in the introduction or does it come later in the piece?

- Wohlsen argues that we have to define what skills children really need to be digitally literate so that they learn and are prepared for the future.
- More specifically, drawing on several interviews, he argues that digital literacy should be about understanding the logic of computer coding, "computational thinking" or having an "algorithmic mindset," more than simply being able to use technology or even use a programming language.

MAP

Map the key points.

A. Make a list of the key points offered in the article.

B. Note how each point relates to the main idea.

C. Focus on the most necessary ideas.

- We have to provide our children with the skills they need so they can shape the future in the ways they need to.
- With the critical thinking skills informed by the logic of computational thinking the next generation will be able to make technology do what they want it to do.
- This must be distinguished from simply knowing how to use technology; we need to be creators rather than consumers.
- If we mistake the ability to use computers with the ability to think within the logical of computer coding, we risk missing the opportunity to provide true digital literacy.
- The limited skills base among teachers is one barrier to achieving this digital literacy.

Sample Answers

Reverse Outline of Wohlsen's Article (Sample Answers)

Wohlsen, M. "Digital Literacy is the Key to the Future."

Topic:

State the topic or question the author is interested in.

- The author is interested in the problem of how to define digital literacy.
- Basically, Digital literacy is "the idea that the world's citizens, and kids in particular, will benefit if they're skilled in the ways of information technology".
- But the problem is how to define exactly what technology skills kids actually need in the future. "Learning to code" is important, but it's not always clear what that really means.

Main Idea:

State the main message or argument. What does the author say *about* the topic?

- Wohlsen, using ideas from many experts in the technology and education fields, argues that skills in "computational thinking" or an "algorithmic mindset" are key to digital literacy.
- Such thinking, informed by the logic of coding, will be crucial in a world driven by information technology, and not just for those involved directly in computer programming.

Now, list the content and function of each key point in the article. Your answers may not match the sample answers exactly, and that's ok. But make sure you haven't missed any key ideas. You may not have 5 key points. That's ok. Just use the space you need.

Key Point #1

Content:

Defining digital literacy is important to ensure the younger generation develops the skills they need in the future.

Function:

Justifies the importance of the topic and his article.

Key Point #2

Content:

Skills in "computational thinking," including the ability to understand algorithm, can be applied outside the context of basic computer programming to solve larger social problems, especially in a world driven by data and information technology.

Function:

First reason why these are the skills key to digital literacy, and necessary for the next generation.

Key Point #3

Content:

With the critical thinking skills informed by the logic of "computational thinking" the next generation will be able to make technology do what they want it to do.

Function:

Second reason why these are the skills key to digital literacy, and necessary for the next generation.

Key Point #4

Content:

Skills in "computational thinking" are critical thinking skills that show deep knowledge of the logic of coding. These must be distinguished from simply knowing how to use technology; we need to be creators rather than consumers.

If we mistake the ability to use computers with the ability to think within the logic of coding, we risk missing the opportunity to provide true digital literacy.

Function:

Comparison to other approaches to digital literacy.

Key Point #5

Content:

The limited skills base among teachers is one barrier to achieving this digital literacy.

Function:

Identifies limits to his argument about the skills needed for digital literacy.

Sample Answers

Summary (Sample Answers)

Summary Template

In his 2014 article "Digital Literacy is key to the Future," published in *WIRED*, Marcus Wohlsen explores the problem of what skills children today will need to be digitally literate in a future defined by big data and information technology. Drawing on ideas and opinions from several experts in technology and digital education, Wohlen argues that skills in "computational thinking" or an "algorithmic mindset" are key to digital literacy. Such thinking, informed by the logic of coding, will be necessary in a world driven by information technology, and not just for those involved directly in computer programming.

Body Paragraphs

For Wohlsen, addressing this topic is necessary to ensure we as a society, in the fields of technology, education and government, correctly define, and then provide to our children, the skills needed for digital literacy.

Drawing on ideas from different experts, Wohlsen explains why skills in "computational thinking," which include critical thinking that shows deep knowledge of the logic of coding and the ability to collaborate, are necessary. First he argues that these skills can be applied outside the context of basic computer programming to solve larger social problems, especially in a world driven by data. Second, he argues these skills will empower the next generation to be able to make technology do what they want it to do.

Wohlsen is quick to distinguish these skills in "computational thinking" from simply knowing how to use technology. Putting computers in front of children to use is not the same as developing this unique form of critical thinking that can engage with algorithms and thus manage in a data-driven world. He warns that if we mistake the ability to use computers with the ability to think within the logic of coding, we risk missing the opportunity to provide true digital literacy.

The problem, Wohlsen concludes, is that confusing the ability to use computers with truly understanding the logic of computers will continue until more teachers have the ability to teach the logic of coding. Development of digital literacy in the classroom will have to start with the teachers.

Conclusion

Wohlsen's article highlights a great challenge facing not only the education system, but also families. Young people will need a new kind of literacy, a literacy based in a knowledge of coding and algorithms, but it is not clear where or how they will be given the opportunity to develop these skills.

Topic

Attribution and context

Provides rationale for the article

Paragraph compares his argument to a different approach and explains why his is better

Conclusion puts the message in context

Example of language of attribution

Main Argument

Paragraph outlines two reasons supporting his main argument about what skills are necessary

Paragraph notes barriers to achieving his main idea

Study Room 2 – Critical Thinking and Comparison

Introduction

Reading to understand is the first step in an academic process. Once we understand, we can then discuss, interpret and compare ideas as we engage with them. As we read, we engage ideas expressed by different authors working in different fields like science, education, and culture. We begin to see writers approach issues and debates with different sets of questions and assumptions. Our critical thinking skills help us to appreciate these differences and what we can learn from them.

Overall, this Study Room will help you develop skills in critical thinking and analysis and apply those skills in the development of a critical comparison of two articles. These analytical skills are the building blocks for many academic tasks, including understanding and responding to theories, arguments and in-depth analyses of a single work.

What is a Critical Comparison?

In a critical comparison, we compare what two different writers have to say about the same topic or problem. Our first task is to understand and compare what each writer says. Our second task is to consider *why* each writer takes the position that they do.

When we write a critical comparison, we ask: What assumptions does a writer make about a topic and how do these assumptions affect their claims and ideas about that topic? Asking questions like these is an example of **critical thinking**.

Why is This Important?

We need the skills of critical comparison to help us understand how and why writers from diverse backgrounds and with different perspectives can develop a variety of diverse opinions about the same issues or debates in society. Once we learn some of the differing opinions and arguments on a given issue, we can begin to develop our own informed positions on that topic.

How to Start

Study Room 2 offers 4 lessons that guide you through a process of critical thinking and the development of a critical comparison essay.

This Study Room works best when you complete the lessons in order. In each lesson, you build on the work completed in the one before it until, finally, you complete a comparison essay.

Can’t do it all? No problem. Dip in to any lesson to find useful tips, templates and samples on each topic.

Critical Thinking and Comparison

Menu

- **Summarizing the Information (Lesson A).**

  To think critically about the articles and compare them, you must first be able to understand them and present them clearly.

- **Identifying Key Issues or Debates (Lesson B).**

  Once you understand what each article says, you can identify the issues or debates that the authors engage.

- **Thinking Critically (Lesson C).**

  Next, you must consider how and why each author makes the arguments and assumptions they do about these issues or debates, and then compare their treatment of the issues.

- **Writing the Critical Comparison (Lesson D).**

  Finally, you must understand the basic structure of a comparison essay to present your critical comparison in a well-formatted essay.

You can work progressively through the lesson, or choose a specific section.

Summarizing the Information (Lesson A)

Our goal in this Study Room is to produce a critical comparison of Marcus Wohlsen's 2014 article "Digital Literacy is the Key to the Future, But We Still Don't Know What It Means," and Marc Prensky's 2001 article "Digital Natives, Digital Immigrants."

A successful critical comparison depends on a strong understanding of the arguments and assumptions of the articles to be compared. Our first step will be to review a reverse outline of Wohlsen's article, and our second step will be to develop a reverse outline of Prensky's argument.

For a more in-depth lesson in reverse outlines and summary, please check out the lessons in Study Room 1.

Note

You do not need to have completed Study Room 1 to enjoy and benefit from this lesson. If you haven't completed it, however, you should take some time now to read Wohlsen's article before you continue.

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

Outline for Wohlsen's Article

Let's begin by reviewing an outline of the key points from Wohlsen's article. If you haven't read Wohlsen's article yet, you should read it now before you begin.

As you read over the outline, especially consider how each of the key points helps Wohlsen to support his main idea about the topic.

Reverse Outline of Wohlsen's Article (Reference)

Topic: • Interested in the problem of how to define digital literacy. • Basically, Digital literacy is "the idea that the world's citizens, and kids in particular, will benefit if they're skilled in the ways of information technology." • But the problem is how to define exactly what technology skills kids actually need in the future. "Learning to code" is important, but it's not always clear what that really means.	State the topic or question the author is interested in.
Main Idea: • Wohlsen, using ideas from many experts in the technology and education fields, argues that skills in "computational thinking" or an "algorithmic mindset" are key to digital literacy. • Such thinking, informed by the logic of coding, will be crucial in a world driven by information technology, and not just for those involved directly in computer programming.	State the main message or argument. What does the author say about the topic?

Critical Thinking and Comparison

Key Point #1 Content: Defining digital literacy is important to ensure the younger generation develops the skills they need in the future. Function: Justifies the importance of the topic and his article.	**Content:** Describe the key point. What does the author say? **Function:** Explain why this information has been included in the article? How does it help the author develop the main idea?
Key Point #2 Content: Skills in "computational thinking," including the ability to understand algorithm, can be applied outside the context of basic computer programming to solve larger social problems, especially in a world driven by data and information technology. Function: First reason why these are the skills key to digital literacy, and necessary for the next generation.	**Content:** Describe the key point. What does the author say? **Function:** Explain why this information has been included in the article? How does it help the author develop the main idea?
Key Point #3 Content: With the critical thinking skills informed by the logic of "computational thinking" the next generation will be able to make technology do what they want it to do. Function: Second reason why these are the skills key to digital literacy, and necessary for the next generation.	**Content:** Describe the key point. What does the author say? **Function:** Explain why this information has been included in the article? How does it help the author develop the main idea?

Key Point #4 Content: Skills in "computational thinking" are critical thinking skills that show deep knowledge of the logic of coding. These must be distinguished from simply knowing how to use technology; we need to be creators rather than consumers. If we mistake the ability to use computers with the ability to think within the logic of coding, we risk missing the opportunity to provide true digital literacy. Function: Comparison to other approaches to digital literacy.	**Content:** Describe the key point. What does the author say? **Function:** Explain why this information has been included in the article? How does it help the author develop the main idea?
Key Point #5 Content: The limited skills base among teachers is one barrier to achieving this digital literacy. Function: Identifies limits to his argument about the skills needed for digital literacy.	**Content:** Describe the key point. What does the author say? **Function:** Explain why this information has been included in the article? How does it help the author develop the main idea?

Outline for Prensky's Article

Now, our task is to read, understand, and create a reverse outline for Prensky's article. When we have finished this step, we will have two outlines ready for comparison.

It's your turn to produce an outline, using the template offered, to develop a reverse outline of Marc Prensky's article. You can use the example on Wohlsen as a guide and, remember, if you need more help, review the lesson in Study Room 1.

1. Scan the article "Digital Natives, Digital Immigrants" and complete the **Reading for Context** questions.
2. Read the article and complete the **Reading for Content** questions to generate a reverse outline.

Reverse Outline of Prensky Article (Practice)

Marc Prensky, "Digital Natives, Digital Immigrants."
Reading for Context Use this information to help you understand who Prensky is and why the article is relevant.
1. **What am I reading? When was it written?** Look at the publication information for the article. What does this tell you about the level of quality or authority it might have? Do you think the information in this article will still be relevant to the debate around digital literacy today? Why/Why not?
2. **Who is the author?** Investigate Marc Prensky. What else has he written? What do others have to say about him and this article? Is he qualified to write an article on digital literacy? What are his research interests? Is his writing generally fun, light or learned?
3. **Why was it written?** Based on the title and perhaps a quick scan of the article, can you determine the basic purpose of the article? What do you think Prensky will discuss?

Reading for Content - Reverse Outline Template
Topic: State the topic or question the author is interested in.
Main Idea: State the main message or argument. What does the author say about the topic?
And now, outline how Prensky's develops this argument. List the content and function of each key point in the article. Your answers may not match the sample answers exactly, and that's ok. But make sure you haven't missed any key ideas.
Key Point #1 **Content:** Describe the key point. What does the author say? **Function:** Explain why this information has been included in the article? How does it help the author develop the main idea?

Key Point #2

Content:

Describe the key point. What does the author say?

Function:

Explain why this information has been included in the article? How does it help the author develop the main idea?

Key Point #3

Content:

Describe the key point. What does the author say?

Function:

Explain why this information has been included in the article? How does it help the author develop the main idea?

Key Point #4

Content:

Describe the key point. What does the author say?

Function:

Explain why this information has been included in the article? How does it help the author develop the main idea?

Identifying Key Issues or Debates (Lesson B)

Understanding an author's argument is only the first step in a larger critical thinking process. Now, we need to consider what each article says as part of a larger conversation in society

.

Note

This lesson draws on knowledge of two articles. If you haven't already, you will want to read them now.

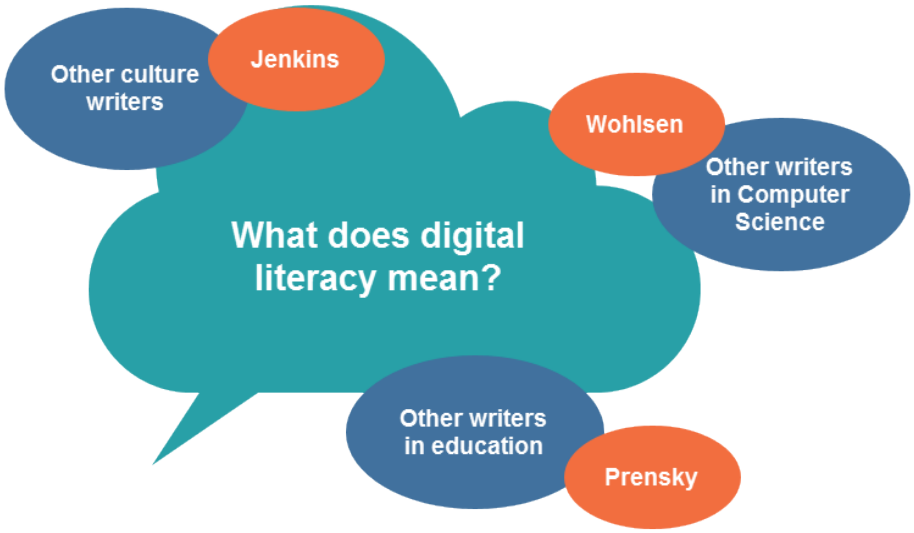
Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5). Retrieved 5 October 2001, from http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20 Immigrants%20-%20Part1.pdf

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

You do not need to have completed Lesson A to enjoy this lesson. If you haven't completed it, you can use the following resources to help you in this lesson:

- Reverse Outline of Wohlsen's Article (Sample Answers)
- Reverse Outline of Prensky Article (Sample Answers)

Writers like Wohlsen and Prensky do not write in a vacuum, isolated from the world. Just the opposite, they write in response to other writers, sharing and debating ideas. And more, the arguments and perspectives they send out are shaped by what they have read and been influenced by in the past.



Once we understand that articles are part of on-going conversations in society, we can begin to use those articles to map these larger social conversations. For example, we can look at several articles on the topic of digital literacy. We can begin to ask some questions: What do

different writers have to say about this topic? How do different writers define digital literacy? Why is it defined in different ways? What do writers in the field of computer studies have to say about this topic? What do writers in the field of education have to say? Do writers in different fields have different views on this topic? Why?

The questions can go on and on. By asking these kinds of questions, we are exploring the different arguments and assumptions about a topic in our society. We will start by developing a comparison of just two arguments about digital literacy – Wohlsen's and Prensky's.

We will do this in two steps. In Step 1, we will look at a process for identifying issues and debates in an article. In Step 2, we will practice matching the information from each article to define a shared topic.

Asking Questions About An Article

Our challenge is to connect an article to bigger issues and debates in society and gain a sense of how that article fits into those debates. To do this, we can ask a series of questions about the goal and audience of the article.

Identifying Issues and Debates Template (Reference)

<table>
<tr><td>Initial Questions</td><td>Use these questions to start thinking about the issues and debates in the article.</td></tr>
<tr><td>What is the author’s main argument?</td><td rowspan="4">Answering these questions helps us to think about the writer’s motivations and goals. Are they trying to solve a problem? Are they trying to add to our understanding of a topic?</td></tr>
<tr><td>What is the author’s main goal? Why did they write the article?</td></tr>
<tr><td>What field(s) of study does the writer connect with?</td></tr>
<tr><td>Who is the writer’s audience?</td></tr>
<tr><td>Issues and Debates</td><td>Use these steps to present the issues and debates
A. Using the ideas from above, identify two or three different issues or debates in the article.
B. Indicate what position the article takes on that debate.</td></tr>
<tr><td>Issue or Debate #1
A. Describe the issue or debate.
B. What position in the issue or debate does the author take?</td><td rowspan="3">Think of an issue or debate as a question that many different people might want to explore and answer. How does this writer choose to approach the question? Answer it?</td></tr>
<tr><td>Issue or Debate #2
A. Describe the issue or debate.
B. What position in the issue or debate does the author take?</td></tr>
<tr><td>Issue or Debate #3
A. Describe the issue or debate.
B. What position in the issue or debate does the author take?</td></tr>
<tr><td colspan="2">Add more issues or debates as you find them.</td></tr>
</table>

Critical Thinking and Comparison

It's your turn to practice. Using the practice template, you will identify the issues and debates explored in both Wohlsen's article and Prensky's article.

Complete the practice template for each article. Use the information in the reverse outlines to help you. Remember, you can print sample answers of the reverse outlines for each article and have them in front of you while you complete this exercise.

Let's do Wohlsen first:

Identifying Issues and Debates – Wohlsen Article (Practice)

Wohlsen article, "Digital Literacy is the Key to the Future" **Reverse outline used:** Reverse Outline of Wohlsen Article (Sample Answers from Study Room 1)	
Initial Questions	Use these questions to start thinking about the issues and debates in the article.
What is the author's main argument?	
What is the author's main goal? Why did they write the article?	
What field(s) of study does the writer connect with?	
Who is the writer's audience?	

Issues and Debates	Use these steps to present the issues and debates in the article. A. Using the ideas from above, identify two or three different issues or debates in the article. B. Indicate what position the article takes on that debate.
Issue or Debate #1	
Describe the issue or debate.	
What position in the issue or debate does the author take?	
Issue or Debate #2	
Describe the issue or debate.	
What position in the issue or debate does the author take?	

Issue or Debate #3
Describe the issue or debate.
What position in the issue or debate does the author take?
Add more issues or debates as you find them.

Now, let's do the same for Prensky:

Identifying Issues and Debates – Prensky Article (Practice)

Prensky's article, "Digital Natives, Digital Immigrants" **Reverse outline used:** Reverse Outline of Prensky Article (Sample Answers)	
Initial Questions	Use these questions to start thinking about the issues and debates in the article.
What is the author's main argument?	
What is the author's main goal? Why did they write the article?	

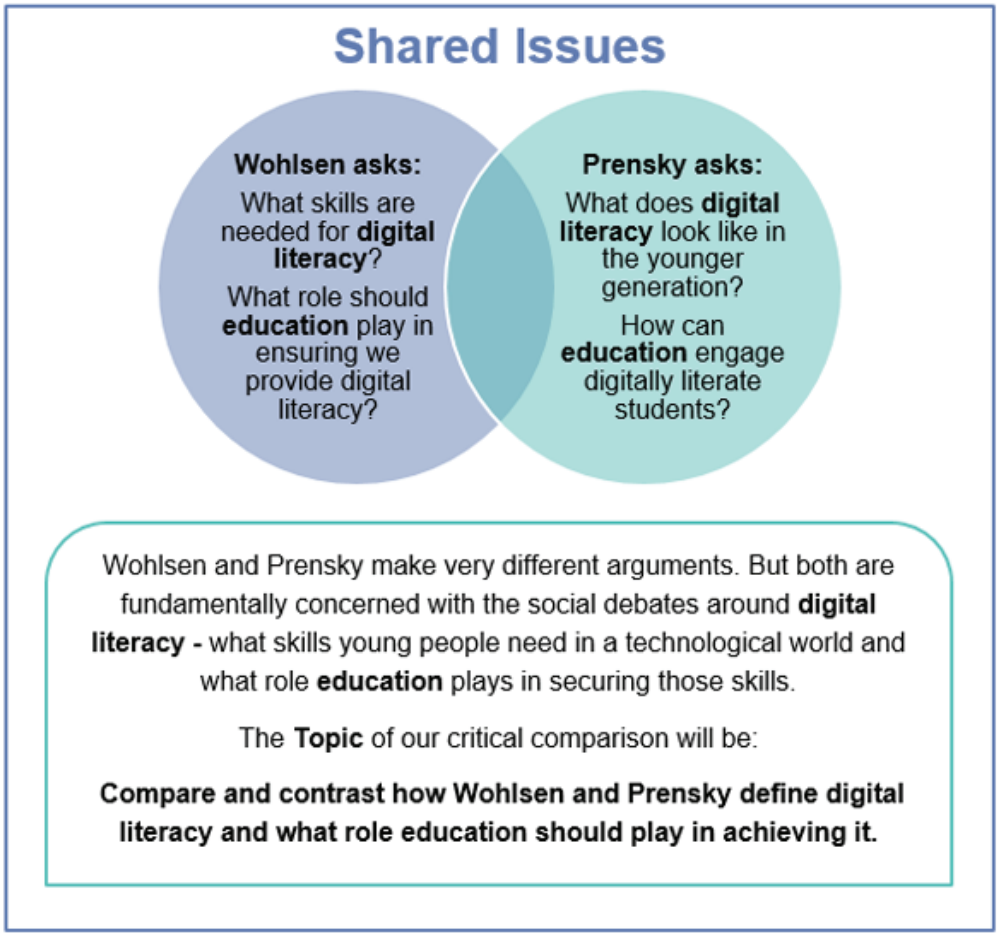
What field(s) of study does the writer connect with?	
Who is the writer's audience?	
Issues and Debates	Use these steps to present the issues and debates in the article. A. Using the ideas from above, identify two or three different issues or debates in the article. B. Indicate what position the article takes on that debate.
Issue or Debate #1	
Describe the issue or debate.	
What position in the issue or debate does the author take?	

Issue or Debate #2
Describe the issue or debate.
What position in the issue or debate does the author take?
Issue or Debate #3
Describe the issue or debate.
What position in the issue or debate does the author take?

Defining a Topic

Usually, after you have worked with different articles for a while as we have been doing in this lesson, you begin to have a sense of what they are about and what connections they have to each other.

The next step is to explore these connections to define a shared topic for the critical comparison. The shared topic will form the basis of your comparison of the two articles and your goal will be to compare and contrast each author's unique approach to the topic.



Thinking Critically (Lesson C)

In this lesson, we will develop skills in thinking critically about articles, moving beyond **what** the authors have to say on a topic, to examine **how** and **why** they say it. This is a move beyond summary towards analysis.

Note

This lesson draws on knowledge of two articles. If you haven't already, you will want to read them now.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5). Retrieved 5 October 2001, from http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20 Immigrants%20-%20Part1.pdf

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

You do not need to have completed Lesson B to enjoy this lesson. If you haven't completed it, you can use the following resources to help you in this lesson:

- Identifying Issues and Debates – Wohlsen Article (Sample Answers)
- Identifying Issues and Debates – Prensky Article (Sample Answers)

Let's look at our sample topic for a critical comparison:

Compare and contrast how Wohlsen and Prensky define digital literacy and what role education should play in achieving it.

At one level, we can answer this with summary information about the content of the articles. But the challenge is not simply to repeat what the authors say about digital literacy and education, but to consider **why** they make the arguments they make and **how** they make them.

To do this, we need some tools for thinking critically. Step 1 is to practice with these tools to develop interesting critical commentary on the articles. In Step 2, we will be organizing all our critical commentary into relevant categories for the critical comparison essay.

Tools for Critical Response

Let's begin with a progressive set of questions that you can apply to any argument you come across. These questions are designed to help you dig more deeply into the underlying logic and goals of any point of argument.

Critical Thinking Questions
1. What argument does the author make? 2. What evidence is used to support the argument? 3. What assumptions lie behind the argument? 4. What are the consequences or implications of the argument?

We can use Prensky as an example to illustrate how to apply these questions.

Critical Thinking Questions (Reference)

Critical Thinking Questions	Explanation	Examples – Critical thinking about Prensky
What is the point of argument?	Describe a basic point of argument in the article. This could be the main argument or a smaller point within the discussion. We have defined many of these as part of our summary work.	Here's one point he argues: **He argues that** "today's students have changed radically," so that the education system cannot meet their needs.
What evidence is used to support the argument?	Writers can use different kinds of evidence to support their arguments and ideas. Critical reading includes assessing what kinds of evidence a writer uses to support and argument. We can look for three kinds of evidence: **Reasons** are used to explain why something is needed or makes sense. **Examples** can be used to illustrate key points. **Claims to the authority of other writers** can be used to support ideas.	Let's look at the evidence Prensky uses to support this point that today's students have "changed radically." **Reason:** Today's students have "changed radically" because they have grown up with digital technology. **Example:** Prensky notes they have "spent their entire lives surrounded by and using computers, videogames, …. And all the other toys and tools of the digital age" and provides statistics on the number of hours in front of screens. **Claim to authority:** Prensky cites Dr. Perry to suggest that student brains have physically changed as a result of this exposure to technology.

What assumptions does the writer make as the basis of the argument?	When making an argument a writer must begin somewhere. Any point of argument, however, depends on certain things being true. A writer must make assumptions, and hope that the reader will agree to these assumptions. When reading critically, we must consider not only the arguments being made, but also the assumptions on which those arguments are based. If the assumptions don't make sense, the argument will have its limits.	Prensky's overall argument is that the older generation teachers have a responsibility to learn to teach in a suitable way for the younger generation of students. His whole article is based on a **key assumption:** That all younger people are fluent users of digital technology and that all older people use technology in a less fluent way. Prensky assumes that the ability to use digital technology is a result of age, rather than a result of individual opportunity in life. What do you think about this assumption? Is this true? Do you think all young people naturally have the digital literacy Prensky writes about? What other factors do you think might shape our ability to use digital technology?
What are the consequences or implications of the arguments offered by the writer?	Finally, critical thinking includes considering the consequences or implications of what a writer is arguing. If a position on a particular social debate leads to detrimental consequences for some people, for example, then it needs to be considered.	Prensky assumes that all younger people are digital natives. We can identify **several implications of this argument.** First, this idea hides the fact that younger students of different social classes or in different geographical areas may have different access to digital technology. Second, his argument assumes that there is no value in holding on to ways of thinking and learning that exist before the pervasive use of digital technology. Is it possible that some of what the older generation has to say might be valuable? These points and more are discussed in Henry Jenkin's critical response to Prensky's article "Reconsidering Digital Immigrants," which you can find at http://henryjenkins.org/2007/12/reconsidering_digital_immigran.html.

Now it's your turn. Practice applying the critical thinking questions to ideas from the Wohlsen article.

In the exercises below, you are given a point of argument from Wohlsen. Your task is to think about the evidence, assumptions behind, and implications of that point of argument. Enter your ideas into the boxes. Use the examples in the Critical Thinking Questions (Reference) as a guide.

Critical Thinking Questions (Practice)

The ideas from this practice activity will be used to build the sample critical comparison essay later in the lesson.
Point of argument from Wohlsen
1. Point of argument Wohlsen argues that being able to use digital technology is not an effective measure of digital literacy; rather, that true digital literacy is in the ability to make the technology do what you want using skills in "computational thinking." Let's look more closely at why Wohlsen would make this point and what is at stake for him. Answer the questions below. When you've finished, review the sample answer.
What evidence is used to support the argument?
What assumptions does the writer make as the basis of the argument?

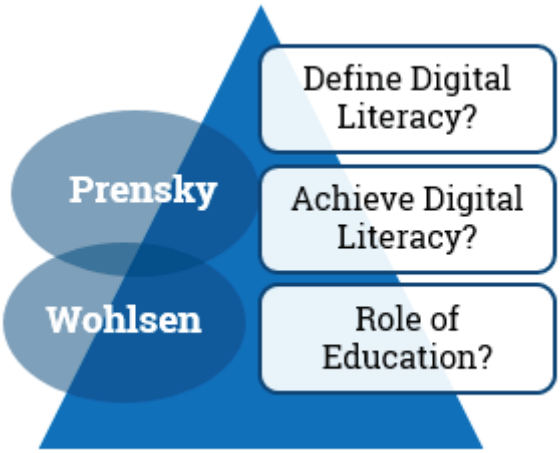
What are the consequences or implications of the arguments offered by the writer?
2. Wohlsen argues that one problem with achieving digital literacy is that teachers do not, generally, have the skills needed to help students become digitally literate. **Point of argument**
What evidence is used to support the argument?
What assumptions does the writer make as the basis of the argument?
What are the consequences or implications of the arguments offered by the writer?

Organizing the Key Categories

Thinking critically about the two articles is a form of brainstorming, gathering together many different points about the articles that will eventually be organized into a logical essay. Before we can proceed to writing this essay, we need to think about **how to organize** all this material.

Drawing on all our critical thinking, we can develop **categories of information** that allow us to group our points together in logical ways. Each reader will find different ways of doing this.

Consider the possible categories of information offered here. Do you agree with them? Do they make sense based on your reading and thinking critically about the two articles? Would you add anything different?



Define Categories of Information

Within each of these categories, we can group our ideas about each article, focusing on arguments, evidence, assumptions and consequences.

Writing the Critical Comparison (Lesson D)

To produce a critical comparison, we apply all the summary and critical thinking work about two articles to an outline based on shared categories for comparison. We need to make decisions about how best to organize a comparison, depending on the type of information involved.

This lesson begins by introducing the basic components and structure of a comparison argument. Then, you will practice by filling in an outline template for the comparison essay.

Note

This lesson draws on knowledge of two articles. If you haven't already, you will want to read them now.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5). Retrieved 5 October 2001, from http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20 Immigrants%20-%20Part1.pdf

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

You do not need to have completed Lesson C to enjoy this lesson. If you haven't completed it, you can use the following resources to help you in this lesson:

- Critical Thinking Questions (Reference)
- Critical Thinking Questions (Practice)

Identify Components of a Comparison

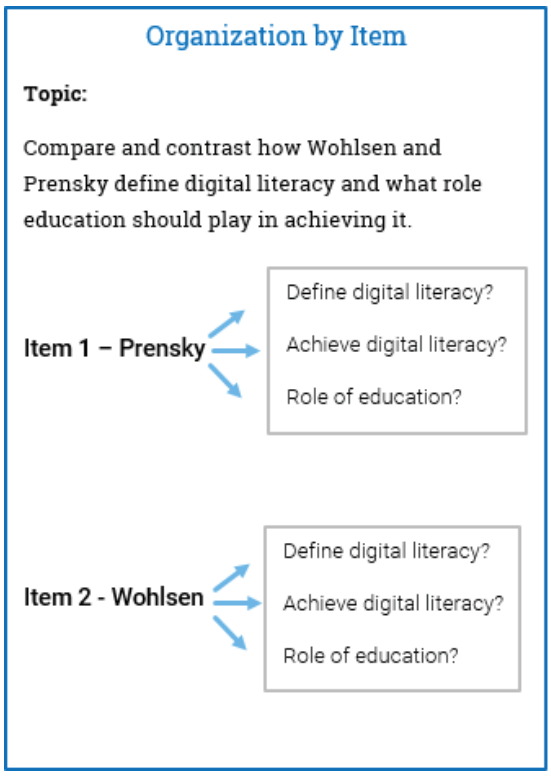
A comparison argument might be the basis of an entire essay or a smaller part of a larger work. In every case however, a comparison always includes these 3 core components.

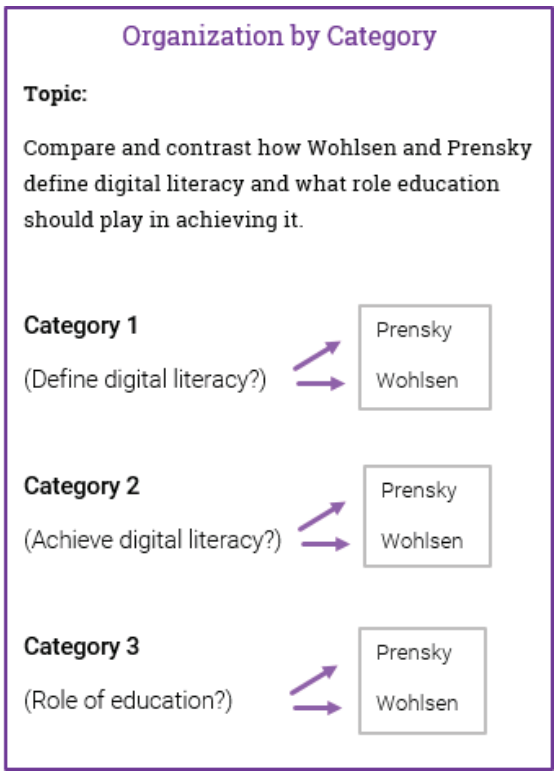
Components of a Comparison (Reference)

Items to be Compared	Basis of Comparison	Categories of Comparison
What two things will be compared?	**Why** are we comparing the two items? What is our purpose and goal?	**How** will the items be compared? What elements of the items will be compared?
Example: Articles by Wohlsen and Prensky.	Example: Compare and contrast how Wohlsen and Prensky define digital literacy and what role education should play in achieving it.	Example: We will compare and contrast based on three categories – definition of digital literacy, criteria for achieving it, and the role of education in achieving it.

Select a Structure of Comparison

Comparison arguments can be structured in two different ways: by **item** or by **category**.





When deciding how to structure a comparison argument, we need to decide between these two basic structures. To do this, we need to consider the advantages and disadvantages of each structure.

Answer the following questions to reflect on when and why you might best use each comparison structure.

Structure of a Comparison (Practice)

1. What do you think the advantages might be of each pattern of organization?
2. What do you think would be the most suitable pattern of organization for the Prensky and Wohlsen essay we have been developing?

Critical Thinking and Comparison

I'm going to write my comparison essay today

Do you remember the three main parts of the essay?

I need to know what I'm comparing, why I'm comparing them, and how I will compare them

I guess you were paying attention!

Completing the Outline

We have already done plenty of work towards developing our critical comparison essay. We know why and how we want to compare the articles. We have completed a large amount of summary work and critical thinking to support our content.

The final stage is to put all this work into an outline, ready for writing.

Consider this template for developing an outline for a critical comparison essay.

Critical Comparison Outline Template (Reference)

Introduction	**Information to include:** 1. What is being compared? 2. Why are they being compared? What is the topic or basis of comparison? 3. How will they be compared? What are the categories of comparison? 4. What will we learn about the topic when we've read this comparison? What is the thesis?
Explore each Category in a series of paragraphs.	**Information to include:** 1. What is the category? Give an introduction to the idea or issue. 2. What does each author have to say about this idea or issue? 3. How does each author develop their particular position about the idea and why? (Look at evidence.) What motivates each author to make the argument that they make? (Look at assumptions.) 4. What are the key points of similarity and difference in each author's position? 5. What are the implications of each author's position? 6. Do you have thoughts about the value or implications of these different positions?
Conclusion	**Information to include:** 1. What do we learn about the topic in this essay? 2. What conclusions does the essay make about the significance of each author's ideas and the consequences of each author's arguments?

Now, it's your turn. Using the template, put together an outline for the critical comparison of the Prensky and Wohlsen articles.

Follow the questions in the outline template and fill in the content. Use the information and ideas about the articles that you have developed through this lesson. You can also use information from the sample answers. As well, you may find that you get new ideas about the articles as you are working. Go ahead and include them too.

When you have finished this activity, you can check the sample answers.

Critical Comparison Outline Template (Practice)

Prensky and Wohlsen
Instructions: • Make point form notes. • Put in specific examples/quotes from articles as necessary. • Use the guiding questions as a guide – you do not need to answer them systematically. • Most of the answers to the questions in the Introduction have already been set by this lesson, but go ahead and write them out anyway for practice.
Introduction 1. What is being compared? 2. Why are they being compared? What is the topic or basis of comparison? 3. How will they be compared? What are the categories of comparison? 4. What will we learn about the topic when we've read this comparison? What is the thesis?

Critical Thinking and Comparison

Category 1 – How should we define digital literacy? Why?

1. What is the category? Give an introduction to the idea or issue.
   Note: The category has already been given for this practice assignment, go ahead and explain it.
2. What does **each author** have to say about this idea or issue?
3. How does each author develop their particular position about the idea and why? (Look at evidence.) What motivates each author to make the argument that they make? (Look at assumptions.)
4. What are the key points of similarity and difference in each author's position?
5. What are the implications of each author's position?
6. Do you have thoughts about the value or implications of these different positions?

Category 2 – How can we achieve digital literacy?

1. What is the category? Give an introduction to the idea or issue.
   Note: The category has already been given for this practice assignment, go ahead and explain it.
2. What does **each author** have to say about this idea or issue?
3. How does each author develop their particular position about the idea and why? (Look at evidence.) What motivates each author to make the argument that they make? (Look at assumptions.)
4. What are the key points of similarity and difference in each author's position?
5. What are the implications of each author's position?
6. Do you have thoughts about the value or implications of these different positions?

Category 3 – What role does education play in achieving digital literacy?

1. What is the category? Give an introduction to the idea or issue.
   Note: The category has already been given for this practice assignment, go ahead and explain it.
2. What does **each author** have to say about this idea or issue?
3. How does each author develop their particular position about the idea and why? (Look at evidence.) What motivates each author to make the argument that they make? (Look at assumptions.)
4. What are the key points of similarity and difference in each author's position?
5. What are the implications of each author's position?
6. Do you have thoughts about the value or implications of these different positions?

Conclusion

1. What do we learn about the topic in this essay?
2. What conclusions does the essay make about the significance of each author's ideas and the consequences of each author's arguments?

Sample Answers

Reverse Outline of Prensky Article (Sample Answers)

Marc Prensky, "Digital Natives, Digital Immigrants"
Reading for Context **Use this information to help you understand who Prensky is and why the article is relevant.**
1. **What am I reading? When was it written?** Look at the publication information for the article. What does this tell you about the level of quality or authority it might have? Do you think the information in this article will still be relevant to the debate around digital literacy today? Why/Why not?
• On the *Horizon* is a peer-reviewed journal associated with a university press. • More significantly, a quick internet search will reveal the pervasive influence on this article on debates around digital literacy and education. The article is now 15 plus years old; students must take this in account when assessing Prensky's conclusions and making comparisons. A lot can change in the field of digital education in 15 years.
2. **Who is the author?** Investigate Marc Prensky. What else has he written? What do others have to say about him and this article? Is he qualified to write an article on digital literacy? What are his research interests? Is his writing generally fun, light or learned?
• An internet search on Marc Prensky will reveal his pervasive and sometimes controversial reputation as a leading thinking on issues of education and technology. • His primary focus has been on how to shape curriculum to take into account the realities of our digital age. • Some controversy surrounds his generally positive acceptance of the potential for digital tools in learning, including game-based learning. • See his bio here: http://marcprensky.com/

3. **Why was it written?**

   Based on the title and perhaps a quick scan of the article, can you determine the basic purpose of the article?

   What do you think Prensky will discuss?

- As the title suggests, Prensky defines a difference between so-called "digital natives," a younger generation raised on digital technology, and "digital immigrants," an older generation who have had to learn to use digital technology.
- As he defines these two groups, we can assume he will develop some kind of argument about the differences between them and why they are significant.
- Have you heard these terms before? What do these terms suggest to you?

Prensky's article has been very popular. Take a few minutes to go online and read some summaries of his argument.

Reading for Content - Reverse Outline Template

Topic:

State the topic or question the author is interested in.

Prensky is concerned with the effectiveness of the education system to provide students with the knowledge and experience they need.

More specifically, he wonders whether the education system is responding adequately to the realities of emerging digital technology.

Main Idea:

State the main message or argument. What does the author say about the topic?

Prensky argues that students today are much more digitally literate than their teachers. And so, he argues, for the education system to be effective, teachers have a responsibility to improve their approaches to teaching in order to engage today's more digitally literate students.

And now, outline how Prensky's develops this argument.

List the content and function of each key point in the article. Your answers may not match the sample answers exactly, and that's ok. But make sure you haven't missed any key ideas.

Sample Answers

Key Point #1

Content:

Describe the key point. What does the author say?

The first point Prensky makes is that today's students are "radically" different from those of previous generations.

As a result of digital technology, today's students, he argues, "think and process information fundamentally differently."

He labels these new students "digital natives," suggesting they are "'native speakers' of the digital language of computers, video games, and the Internet."

The older generation becomes, thus, "digital immigrants," those who have had to learn and adopt the new digital ways of thinking.

Function:

Explain why this information has been included in the article? How does it help the author develop the main idea?

This opening point functions as the initial assumption of Prensky's argument. He needs us to first believe that students have radically different ways of thinking because of exposure to digital technology in order for the rest of his argument to be logical.

Key Point #2

Content:

The central problem in the education system today is the gap between what "digital immigrant" teachers have to offer and what "digital native" students need and want to learn.

He notes that the traditional approaches to teaching with step-by-step logic do not engage the younger student raised on fast and fragmented digital multitasking.

If we don't fix this problem, he argues, the education system will have nothing to offer the younger generation and, so, will fail to prepare them for the future.

Function:

This is the central problem that motivates Prensky to build his argument. This is the problem he wants his readers to understand and that he wants to solve.

Key Point #3

Content:

Prensky concludes that the responsibility is on "digital immigrants," the older generation, to change how they teach to meet the needs of todays' radically different students.

Specifically, teachers today must change their methodology–to educate students in a style that suits their preferences.

They must also change the content of education; traditional content should be reviewed for relevancy, and new content related to the realities of the digital world should be embraced; this might include knowledge of computer software and hardware, and the political and social issues associated with their role in society.

Function:

This is his solution to the central problem he presents.

Key Point #4

Content:

Prensky's final step is to provide an example of the kind of solution to the problem of education that he proposes. He provides an example of how education practices could be changed to better meet the needs and preferences of "digital natives."

Specifically, he promotes the use of video games for teaching, and describes examples from his own projects to support this.

Function

He justifies his solution to the problem by using his own curriculum development project as an example.

Final Thoughts

Prensky uses a central metaphor of immigration to build his article. He suggests that the gap between older and younger generations using digital technology is similar to the experience of immigrants and their children who are born into the new culture.

Do you think this is a fair and useful metaphor for Prensky's argument? Consider his conclusion that digital immigrants must change. Would the same type of argument be relevant and acceptable in a cultural context? Should cultural immigrants be forced to change?

Henry Jenkins writes an excellent critical response to Prensky's article "Reconsidering Digital Immigrants" which focuses on these issues. You are encouraged to read the article here: http://henryjenkins.org/2007/12/reconsidering_digital_immigran.html

Sample Answers

Identifying Issues and Debates – Wohlsen's Article (Sample Answers)

Initial Questions	**Use these questions to start thinking about the issues and debates in the article.**
What is the author's main argument?	
Wohlsen argues that skills in "computational thinking" and the logic of coding will be crucial in a world driven by information technology, and not just for those involved directly in computer programming.	
What is the author's main goal? Why did they write the article?	
Wohlsen wants to convince his audience that we, in society, face a challenge of trying to define **digital literacy** and that this challenge is important to solve. He writes the article to get his audience thinking about **what skills young people really will need** in the future.	
What field(s) of study does the writer connect with?	
Wohlsen is writing in a technology magazine. His concerns and goals would be linked to working in the **computer technology field**, including computer programming. But also, his ideas would be of interest to the **field of education**, and perhaps social policy development.	
Who is the writer's audience?	
Wohlsen's audience are the readers of a popular online technology journal; the audience would certainly have some interest in **the role of digital technology in our working and social lives.** These sample answers have highlighted key phrases that are clues to identifying the issues and debates in the article.	
Issues and Debates	**Use these steps to present the issues and debates in the article.** A. **Using the ideas from above, identify two or three different issues or debates in the article.** B. **Indicate what position the article takes on that debate.**

Issue or Debate #1
Describe the issue or debate.
Education: What do students need to know? What should we be doing in school today to ensure young people have the skills they need to succeed in today's computer-driven society?
What position in the issue or debate does the author take?
Not everyone would agree with Wohlsen's focus on the benefits of a heavy emphasis on computer skills and coding in schools.
Issue or Debate #2
Describe the issue or debate.
Digital Literacy: How have computers changed what we know and what we need to know? Computer technology has changed the priorities in our world. Given we live in a world dominated by digital information technology, what skills and knowledge do we need to handle it?
What position in the issue or debate does the author take?
Wohlsen's emphasis is on coding, but not everyone sees it that way. Others might define digital literacy as simply being able to use digital devices and software.
Issue or Debate #3
Describe the issue or debate.
Information technology and data: How will we be able to manage the mass data that we can now collect in society? What does a data-driven society look like? How will it be different from the past and what opportunities and challenges will we face?
What position in the issue or debate does the author take?
Wohlsen's focus on the primacy of technology may lead him to overstate the value of data in society.
Add more issues or debates as you find them.

Sample Answers

Identifying Issues and Debates – Prensky Article (Sample Answers)

Initial Questions	**Use these questions to start thinking about the issues and debates in the article.**
What is the author's main argument?	
Prensky argues that for the **education system to be effective**, teachers have a responsibility to improve their approaches to teaching in order to engage today's more **digitally literate** students.	
What is the author's main goal? Why did they write the article?	
Prensky is motivated by his desire to promote computer use, especially computer games, as part of the learning experience. He wants educators to link innovation with increased **use of digital technology.**	
What field(s) of study does the writer connect with?	
Prensky's arguments clearly engage with the **fields of education and learning**. But his work might also be of interest in the fields of computer gaming and the development of other educational computer resources.	
Who is the writer's audience?	
Prensky's audience are **educators** and people working in the fields of curriculum development, as well as those in the **technology fields** interested in educational resources. These sample answers have highlighted key phrases that are clues to identifying the issues and debates in the article.	
Issues and Debates	**Use these steps to present the issues and debates in the article.** A. **Using the ideas from above, identify two or three different issues or debates in the article.** B. **Indicate what position the article takes on that debate.**
Issue or Debate #1	
Describe the issue or debate.	
Education: How should students be taught? What should students learn in school? What role does technology have in the education system?	

What position in the issue or debate does the author take?
Prensky emphasizes an education system that appeals to the preferences of a younger digital generation. Not everyone agrees this is necessary or beneficial.
Issue or Debate #2
Describe the issue or debate.
Digital Literacy: What new skills are important in the digital era? In a world shaped increasingly by our use of digital technology, what skills do we need to succeed?
What position in the issue or debate does the author take?
Prensky emphasizes skills in multitasking, in game play, and in the fluent ability to use digital technology. Other writers identify different skills.
Issue or Debate #3
Describe the issue or debate.
Digital Divide: What assumptions do we make about who has access to, and so benefits from, digital technology and who does not?
What position in the issue or debate does the author take?
Not all writers agree with Prensky's idea that the generational divide is accurate or even the most important issue. Issues like class, urban and rural living, and the priorities of the education system also affect how competent people are with technology.

Sample Answers

Critical Thinking Questions (Sample Answers)

The ideas from this practice activity will be used to build the sample critical comparison essay later in the lesson.

Point of argument from Wohlsen

1. **Point of argument**

   Wohlsen argues that being able to use digital technology is not an effective measure of digital literacy; rather, that true digital literacy is in the ability to make the technology do what you want using skills in "computational thinking."

Evidence:

Reason – Digital literacy must include an understanding of the logic of coding because the next generation will need an active, rather than passive, relationship to the technology in order to succeed. In this reason, we can connect to Wohlsen's motivation for the article. If we don't define digital literacy in a useful way, we won't give our students the tools they need going forward.

Claim to authority – Wohlsen relies heavily on the ideas and statements of other experts to build his discussion. This suits the journalistic nature of his writing. For example: "Digital literacy, Smith said, also is about 'how to make it do what you want.' Or as Geshner put it: 'Are you an iPad or are you a laptop? An iPad is designed for consumption.' Literacy, as he described it, means moving beyond a passive relationship with technology. 'When you get down to coding, you're creating your own tools.'"

Assumptions:

As part of his article, Wohlsen **assumes** that as a society it's imperative that we define what digital literacy really means because this is how we will know what skills and tools our young people will need in the future. Here's a quote to illustrate:

> "And how digital literacy is defined is important. This isn't just about filling Silicon Valley jobs. It's about educators, policy makers, and parents understanding how to give the rising generations of digital natives the tools they need to define the future of technology for themselves." (Wohlsen)

This is a crucial initial assumption for Wohlsen's argument. And it goes even deeper. His motivation for writing this argument begins with this **assumption that** digital literacy can be defined – that it's not an obvious concept. This assumption allows him to push the boundaries of how society understands digital literacy in order to change how we educate young people. We can, for example, now compare how Wohlsen and Prensky define digital literacy and the implications of those assumptions.

Consequences:

As a result of his argument that digital literacy should be defined to focus on "computational thinking" rather than passive use of digital technology, Wohlsen is able to offer an argument for changes to the teaching and learning opportunities in schools. One implication of this argument is that we are forced to evaluate how digital technology and skills are taught and used in schools, thus leading to changes and innovations.

2. **Wohlsen argues that one problem with achieving digital literacy is that teachers do not, generally, have the skills needed to help students become digitally literate.**

Point of argument

Evidence:

Wohlsen cites different authorities and statistics on the limited offerings of computing courses and teacher professional development.

Assumptions:

This point of argument assumes that it is generally teachers, and therefore, the education system that should be responsible for ensuring young people grow up digitally literate and able to succeed in a technology-dominated society.

Consequences:

The consequence of this argument is that there could be a significant skill gap in those societies that do not revise their educational system to foster the kind of digital literacy Wohlsen is talking about.

Do you agree with this argument? Do you agree with the assumptions behind it? How likely do you think this consequence of a skill gap is? How does this argument compare to Prensky's call for teachers to develop new skills?

Sample Answers

Structure of a Comparison (Sample Answers)

1. **What do you think the advantages might be of each pattern of organization?**
Organization by item allows you to focus on gaining a complete understanding of the arguments and ideas in each article. Organization by category allows for more direct comparison of the articles through the discussion.
2. **What do you think would be the most suitable pattern of organization for the Prensky and Wohlsen essay we have been developing?**
Because we are focused on understanding the different ways each author defines terms and approaches ideas about digital literacy, organization by category would be more suitable. This type of organization is almost always the most effective structure when you really want to understand points of intersection and divergence in two articles.

Critical Comparison Outline Template (Sample Answers)

Prensky and Wohlsen
Introduction 1. What is being compared? 2. Why are they being compared? What is the Topic or Basis of comparison? 3. How will they be compared? What are the Categories of comparison? 4. What will we learn about the topic when we've read this comparison? What is the thesis?
• Debate exists around what digital literacy means and the best ways to ensure the education system can provide a younger generation the digital literacy they need to be successful. • This essay will explore two articles that participate in this debate – Prensky's 2001 article "Digital Natives, Digital Immigrants," and Wohlsen's 2014 article "Digital Literacy is the Key to the Future, But We Still Don't Know What It Means." • **Thesis:** The different definitions of digital literacy offered by Prensky and Wohlsen shape their arguments about how to achieve it, and the role teachers play in ensuring it is fostered in their students. While Prensky sees a digitally literate youth driving changes to the education system, Wohlsen sees a need to change the education system to ensure we develop a digitally literate youth. • The essay will be organized around three categories of comparison – defining digital literacy, achieving digital literacy, and the role of education.

Category 1 – How should we define digital literacy? Why?

1. What is the category? Give an introduction to the idea or issue.
   Note: The category has already been given for this practice assignment, go ahead and explain it.
2. What does each author have to say about this idea or issue?
3. How does each author develop their particular position about the idea and why? (Look at evidence.) What motivates each author to make the argument that they make? (Look at assumptions.)
4. What are the key points of similarity and difference in each author's position?
5. What are the implications of each author's position?
6. Do you have thoughts about the value or implications of these different positions?

- Prensky defines digital literacy as the ability to use digital technology effortlessly. He also includes particular use patterns, such as a preference for speed and multi-tasking.
- Wohlsen defines digital literacy as an understanding of the "logic of coding" or "computational thinking," in direct opposition to, simply, the ability to use the technology. Wohlsen's extension of this definition past Prensky's might, in part, be due to developments in the 13 years between when the articles were written.
- Prensky's argument is motivated by his primary focus – to argue for computer-based innovations in teaching and course delivery. His focus is primarily on the potential to use digital technology in the classroom. In contrast, Wohlsen's definition matches his own goal. He is looking ahead to the needs of industry and the job market, and is concerned with the problem of raising a generation with the skills society needs. Because of this different definition, Wohlsen's focus is on making sure we teach children how to become digitally literate, rather than assuming that they already are.

Sample Answers

Category 2 – How can we achieve digital literacy?

1. What is the category? Give an introduction to the idea or issue.
   Note: The category has already been given for this practice assignment, go ahead and explain it.
2. What does each author have to say about this idea or issue?
3. How does each author develop their particular position about the idea and why? (Look at evidence.) What motivates each author to make the argument that they make? (Look at assumptions.)
4. What are the key points of similarity and difference in each author's position?
5. What are the implications of each author's position?
6. Do you have thoughts about the value or implications of these different positions?

- Wohlsen's primary purpose is to emphasis techniques and opportunities to provide digital literacy to today's youth. He showcases different camps and activities that are designed to take children beyond using technology into an understanding of its inherent logic. His warning is that if we don't understand these skills as necessary for digital literacy, we will not foster these opportunities to achieve it. In contrast, Prensky warns that if we don't foster the "digital natives'" literacy, we will alienate them.
- Wohlsen's arguments for achieving digital literacy assume a very central role for algorithm and data, for computational logic, in society. While this is true, and his evidence seems to support this, he relies on evidence solely within the technology field and this may overstate the significance of these skills in society.
- Prensky's position makes the difficult assumption that all younger people – his "digital natives" – are inherently literate in technology, drawing on arguments about brain development; in other words, they don't need to achieve it. The problem here is that his argument erases issues of class or geography that impede access for some young people to technology skills. There is little space in Prensky's argument to discuss what happens when youth don't have skills in using technology. Wohlsen's argument would be much better at finding solutions to closing the skill gap in technology that emerges due to class and geography.

Category 3 – What role does education play in achieving digital literacy?

1. What is the category? Give an introduction to the idea or issue.
   Note: The category has already been given for this practice assignment, go ahead and explain it.
2. What does each author have to say about this idea or issue?
3. How does each author develop their particular position about the idea and why? (Look at evidence.) What motivates each author to make the argument that they make? (Look at assumptions.)
4. What are the key points of similarity and difference in each author's position?
5. What are the implications of each author's position?
6. Do you have thoughts about the value or implications of these different positions?

- Both writers share, however, the view that the education system is primarily responsible for meeting the needs of digital literacy, and that teacher knowledge is the primary impediment to this.
- And both indicate the challenge of educating teachers so that they have the knowledge and skills necessary to meet the needs of their students. Again, because of differences in their definition of digital literacy, the emphasis on what teachers need to learn and do is different. For Prensky, the challenge is for teachers to teach differently, embracing the use of technology and emphasis on multi-tasking and speed in order to engage students. For Wohlsen, the challenge is one of knowledge – teachers cannot teach an understanding of code and algorithm if they don't have it themselves.

Conclusion

1. What do we learn about the topic in this essay?
2. What conclusions does the essay make about the significance of each author's ideas and the consequences of each author's arguments?

- The debate around digital literacy demonstrates several tensions in society as we learn to incorporate digital technology into every aspect of our lives. First, the differences in how each author defines digital literacy over the 13-year period indicates our evolving understanding of the skills we will need in a technology-driven society. Second, it's crucial that we don't assume our younger generation has all the skills they need; rather, we need to assess these needs on an on-going basis as our technologies change and as our relationship to those technologies changes.

Study Room 3 – Research and Annotation

Introduction

Finding and working with quality research material is a core part of the academic writing process. In a digital culture, we are flooded with easily available information. But sometimes, it's just too much information! How can we filter it? How do we find relevant information for our projects?

Overall, this Study Room will help you to develop skills in finding and evaluating quality research material appropriate for academic contexts. As we develop these skills through practice, we will build an annotated bibliography for a sample essay topic. By the end, you will have a template for an annotated bibliography that you can use in a range of academic areas.

What is an Annotated Bibliography?

An annotated bibliography is a list of citations that are all relevant to a particular research topic. Each citation is followed by a short summary and statement about the relevance of the source to the research topic.

> Note that this lesson uses APA 6th ed. but it does not cover the mechanics of documenting sources in *APA.* For practice in documentation, you might consider Boot Camp 3.

How to start

Study Room 3 offers 3 lessons that guide you through a process of developing a research question and then finding and evaluating relevant information for an annotated bibliography.

This Study Room works best when you complete the lessons in order. In each lesson, you build on the work completed in the one before it until, finally, you complete an annotated bibliography.

Can't do it all? No problem. Dip in to any lesson to find useful tips, templates and samples on each topic.

Research and Annotation

Menu

- **Developing a Research Question (Lesson A).**

  You will learn how to select a general topic, and develop techniques to narrow it to a manageable research question.

- **Finding and Evaluating Sources (Lesson B).**

  You will become familiar with library and Internet search tools and how to find and evaluate sources relevant to your research question.

- **Writing an Annotated Bibliography (Lesson C).**

  Using a template, you will learn how to write short summaries and justifications for each source that you find.

You can work progressively through the lesson, or choose a specific section.

Developing a Research Question (Lesson A)

The challenge with any research project today is to avoid drowning in information. The first stage, then, in any research project is to define the goal and scope of the research.

Once you have a general topic, step 1 is to focus that topic into a manageable research question. Step 2 is to identify what kinds of information you will need to address the research question. And step 3 is to identify key search terms and strategies that you can use to search for information.

Completing these three steps ensures your research will not be so overwhelming. You will know what information you're looking for and have some tools ready to help you find it.

Note

This lesson draws on knowledge of two articles. If you haven't already, you will want to read them now.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5). Retrieved 5 October 2001, from http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20 Immigrants%20-%20Part1.pdf

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

The lessons in Study Room 2 provide some summary and comparison work on these articles. You do not need to have completed Study Room 2 to enjoy this lesson. If you haven't completed it, you can use the following resources to help you in this lesson:

- Reverse Outline of Wohlsen's Article (Sample Answers)
- Reverse Outline of Prensky Article (Sample Answers)
- Identifying Issues and Debates – Wohlsen Article (Sample Answers)
- Identifying Issues and Debates – Prensky Article (Sample Answers)
- Critical Thinking Questions (Sample Answers)
- Structure of a Comparison (Sample Answers)
- Critical Comparison Outline Template (Sample Answers)

Focusing the Research Topic

Usually, when beginning a research project, you have a general topic or area of interest. But successful research depends on being able to focus that topic into a manageable research question. What is manageable? The research question should be something that can be answered effectively within the scope or word length of the project or assignment.

Consider the template for focusing the research topic. These generic questions can help us start thinking about what we really want to know in our research. Also, by generating a list of questions, we can begin to limit our scope.

Focusing the Research Topic Template (Reference)

What do you want to know about the topic?
What problems are connected to the topic?
Are the ideas clearly defined?
Are there social debates suggested by the topic?
Why is this topic important?

Let's practice using the template.

Consider this general topic:

Digital Literacy and Education

This topic is very broad. We could write a 1 page newspaper story or a PhD thesis on the ideas suggested by digital literacy and education. We need to decide how we want to focus our efforts by using the questions in the template. From that, we can develop a usable research question.

Answer the questions in the template. Review the sample answers when you're finished.

Remember, however, that there are always many ways to focus a topic.

Focusing the Research Topic (Practice)

Topic: **Digital Literacy and Education**
What do you want to know about digital literacy?
What do you want to know about the relationship between digital literacy and education?

What problems are there with understanding digital literacy?
Is the concept of digital literacy clearly defined?
Is the relationship between digital literacy and education clearly understood?
Are there social debates suggested by the question of digital literacy and education? What is at stake in this topic?
Why is this topic important?
List some questions related to the topic.

Identifying the Research Needs

With a broad topic like *Digital Literacy and Education*, we could develop many possible research questions. For the sake of this lesson, let's work with this one:

> Digital technologies influence how we gain access to information and how we communicate with other people. In the 21st century, what skills will be essential?

Clearly, this research question came out of the ideas and questions we had about the broad topic. But in selecting this question, we must leave off other ideas that we may have come up with. While they may all be significant, we cannot do everything in one essay. Longer and more complex projects can, of course, have more complex questions.

Now, what do we need to know to answer this question?

We need to make a list of all the information we need to know to answer this question. This list of information will help guide the research process.

Follow these questions to identify what information you need to answer the research question.

Identifying Information Needs (Practice)

1. **Identify Key Words.** Key words provide clues to the scope and focus of the question.

   Read over the research question carefully and circle what you think are significant words or phrases that are necessary to answering the question:

   > Digital technology influences how we gain access to information and how we communicate with other people. In the 21st century, what skills will be essential?

2. Explain how each key word helps shape the topic.

   - **digital technology**
   - **access to information**
   - **communicate**
   - **21st century**
   - **skills**

3. Your own ideas and reactions to the research question can help you to focus. In the box below, reflect on your own answer to the question. What do you think? You can use this to measure and compare against the research material you find.

What do you think about the research question? How would you answer it?

4. Based on the information explaining the key words and phrases, make a list of specific information that we need to research. Sometimes it's helpful to list this as smaller, more specific questions that need to be answered.

List of Information Needs

Identifying Key Search Terms and Strategies

Now that we know what information we need, we can start to plan our research strategy. While it is tempting to type fully formed questions into Google, this will not produce the balanced and quality research that you need for academic study.

Instead, the next step is to identify key search terms to use in the search engines.

Let's practice using a *key word matrix*. Based on the key words in the research question, you can generate a list of search terms to use as well as consider different search strategies (which means different ways) you can combine your search terms to find useful information.

Answer the questions in the Key Word Matrix to develop additional search terms. Try to think of as many useful search terms and related terms as possible.

Key Word Matrix (Practice)

Key Words	Synonyms and Related Terms
Digital technology	Information technology, computers, social media
21st Century Skills	Digital literacy, cultural literacy, media literacy, technology skills
Access to information	Can you think of other ways to express this?
Communication	Can you think of other ways to express this?
Can you think of other key words that might be helpful?	Can you think of other ways to express this?

Finding and Evaluating Sources (Lesson B)

The first stage in the development of a research project is defining the research question and focusing on specific search terms and strategies. This helps to ensure an efficient and effective approach to finding information. The next stage is to go ahead and find quality information. The challenge here is in learning to use the search tools and knowing a good source when you see one!

Note

This lesson draws on knowledge of two articles. If you haven't already, you will want to read them now.

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- Critical Thinking Questions (Sample Answers)
- Structure of a Comparison (Sample Answers)
- Critical Comparison Outline Template (Sample Answers)

In Step 1, we will consider the kinds of sources available and tips for selecting the most relevant information. Step 2 directs you to explore the resources available through a typical university library, and highlights search strategies for both a library and Google on-line portals. Step 3 provides an opportunity to practice finding and evaluating sources for a sample research question.

Understanding the Types of Research Material

Searching online or in print, we can come across a variety of research material, and not all of it will be of equal value to us. The trick is to identify what kind of material you have found and evaluate not only if it will be useful to you, but also how it will be useful. The following table summarizes different types of material and their typical value in an academic context.

The Prensky and Wohlsen articles would fit in the middle column of Investigative and Researched Media.

Types of Source Material (Reference)

These different types of source material can often be found online and in print.			
	Reporting Media	**Investigative and Researched Media**	**Academic and Scholarly journals**
Frequency	Updated frequently	Published Weekly/Monthly	Published 3-4 times a year
Types of sources	Blogs Newspapers Websites	Popular Magazines Trade/Professional magazines	Articles published for specific fields of research
Authors	Journalists Citizen journalists Companies	Journalists with specific knowledge of a field or topic Experts working in industry	Academics working in a field of knowledge
Type of Information	Summary of and response to immediate news events Amateur commentary on issues and topics Promotion and marketing	In-depth investigation or information about a topic Relies on expert opinion/ knowledge Presented for a general audience Usually lacks details of the research background	In-depth investigation or information about a topic Produced by expert in field Presented for academic audience with previous knowledge in field All research is substantiated
When to use in academic writing	If you want to draw attention to a recent event or concern with an issue in the media	If you want expert-level knowledge of an issue, but presented at the level of a general audience for widespread interest; use as quality research when the author's authority is proven	If you require academic level sources, meaning information that is presented for experts in that field of study; use if you are learning the terms and debates in that field and particularly need the expertise/voice of academics in that field
Example	News release about new virtual reality video game device Promotional material available on company websites	Investigative piece on the new virtual reality device; might ask questions like: How does it work? Comparison to previous technologies? What are the industry applications for virtual reality? How will it affect children's thinking? Could it be used in schools?	Academic article about the social implications of virtual reality, examining how it affects our communication and interaction Article may involve primary research in the form of a survey or experiment

When we start looking for sources for our project, we will refer back to this information.

Learning About the Search Tools

We have really two choices when it comes to conducting academic research. We can head straight to the internet through a general search engine, such as Google. Or, we can make use of the library search portal provided by our college or university.

Google seems easy to us as we have come to rely on it in our day to day life. But, while much can be done in academic research using direct internet access, libraries offer some unique supports and access. So, it is well worth the effort to get familiar with and learn to use these advanced tools if you have access to them.

Library Search Tools

Take a few minutes now to watch this video tour of a university's online library site. The interface and organization of resources may be different than those at your own library, but the general strategies for using it are the same.

http://barabus.tru.ca/engl1101/library.html

If you have access to a university library online, take some time now to explore it. While the interface of any one library may be different, they all provide a similar slate of resources and tools.

Using the Library Resources Checklist, tour your library online and make sure you can find and practice using its key features.

Library Resources Checklist (Reference)

Learning Tools – such as information on documenting source material and avoiding plagiarism.	
General Library Holding Search Portal – use this to search the material that is available at your specific library, including print books, journals, and other media.	
Research Databases – search these subject-specific databases for a wide collection of journal articles in any field of study, and make sure you understand how to get the articles that you find.	
Finding a specific article – find an article that you consider interesting and make sure you can figure out how to get the full text of that article. Sometimes full text pdfs are easily available, and sometimes you will need to follow a link, or even order it from interlibrary loans.	

Transcript:

Welcome to our tour of the university library online portal. Today, we'll be using the TRU Library as our example, but remember that most college and university libraries will have similar resources. You might just have to explore a little to find them!

In this short video, we will review the general resources available on the Library page and we will practice conducting a search for information. Then look at some of the ways you can access information once you've found it.

Let's begin by exploring the library home page. You'll find a lot of information here to help you conduct research and to use that research effectively in your studies.

We can access this information by clicking on the Research Guides tab. Several options are available here. If you want to find more information on a particular subject that you are studying, you can select it and this will lead you to a bunch of resources and guides you might find useful. Likewise, under Other Guides and How To Writing Support, you can find a range of information to help you with your studies. You can for example find information on doing an annotated bibliography, or presentation skills. Every library will have a different selection of these kinds of resources, so you will have to explore a bit and find things you will find useful. Let's look now at the citation guide section. If we click here, we can see information on the different types of citation guides available for study, but right down here on the bottom we can also see this information about plagiarism. Take special note of this information. For some students, the conventions around documenting sources can be quite different than what they are used to. Take some time to review University policy and your instructor's expectations around this.

Alright, we are going to have a look at APA citation because it is one of the most common. Make sure you understand which citation guide your instructor expects you to use. On this page we get a whole range of information about the APA Style. Down here on the bottom there is a paper template, there is a sample APA paper so you can copy the format, and over here on the left-hand side you can find information on how to do your APA referencing. Let's go back to the homepage and actually try to find a source.

Now we are back at the TRU Library Homepage, and we can see about searching for some information. Here you have your basic search portal for the library.

While Google searches the entire internet, the library portal search dozens of databases and library holdings that have been filtered for university use; this means you are more likely to get relevant and quality information.

Let's go straight to advanced search. Today we are going to search for information related to digital technology and literacy. So, let's just type those terms in. You can see now that the terms are in that we have several choices here. There are several search boxes, so we can split our terms up across those boxes and we can choose the relationship between those search terms, so we choose "And" not "or".

We can also select which field we would like to search. In this case, we are interested in the Subject Terms or the All Fields terms and just leave it like that. Finally, down here, we can narrow our searches by selecting the type of discipline that we want. This just helps to limit the returns. So, we might select for example, Communications and Education. But be really careful when limiting your searches, because you might lose out on some really great information. All right, let's see what we can get.

So here is the list for our search results. Before we look at specific results, we can see here on the left-hand side, more options for limiting our searches. We can go down here and search only things that are available in full text, so if you want them right away, you can click them. You can select only scholarly articles, sometimes instructors require you to use only scholarly information. Down here you can refine that even more, academic journals, magazines, or if you only want books. So again, lots of options

here but be really careful not to limit too much. You can see though that we have 40,000 results, better than google but not particularly useful, so you would want to play around with the limiters a little bit. Let's have a look at our actual search results now and see what kind of information we can find out about them. So, one of the first things we want to do is click on the title. So, once we get to the full information about this particular result we can see a few things. We can see that it is a book, it was published in 2015, nice and recent. These search terms down here these are really useful because those are terms you can use to find more information on the same topic.

Over here on the right-hand side is information to help you get access to this material, so while you are doing your search you can email this result to yourself. But the key thing is this cite option. This button will provide for you the reference for the source that you found. This is really useful information, both for helping you find the source again later, and but also for putting in your references for your research papers. So, here's our APA citation and it's all generated for you, so you can copy and paste that for future reference. Let's go back to our results list and look at the different kinds of sources that we have. This first source we looked at is clearly a book and you can see it gives you the physical location of the book in the library, but in this case, there's also an e-book available. So, if we were to click here we would get direct online access to it. Sometimes the sources are provided in a full PDF text as this one down here is again simply click and the document will open for you and you can save it. Again, you might want to in this case click on the title use the cite feature and get that APA reference so that you'll have it. Most often articles are available from the online database and you'll have to click through the instructions to get access to them so we can click on the where can I get this button and we follow these instructions until we get access to the article.

We've covered the basics of what you can find and do on a university library portal one last reminder, librarians are always there to support students get in touch if you need some help with your research.

Library vs. Google

Searching through a library portal has many advantages; unlike on the internet, information here has already been filtered and what you find will more likely be suitable for the needs of your academic project.

Also, a lot of information is copyrighted and so can be expensive to access online. Often, we can find excellent resources online, but they are behind a paywall.

Let's look at two examples to compare the limits of each search portal.

1. Let's say for our research project we wanted to use the 2015 article by Thomas Roberts and Pamela Chapman entitled "Express yourself: Using Digital Technology to Meaningfully Communicate," published in the journal *Children's Technology and Engineering*.

   We can easily access this article through a library database because the library has paid for access to the journal. However, if we try to access it directly through the open internet, we run into a paywall. View it at https://www.highbeam.com/doc/1G1-439035979.html.

   If you have access to a post-secondary library, you will be able to gain free access to this material. It's part of the privilege of being a student.

2. On the other hand, an increasing number of excellent resources are available directly online. The website MediaSmarts: Canada's Centre for Digital and Media Literacy http://mediasmarts.ca/ contains up-to-date, innovate, and authoritative material for students, teachers and the general public that does not always show up in a library search.

   Using internet search engines specifically for academic research can be challenging. Take a few minutes to go online and search for "Tips for searching with Google." Read through some resources to help refine your own Google techniques. Here are a couple of links to get you started:

   "Google Tips and Tricks Every Student Should Know" at https://lifehacker.com/google-tips-and-tricks-every-student-should-know-1508121671

   "Infographic: How to Use Google More Effectively" at http://mashable.com/2011/11/24/google-search-infographic/

Conducting a Search

Now that we are familiar with the search tools, we can begin to search for information for our research question. We have two key goals: first, to find the information that we need and second, to keep track of–or document–that information so that we can evaluate it and use it in our project.

The table on the next page lists the information we need to document for each source we find. We are recording details so we can attribute the information to the source accurately in our essay. As well, we are evaluating the source to make sure it is suitable for our project.

Documenting Research Information Template (Reference)

Information you need for the annotated bibliography	**Tips**
Identify the Source	
Source Title	As we search for sources, we quickly forget what we've looked at. Keep note of every source that looks promising so that you don't lose track of it!
Citation Information: • Author, Title, Year, Publication?	Collect either the full APA citation or the specific details so that you can write the citation later.
Access to Article: • Where did you find the source? Online Link? Library search? • Did you download a pdf?	Keep track of where or how you found the source so that you can find it again if necessary. If you save pdf documents, think about how you will name them and what folders you can keep them in to stay organized.
Evaluate the Source	
What type of source material is this? Where was it published? • Media report • Trades/Popular article • Academic journal • Other?	Identify the kind of source you have found, considering where it was published and what kind of information it will provide.
Is the source authoritative enough and of good enough quality for an academic project?	Once you know what kind of source it is, decide if the quality will be appropriate for your project. You may have to do a little exploring to find out the background of the writer, journal or website you are considering.
Determine the relevance of the source	
Why do you think this source might help with the research project? How do you think you will be able to use this source to answer the research question? What might it contribute to your research project?	What is the main focus of the source? How and why do you think this source will be helpful in answering your research question?

Research and Annotation

Now, let's dig in and do some research. First, you will do a scavenger hunt to practice using the search tools to find specific items.

Next, for one of the sources that you find, you will complete the documentation template.

Part 1

Remember, if you can, aim to use a university or college library site for this work as it's important practice. If you don't have access to this, you can use a general internet search engine like Google.

Scavenger Hunt (Practice)

	✓ Tick when complete:
1. On the library home page, find the search bar.	
2. Find the following source: Jenkins, H. (2006). *Confronting the challenges of participatory culture: Media education for the 21st century*. John D. and Catherine T. MacArthur Foundation.	
3. Find where to access the full text version of Jenkin's report.	
4. Do a new search – Find other sources by Henry Jenkins that discuss the idea of participatory culture.	
5. Select 2 of those sources and copy and paste the APA citations for them. Hint, use the CITE tool on the library webpage or an online citation tool.	
6. Find the article called: "Why We Need to Teach 21st Century Skills--And How to Do It."	
7. Complete the Documentation Template below for this article.	

Part 2. Collecting Key Documentation Information

Documenting Research Information Template (Practice)

Activity – complete this template for the article "Why We Need to Teach 21st Century Skills--And How to Do It."
Identify the Source Source Title
Citation Information Author, Title, Year, Publication?
Access to Article Where did you find the source? Online Link? Library search? Did you download a pdf?

Evaluate the Source

What type of source material is this?

Where was it published?

- Media report
- Trades/Popular article
- Academic journal
- Other?

Is the source authoritative enough and of good enough quality for an academic project?

Determine the Relevance of the Source

Why do you think this source might help with the research project?

How do you think you will be able to use this source to answer the research question?

What might it contribute to your research project?

Preparing the Annotated Bibliography (Lesson C)

An annotated bibliography provides summary and evaluation of source material collected on a specific topic or research question. Sometimes the annotated bibliography is an independent project – designed primarily to map out the research available on a topic. Other times it is used as part of a larger writing project.

Note

This lesson draws on knowledge of two articles. If you haven't already, you will want to read them now.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5). Retrieved 5 October 2001, from http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20 Immigrants%20-%20Part1.pdf

Regan, B. (2008). Why we need to teach 21st century skills–And how to do it. *Multimedia & Internet@Schools, 15*(4), 10-13.

The first step is to understand the main components and formatting requirements for an annotated bibliography. And second, we will look at a template for producing an annotated bibliography.

Formatting the Annotated Bibliography

An entry for an annotated bibliography contains 2 components: the Citation and the Annotation.

Components of the Annotated Bibliography (Reference)

Annotated Bibliography – Components for One Entry
Citation: Use the style suitable to your course or field of study. For this course, we are using the APA style.

Research and Annotation

Annotation:

An annotation is usually a 100-300-word paragraph.

It includes the following information:

1. **Summary**. What is the main argument or conclusion?
2. **Relevance/Authority**. Does the source have the credibility necessary to contribute meaningfully to the topic? How?
3. **Position**. What particular position does the source take towards the topic? How does it compare to other sources being looked at?
4. **Usefulness**. How will this source be useful in answering your research question?

Sample Entry

Prensky, M. (2001). Digital natives, digital immigrants. *On The Horizon*, *9*(5). Retrieved from http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf

Summary: In this article, Prensky argues that teachers have a responsibility to adapt the curriculum to meet the needs of a younger generation raised on digital technology. Such adaptations should address a younger generation's preference for a faster digital experience and multitasking. **Relevance/Authority:** Prensky is an established if controversial authority in the field of educational technology and curriculum design, and this particular article has become in the past 15 years a key focus for many exploring the issues of technology and learning. Prensky's terms, "digital immigrant" and "digital native," are now used by many, and have been the subject of much critique. **Position:** Prensky's position is notable for its assumption that all youth are inherently digital natives, meaning they have the skills and preference to work in a digitally-driven and technology-focused learning environment. Other writers have been quick to critique this assumption, arguing that the digital divide is a more pressing problem - addressing the factors that lead some in the younger generation to miss out on the technology skills necessary to be successful. The article by Wohlsen on this bibliography is an example of this. **Usefulness:** This article will be useful for this research question as it contributes to the discussion of what kinds of skills are valuable in the digital era; Prensky offers one example of the position that knowledge of digital technology is essential to the future. While he assumes the key skill is use of digital technology, his article can be compared to others who suggest it is the ability to code or create the technology that is more important.

- **Summary**. What is the main argument or conclusion?
- **Relevance/Authority**. Does the source have the credibility necessary to contribute meaningfully to the topic? How?
- **Position**. What particular position does the source take towards the topic? How does it compare to other sources being looked at?
- **Usefulness**. How will this source be useful in answering your research question?

Producing an Annotated Bibliography

In its final form, an annotated bibliography opens with a brief introduction, explaining the overall topic or research question and clearly indicating the scope and focus of the research. Then, it provides a list of entries, with the **full citation** and **annotation.**

Note

Information developed in Lessons A and B of this Study Room will be helpful in completing this task, but not essential. If you haven't completed it, you can use the following resources to help you in this task:

- Identify Key Words (Sample Answers)
- Key Word Matrix (Sample Answers)

Let's build part of an annotated bibliography for this research question:

> Digital technology influences how we gain access to information and how we communicate with other people. In the 21st century, what skills will be essential?

First, complete an introduction to the annotated bibliography. Use the headings in the template to guide you.

Then, complete one sample entry for the article: "Why We Need to Teach 21st Century Skills – And How to Do It." If you haven't yet read it, the article is available online here: http://www.internetatschools.com/Articles/Editorial/Features/Why-We-Need-to-Teach-21st-Century-Skills-And-How-to-Do-It-%5BAvailable-Full-Text-Free%5D-61011.aspx.

Review the sample answers when complete.

Annotated Bibliography (Practice)

Introduction

- Introduce the general topic that you have been researching.
- Explain your specific research question – emphasizing the scope or specific issue of focus.
- Explain the various kinds of information you will need to find in your research so that you can answer the research question. List some specific questions that you will use to guide your research.

Type your Introduction here:

Citations

Proper APA citation with correct formatting.

Write your citation here:

Annotation:

A 250-300-word paragraph that includes:

- **Summary**. What is the main argument or conclusion?
- **Relevance/Authority**. Does the source have the credibility necessary to contribute meaningfully to the topic? How?
- **Position**. What particular position does the source take towards the topic? How does it compare to other sources being looked at?
- **Usefulness**. How will this source be useful in answering your research question?

Write your annotation here:

Sample Answers

Focusing the Research Topic (Sample Answers)

Topic: **Digital Literacy and Education**
What do you want to know about digital literacy?
What is digital literacy? What skills are included in the definition of digital literacy? Who has digital literacy? Who does not? How can we ensure students have digital literacy?
What do you want to know about the relationship between digital literacy and education?
Does our education system teach digital literacy? Should our education system teach digital literacy? How can we ensure the education system teaches digital literacy? What education can be considered digital literacy?
What problems are there with understanding digital literacy?
Do we know what skills we need? Do we know what digital literacy is? Should we focus on access to digital technology, or the ability to use it, or the ability to build with it?
Is the concept of digital literacy clearly defined?
Debate exists over how to define digital literacy (i.e., Wohlsen and Prensky). The debate looks at the difference between access to and use of technology, as well as particular ways of thinking. The debate includes discussion over whether younger people simply have digital literacy or have to learn it.
Is the relationship between digital literacy and education clearly understood?
Based on readings of Wohlsen and Prensky, this relationship is not well understood. Debate exists around how and why the education system can support the goal of digital literacy. Should the education system change to provide digital literacy? Should it change to respond to already digitally literate students? What skills are truly necessary for the future and which ones are trends in technology? What role do teachers play in this?

Are there social debates suggested by the question of digital literacy and education? What is at stake in this topic?

1. What skills do young people need to be successful in the future?
2. Is the use of technology a necessary part of learning and education?
3. How should technology be integrated into learning and education?
4. Is digital literacy really necessary? How should it be defined?
5. Should teachers really change the classroom to meet the needs of technology focused generation?

Why is this topic important?

Digital technology is pervasive in the work, social, and educational levels of our lives. But how much of this is excitement over new ways of communicating, and how much is a fundamental difference in how we interact and learn?

We need to understand what we really need to know when it comes to digital technology so that we can make informed choices about things like our education system.

While Prensky and Wohlsen have different perspectives, both are concerned about what skills are being taught and how they are being taught.

List some questions related to the topic:

Sample questions have been offered in all of the categories above. Any one of those questions could form the basis of a research project. You may find that similar ideas and questions keep appearing as you work through this template; this means you are focusing in on something that interests you.

Here, we can list the questions that seem the most relevant and pressing, based on the answers above:

1. What is digital literacy? What skills are going to be necessary for future success? Are all of these skills tied to using digital technology? Are there other new skills needed because we live in a digital time?
2. What skills should the education system provide to ensure that students achieve the digital literacy they need?
3. Does the education system meet the needs of digitally literate students? Of a technology-focused society?
4. Should teachers change the classroom to meet the needs of a technology-focused generation? How?
5. Is there a debate about what skills are needed in the 21st century? Do we all really need to code? Is using technology the most important thing?

As you can see, this process allows us to uncover many different possible approaches to this topic. We have enough questions here for several essays. And your own answers many have uncovered even more.

In the next step, we will select one approach, and focus it for research.

Sample Answers

Identifying Information Needs (Sample Answers)

Identify Key Words. Key words provide clues to the scope and focus of the question.

Read over the research question carefully and circle what you think are significant words or phrases that are necessary to answering the question:

> **Digital technology** influences how we gain **access to information** and how we **communicate** with other people. In the **21st century**, what **skills** will be essential?

Explanation of Key Words and Phrases

Digital Technology • **Access to Information** • **How to Communicate**	Provides the context of the question. Because of the prevalence of digital technology, we need to think about what new skills we need. So the scope of the essay is set by these ideas of accessing information and communicating effectively. We need to ask: • What do we mean by digital technology? • How does it change our access to information? • How does it affect how we communicate? The answers to these questions will help us understand what new skills we need so that we can access information and communicate effectively.
21st Century Skills	We are looking for discussion and arguments that define what the new 21st Century skills might be. We will summarize these different positions in the essay and add in our own views. We want to look for: • Any debates over these skills. For example, Prensky and Wohlsen differ in what they argue are essential skills. • Different skills associated with different perspectives and fields of study. Do computer science and technology writers identify different skills than educators or people in the social sciences?

Your own ideas and reactions to the research question can help you to focus. In the box below, reflect on your own answer to the question. What do you think? You can use this to measure and compare against the research material you find.

What do you think about the research question? How would you answer it?

Answers will vary.

Based on the information explaining the key words and phrases, make a list of specific information that we need to research. Sometimes it's helpful to list this as smaller, more specific questions that need to be answered.

List of Information needs

- How do we define digital technology? Examples?
- How does it affect our access to information? Is there debate about this?
- How does digital technology affect the way we communicate? Is there debate about this?
- What are the essential 21st century skills needed to ensure we can succeed in a world shaped by digital technology? Is there debate about this?
- Do different fields of study have different views about what skills are necessary?
- What skills will be necessary to ensure we can manage all the information that we have access to as a result of digital technology?
- What skills will be necessary to ensure we can communicate effectively using digital technology?

We can use these questions to guide our research. Finding answers to all these questions will ensure we what we need to answer the research question.

Key Word Matrix (Sample Answers)

Key Words	Synonyms and Related Terms
Digital technology	Information technology, computers, social media
21st Century Skills	Digital literacy, cultural literacy, media literacy, technology skills
Access to information	Digital divide, information divide, mass information, mass data, digital access, education gaps
Communication	Relationships, social interaction, social media, identity, community

Sample Answers

Documenting Research Information Template (Sample Answers)

Activity – complete this template for the article "Why We Need to Teach 21st Century Skills--And How to Do It."
Identify the source **Source Title**
"Why We Need to Teach 21st Century Skills–And How to Do It."
Citation Information: **Author, Title, Year, Publication?**
Regan, B. (2008). Why we need to teach 21st century skills–And how to do it. *Multimedia & Internet@Schools*, *15*(4), 10-13.
Access to article: **Where did you find the source? Online Link? Library search? Did you download a pdf?**
Using library search engine. Search terms were: 21st century skills AND digital literacy Available as HTML Full text. Emailed to myself. Source is also available free online at http://www.internetatschools.com/Articles/Editorial/Features/Why-We-Need-to-Teach-21st-Century-Skills-And-How-to-Do-It-%5BAvailable-Full-Text-Free%5D-61011.aspx
Evaluate the source **What type of source material is this?** **Where was it published?** • **Media report** • **Trades/Popular article** • **Academic journal** • **Other?**

This article is published in an online journal called *Internet@schools: An Educator's Guide to Technology and the Web.* You can visit the home page for the journal online to learn more about it: http://www.internetatschools.com/

The journal provides authoritative and practical research, guidelines, and editorial pieces aimed at a general knowledge, but focused specifically for practical use by educators.

Is the source authoritative enough and of good enough quality for an academic project?

This is a perfect example of the quality and complexity of source that would be suitable for this course. The information is researched, based on practitioner and expert knowledge but presented in an accessible form for undergraduate research. It makes reference to previous research and is engaged in debate relevant to the fields of teaching and technology.

Determine the relevance of the source

Why do you think this source might help with the research project?

A quick skim over this article for key words and ideas reveals its relevance. The article summarizes and justifies an emphasis on 21st century skills as a focus for approaches to teaching, with attention to the value of media literacy, problem-solving, and collaborative skills.

How do you think you will be able to use this source to answer the research question?

Here's a quote that might be useful:

"To succeed in school and on the job today—where a visual cacophony and information overload are the norm—students need to learn how to assemble data in a meaningful way that expresses the possibilities, interpretations, and implications that arise from the facts."

What might it contribute to your research project?

These 21st century skills identified in this article overlap with the information from the Henry Jenkins article "Confronting the Challenges of Participatory Culture." This provides us with at least two articles that are engaged in conversation about the same issues and questions. A good goal for the research project. Both articles provide examples of the skills we need in the 21st century to be good communicators.

Sample Answers

Annotated Bibliography (Sample Answers)

Introduction

- Introduce the general topic that you have been researching.
- Explain your specific research question – emphasizing the scope or specific issue of focus.
- Explain the various kinds of information you will need to find in your research so that you can answer the research question. List some specific questions that you will use to guide your research.

This bibliography addresses the general topic of digital literacy and education. Researchers in the fields of education and technology are interested in the skills needed for the future, but significant debate exists about what those skills might be and why they are important. Therefore, this research is focused on the specific question of what skills will be essential in the 21st century to ensure we can access information and communicate effectively. This research was guided by the following questions:

1. How do we define digital technology? Examples?
2. How does it affect our access to information? Is there debate about this?
3. How does digital technology affect the way we communicate? Is there debate about this?
4. What are the essential 21st Century skills needed to ensure we can succeed in a world shaped by digital technology? Is there debate about this?
5. Do different fields of study have different views about what skills are necessary?
6. What skills will be necessary to ensure we can manage all the information that we have access to as a result of digital technology?
7. What skills will be necessary to ensure we can communicate effectively using digital technology?

Citations

Proper APA citation with correct formatting.

Regan, B. (2008). W*hy we need to teach 21st century skills–And how to do it.* Multimedia & Internet@Schools, 15(4), 10-13.

Annotation:

A 250-300-word paragraph that includes:

- **Summary**. What is the main argument or conclusion?
- **Relevance/Authority**. Does the source have the credibility necessary to contribute meaningfully to the topic? How?
- **Position**. What particular position does the source take towards the topic? How does it compare to other sources being looked at?
- **Usefulness**. How will this source be useful in answering your research question?

The article explores how "21st century skills" such as media literacy, problem-solving and collaborative ability are new tools to meet long-held progressive views of education that emphasize "learning while doing." The article, published in the journal *Internet@ Schools,* provides authoritative and practical information aimed at educators. It refers to previous research and is engaged in debate relevant to the fields of teaching and media studies. A quick skim over this article for key words and ideas reveals its relevance. The article summarizes and justifies an emphasis on 21st century skills as a focus for approaches to teaching, taking the position that attention to such values as media literacy, problem-solving, and collaborative skills are consistent with the long-standing goals of education in the United States. The 21st century skills identified in this article overlap with the information from the Henry Jenkins article "Confronting the Challenges of Participatory Culture." This provides us with at least two articles that are engaged in conversation about the same issues and questions. A good goal for the research project. Both articles provide examples of the skills we need in the 21st century to be good communicators.

Study Room 4 – Synthesis and Curation

Introduction

In a digital culture, the information stream is endless; whether its education, news, entertainment or advertising, we must negotiate new content at alarming rates each day. Information overload is now a common challenge.

To overcome the challenges of this information, we need to learn to filter and organize all this content. We need to be able to make sense out of it. In fact, such skills in information management and synthesis are key to a 21st century literacy. We need to be able to discern quality information, and we need to be able to find connections within all this information in order to give meaning to the world around us.

These key literacy skills are central to the academic process. Once we have a research question, we go and out and collect information from multiple sources to help us answer that question. But to do that, we need to be able to make order from all the information we collect.

In Study Room 4, we will work step by step through the development of a synthesis essay, and learn to organize information from multiple sources in logical and illuminating ways to answer a research question.

What is a Synthesis Essay?

A *synthesis essay* combines the perspectives from a variety of sources on a given issue or question. The goal is to make connections and illuminate relationships between different sources, and develop a larger understanding of the issue and your own critical position on it.

Why is This Important?

The ability to synthesize information is essential to thinking and writing in a university context. In synthesizing information, we have the ability to bring together many diverse voices around a singular issue; by doing this, we can illuminate the issues and show how they are significant to society. Further, we can add our own position to the larger conversation on the issues.

How to Start

Study Room 4 offers 3 lessons that guide you through a process of organizing information and the development of a synthesis essay.

This Study Room works best when you complete the lessons in order. In each lesson, you build on the work completed in the one before it until, finally, you complete a comparison essay.

Can't do it all? No problem. Dip in to any lesson to find useful tips, templates and samples on each topic.

Synthesis and Curation

Menu

- **Organizing and Grouping Information (Lesson A)**.

  You will learn to organize and group research information into useful points of discussion.

- **Combining and Evaluating Ideas (Lesson B)**.

  You will practice deciding how to combine and comment on the connections between sources.

- **Producing the Essay Outline (Lesson C)**.

  You will produce an essay outline based on categories of discussion.

You can work progressively through the lesson, or choose a specific section.

Organizing and grouping information (Lesson A)

After successfully conducting research for a project, you will find yourself facing a mass of information and wondering how you will sort it all out to write a paper. This sorting process is the focus of this section.

First, we will distinguish the demands of a synthesis project from a basic summary. And next, we will practice organizing the research material into relevant categories of discussion. Finally, we will develop a template to filter research material into these categories of discussion and, develop connections and commentary.

Note

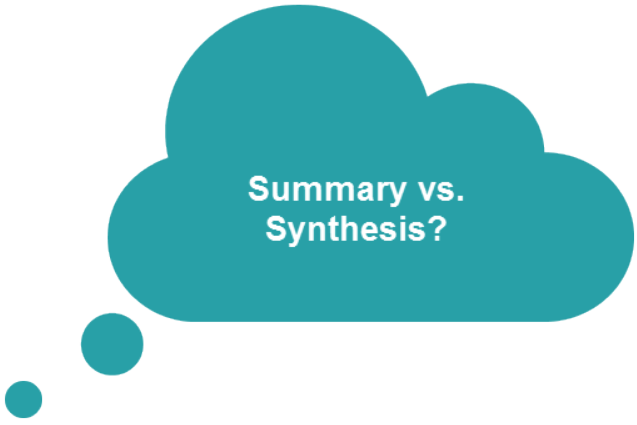
This lesson draws on knowledge of three articles. If you haven't already, you will want to read them now.

Jenkins, H., (2006). Confronting the challenges of participatory culture: Media education for the 21st century. An Occasional Paper on Digital Media and Learning. *John D. and Catherine T. MacArthur Foundation*. Retrieved from https://files.eric.ed.gov/fulltext/ED536086.pdf

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5). Retrieved 5 October 2001, from http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20 Immigrants%20-%20Part1.pdf

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

Understanding Synthesis



Let's begin with what you **don't** want to do in a synthesis paper. Working with research material is challenging, and the risk is that research material is *summarized* in the paper, but not *synthesized.*

What's the difference?

Summary vs. Synthesis (Reference)

Summary of Research material in an essay	Synthesis of Research material in an essay
Source material is described in summary form, with an emphasis on how that material relates to the overall essay topic.	Source material is critically evaluated for the position it takes in the larger conversation about the topic.
Source material is treated independently, with little effort to find connections or relationships between sources.	Source material is viewed as part of a larger conversation, and explored for how it relates to and connects with the other sources addressing the same topic.
Summary essays are organized by source, as each section of the essay summarizes the ideas in one source. In this way, they are really essay versions of the annotated bibliography.	Synthesis essays are organized by key issues or categories of information, and each section works to illuminate a new understanding of the issue by combining a variety of sources and examining the connections among them.

So, the goal when writing a synthesis paper is to find and explore meaningful connections among sources with various positions, arguments and assumptions. To do this, you must be able to organize the research information into relevant points of discussion.

Points of Discussion

To identify relevant points of discussion, we need to start with our purpose for doing the research in the first place. This purpose will, of course, change from project to project. The initial topic and research question provide a starting point. As we find and evaluate research material, we add to that our evolving understanding of the topic and a growing sense of the important themes and ideas emerging from the research itself.

Because of this, defining points of discussion tends to be a creative brainstorming act; we look over our research question and the mass of research we have read, and decide for ourselves what *points of discussion* are most relevant.

Have a look at this sample research question.

Points of Discussion (Reference)

Finding Points of Discussion	
Research Question: Digital technologies influence how we gain access to information and how we communicate with other people. In the 21st century, what skills will be essential?	**To answer this research question:** What points of discussion do we need to make in the essay? What would be the best headings for each section of the essay?

Let's practice organizing ideas and sources around key points of discussion. In this exercise, you will be given the key points of discussion. When you write your paper, you will have to figure out what these are based on the information you have.

Organizing Around Points of Discussion (Practice)

Organizing Information

1. **Research Question**

   Circle the key words to help identify what kind of information you need to include in the essay.

   Digital technologies influence how we gain access to information and how we communicate with other people. In the 21st century, what skills will be essential?

2. **Organizing Research Questions**

   Below are 7 smaller questions that can help us to focus and to answer the research question. Read over these questions, and group them under the most *logical point of discussion.*

   - How do we define digital technology? Examples?
   - How does it affect our access to information? Is there debate about this?
   - How does digital technology affect the way we communicate? Is there debate about this?
   - What are the essential 21st century skills needed to ensure we can succeed in a world shaped by digital technology? Is there debate about this?
   - Do different fields of study have different views about what skills are necessary?
   - What skills will be necessary to ensure we can manage all the information that we have access to as a result of digital technology?
   - What skills will be necessary to ensure we can communicate effectively using digital technology?

21st Century Skills:

Access to Information:

Effects on communication:

3. **Relevant Source Material**

- Here are three articles that we can use to respond to the research question. In your future projects, you may have to synthesis information from more than three sources. The process explored in this lesson is the same, whether you are working with 3 or 13 sources!
- Based on what you know about each article, match each author's name to the three groups of questions you made above. In this way, you have an idea of which sources can help you to answer which groups of questions.

Jenkins, H., (2006). Confronting the challenges of participatory culture: Media education for the 21st century. An Occasional Paper on Digital Media and Learning. *John D. and Catherine T. MacArthur Foundation*. Retrieved from https://files.eric.ed.gov/fulltext/ED536086.pdf

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon* , 9(5). Retrieved 5 October 2001, from http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

21st Century Skills:

Access to Information:

Relevant Source Material:

Combining and Evaluating Ideas (Lesson B)

In this lesson, we continue the process of sorting through our research material to combine and make connections between several sources.

Once we have identified the main points of discussion for the research topic, our goal is to articulate the connections and relationships *between* the sources to demonstrate the range of ideas on each point of discussion.

We will begin, in Step 1, by developing a *synthesis table*, which we will populate with specific and detailed information from the source material. In Step 2, we will focus on one specific category or 'point' of discussion, and develop our ability to examine and illuminate the relationships between sources.

Note

This lesson draws on knowledge of three articles. If you haven't already, you will want to read them now.

Jenkins, H., (2006). Confronting the challenges of participatory culture: Media education for the 21st century. An Occasional Paper on Digital Media and Learning. *John D. and Catherine T. MacArthur Foundation*. Retrieved from https://files.eric.ed.gov/fulltext/ED536086.pdf

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5). Retrieved 5 October 2001, from http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20 Immigrants%20-%20Part1.pdf

Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

The lessons in Study Room 2 and Study Room 3 provide some summary work and comparison of these articles. You do not need to have completed these to enjoy this lesson. See the following resources if you would like some background information on the Prensky and Wohlsen readings:

- Reverse Outline of Wohlsen's Article (Sample Answers)
- Reverse Outline of Prensky Article (Sample Answers)
- Identifying Issues and Debates – Wohlsen Article (Sample Answers)
- Identifying Issues and Debates – Prensky Article (Sample Answers)
- Critical Thinking Questions (Sample Answers)
- Structure of a Comparison (Sample Answers)
- Critical Comparison Outline Template (Sample Answers)

Filtering Source Material

Once you have defined the points of discussion for a project, it's time to work with specific content. This process can take some time; you need to go back over your research material, and review the summary and annotation notes that you have completed so far, to collect relevant content for each point of discussion.

The goal is to filter the mass of research information you have collected, and select information relevant for each point of discussion. A *synthesis table* is a helpful tool in this process as it makes it easier to highlight relationships between sources.

Note

If you haven't completed Lesson A for this Study Room, view the following resources to see the points of discussion developed for our sample research question:

- Organizing around Points of Discussion (Sample Answers)

Have a look at the *Synthesis Table* template, but first take note of the following hints for using it:

1. In the first column, list the main points of discussion. They become the main sections of the essay. Provide as much detail as you can about the kind of information you plan to put in this category and the kinds of questions this category will address.

   Remember, as you progress through this process, you may find that the points need to be revised; sometimes one point turns out to be too big and needs to be re-focused into several smaller categories of discussion.

2. The next columns are for each source. The template has room for three sources, but you can have as many as you like. Just add columns!

   Fill in specific information from each source for each category, when relevant. Remember, not every source will be useful for every category.

   Include your own summary and paraphrase of ideas in the source as well as small quotations when useful. Remember to think not only about specific points the author makes, but also dig deeper to include the assumptions, evidence, and examples used.

Note

If you aren't sure about how to draw out specific ideas, assumptions and evidence from the sources, you can review these in the Study Room 1 and Study Room 2 lessons.

3. The final column is for notes to yourself about the research material and ideas you are working with. This information will help you to make connections and transitions between ideas in the essay, as well as insert your own position.

   For each category of discussion, make notes about the relationships between the ideas in different sources, noting any points of conflict or debate as well as agreement, and any comments and conclusions you might make about the issues under discussion.

Synthesis Table (Reference)

Synthesis Table Template				
For each point of information: • Briefly describe what kind of question or information you are looking for.	**For each source, indicate how it contributes to the category of information, including:** • What does the source have to say about this topic (summary of the source's position/idea)? • Indicate what kinds of assumptions the author makes about this topic. • Indicate what kinds of evidence and examples are provided.			**For each category, reflect on the information from the sources and consider:** • Interesting relationships between what the different sources say. • The nature of the connections between the sources. Is there debate or agreement? • Your own position on this idea and how it relates to the other sources.
	Source A	**Source B**	**Source C**	**Comments/Conclusions**
Points				

Practice

Now it's your turn to practice with the template. Notice that in this case, the template has the research question at the top and the points of discussion that have already been developed listed down the left hand columns.

Using the template, fill in the boxes for each category as best you can, drawing on the source articles by Prensky, Jenkins, and Wohlsen. If you can think of other relevant sources for this topic, go ahead and add them!

While answers will vary, you can check the sample answers for each category. Based on the sample answer, see if you can improve your work for the next point.

Synthesis Table (Practice)

<table>
<tr><td colspan="4">Research Question:

Digital technologies influence how we gain access to information and how we communicate with other people. In the 21st century, what skills will be essential?</td></tr>
<tr><td>For each point of information:

• Briefly describe what kind of question or information you are looking for.</td><td colspan="2">For each source, indicate how it contributes to the category of information, including:

• What does the source have to say about this topic (summary of the source's position or idea)?

• Indicate what kinds of assumptions the author makes about this topic.

• Indicate what kinds of evidence and examples are provided.</td><td>For each category, reflect on the information from the sources and consider:

• Interesting relationships between what the different sources say.

• The nature of the connections between the sources. Is there debate or agreement?

• Your own position on this idea and how it relates to the other sources.</td></tr>
<tr><td></td><td>Source A</td><td>Source B</td><td>Source C</td><td>Comments/Conclusions</td></tr>
<tr><td>Points</td><td>Prensky</td><td>Wohlsen</td><td>Jenkins</td><td></td></tr>
<tr><td>Point 1 – Access to Information

What does the research have to say about how digital technology affects the way we access information?</td><td></td><td></td><td></td><td></td></tr>
</table>

Point 2 – *Effects on Communication* What does the research have to say about how digital technology affects the way we communicate?				
Point 3 – *21st Century Skills* What does the research say about what skills we need to ensure we can continue to access information and communicate effectively in the 21st century?				

Remember that these sample answers are offered as demonstration only and reflect the idea of how to approach this task.

Exploring and Evaluating Relationships

Now, let's practice how to go from the notes in our synthesis table to writing paragraphs that combine and evaluate the relationships among this source material. You might think about all the ideas and examples in the table as building blocks. You should have a good idea now of what you want to build and how each point will fit in; it's time to build!

When we move to writing paragraphs, we must remember that our goal is to highlight the *relationships* between ideas. As you build a paragraph using ideas from multiple sources, consider:

- Does the information you bring in suggest agreement or debate?
- Does the information provide arguments, assumptions, or evidence about an idea?
- How does the information link to the paragraph before it? After it?

In a synthesis essay, much of the information will be paraphrased and quoted from other sources. Your voice comes across when you explain the relationships between all the other information.

This is the **work** that you do – your unique contribution; no one else will bring all the research material together in exactly the same way to illuminate exactly the same ideas.

Let's practice by looking at the information for Point 1 from the synthesis table.

Practice

The task is to put together a paragraph based on the information from the synthesis table.

All the ideas from Point 1 are provided here. Review these notes, then follow the instructions below.

Information for Point 1 (Reference)

	Prensky	Wohlsen	Jenkins	
Point 1 – *Access to Information* What does the research have to say about how digital technology affects the way we access	Prensky focuses on how the "digital natives" access information in fundamentally different ways because of exposure to digital tech: "as a result of this ubiquitous environment and the sheer volume of their interaction with it, today's students think and process information fundamentally differently from their predecessors." (p. 1). Point is Prensky's fundamental assumption that allows him to make his argument about changing curriculum.	For Wohlsen, key skills in coding and algorithmic thinking are necessary primarily as they will enable the younger generation to be able to interpret and use the mass of information that is generated in a digital culture. Kids, he argues, need to be "skilled in the ways of information technology" because most career paths are "data-driven."	For Jenkins the emphasis is on the skills necessary for participatory culture – in which participation in culture means the ability to produce and share information. With the skills to do so, individuals will be fully participating in culture as citizens.	Prensky focuses on a preference for how to consume or engage information, but Wohlsen and Jenkins are more focused on how digital literacy skills will enable the ability to produce and share information within society. For Prensky, digital technology has changed the way young people consume information. While this may be true, this view, perhaps because he writes in 2001, is only a small part of the issue. In the digital age, information and data are key, and Wohlsen and Jenkins emphasize the skills in interpreting, producing and sharing information as the cornerstone of digital literacy.

Now it's your turn.

Sample Paragraph (Practice)

Part 1 - Instructions:

Below you will find five pieces of a paragraph. These pieces are all mixed up, and your task it to drag them into a logical order to make an effective paragraph. Think about the topic sentence – what is the main idea of the paragraph? And then consider the logical development of information.

Rearrange the sections into a logical order.

However, writing years after Prensky, Wohlsen and Jenkins tackle his early assumption that "digital natives" know more about how to use technologies than they actually do, and argue that education should be designed with this in mind.

Writing in 2001, Marc Prensky argues that "digital natives" "think and process information fundamentally differently from their predecessors" (p. 1) as a result of experience with digital technology. This assumption allows Prensky to make his argument about changing the curriculum to include game-focused learning.

The need to close skill gaps in digital technology is supported by both Wohlsen, in the field of computer programming, and Jenkins' arguments on 21st century literacy.

Use of digital technology effects not only how we access information, but also our ability to produce and interpret the information around us.

Wohlsen argues kids need to be "skilled in the ways of information technology" because most career paths are "data-driven." And Jenkins argues that skills to produce and share digital information are necessary to fully participate in culture as citizens.

Part 2 Instructions

Read over the completed paragraph, and locate all the transition language and key words and phrases that are repeated. Locate any words or phrases that help you to understand the relationships between the different ideas.

> Use of digital technology effects not only how we access information, but also our ability to produce and share the information around us. Writing in 2001, Marc Prensky argues that "digital natives" "think and process information fundamentally differently from their predecessors" (p. 1) as a result of experience with digital technology. This assumption allows Prensky to make his argument about changing the curriculum to account for this shift in information access, and include game-focused learning. However, writing years after Prensky, Wohlsen and Jenkins tackle his early assumption that "digital natives" know more about how to use technologies than they actually do, and argue that education should be designed with this in mind. The need to close skill gaps in digital technology is supported by both Wohlsen, in the field of computer programming, and Jenkins' arguments on 21st century literacy. Wohlsen argues kids need to be "skilled in the ways of information technology" because most career paths are "data-driven" (2014). More generally, Jenkins (2009) argues that skills to produce and share digital information are necessary to fully participate in culture as citizens.

Producing the Essay Outline (Lesson C)

All the information has been read, considered, and organized. You have thought through the relationships between the different source material and you have a strong sense of what points you want to convey to your reader. It's time to write the synthesis essay.

This outline template is a final tool for you to use when preparing to write. The outline template helps to remind you of the conventions for the overall structure of the essay; the expectation is that the main points are directly stated first, and then supporting information is developed. This approach may be different from what you are used to and the template can help you stay on track.

Synthesis Paper Outline Template (Reference)

Introduction

- Topic and purpose – What is the general issue?
- Main thesis – What will you say about that issue?
- Map – what points will you cover?

Hints for Body of the essay

- You can have more than 3 points.
- Points are not the same as paragraphs - you may have many paragraphs to cover 1 point.
- Source information is correctly documented.
- Paragraphs are well-organized with topic sentences and strong supporting evidence.
- Transition language and key words help connect information together.

Point 1:

- Content – What is the key point?
- Function – Why are you including this information? How does it connect to the thesis?
- Support – What source material and supporting explanation will you use?

Point 2:

- As above

Point 3:

- As above

Conclusion:

- Emphasize key message – what did this essay teach us?
- Moving forward – what shall we think about next?

Sample Answers

Organizing Around Points of Discussion (Sample Answers)

1. **Research Question:**

   Circle the key words to help identify what kind of information you need to include in the essay.

   Digital technologies influence how we **gain access to information** and how **we communicate** with other people. In the 21st century, **what skills will be essential**?

2. **Organizing Research Questions:**

   Below are 7 smaller questions that can help us to focus and to answer the research question. Read over these questions, and group them under the most *logical point of discussion.*

   - How do we define digital technology? Examples?
   - How does it affect our access to information? Is there debate about this?
   - How does digital technology affect the way we communicate? Is there debate about this?
   - What are the essential 21st century skills needed to ensure we can succeed in a world shaped by digital technology? Is there debate about this?
   - Do different fields of study have different views about what skills are necessary?
   - What skills will be necessary to ensure we can manage all the information that we have access to as a result of digital technology?
   - What skills will be necessary to ensure we can communicate effectively using digital technology?

21st Century Skills:

- How do we define digital technology? Examples?
- What are the essential 21st century skills needed to ensure we can succeed in a world shaped by digital technology? Is there debate about this?
- Do different fields of study have different views about what skills are necessary?

Access to Information:

- How does it affect our access to information? Is there debate about this?
- What skills will be necessary to ensure we can manage all the information that we have access to as a result of digital technology?

Effects on Communication:

- How does digital technology affect the way we communicate? Is there debate about this?
- What skills will be necessary to ensure we can communicate effectively using digital technology?

3. **Relevant Source Material:**

   - Here are three articles that we can use to respond to the research question. In your future projects, you may have to synthesis information from many more than three sources. The process we will explore in this lesson is the same, whether you are working with 3 or 13 sources!
   - Based on what you know about each article, match each author's name to the three groups of questions you made above. In this way, you have an idea of which sources can help you to answer which groups of questions.

Jenkins, H., (2006). Confronting the challenges of participatory culture: Media education for the 21st century. An Occasional Paper on Digital Media and Learning. *John D. and Catherine T. MacArthur Foundation*. Retrieved from https://files.eric.ed.gov/fulltext/ED536086.pdf

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Wohlsen, M. (2016). Digital literacy is the key to the future, but we still don't know what it means. *WIRED*. Retrieved 14 April 2016, from http://www.wired.com/2014/09/digital-literacy-key-future-still-don't-know-means/

21st Century Skills:

- Prensky
- Jenkins
- Wohlsen

Access to Information:

- Prensky
- Wohlsen
- Jenkins

Effects on Communication:

- Jenkins
- Prensky

Sample Answers

Synthesis Table (Sample Answers)

Research Question: Digital technologies influence how we gain access to information and how we communicate with other people. In the 21st century, what skills will be essential?				
For each point of information: • Briefly describe what kind of question or information you are looking for.	**For each source, indicate how it contributes to the category of information, including:** • What does the source have to say about this topic (summary of the source's position or idea)? • Indicate what kinds of assumptions the author makes about this topic. • Indicate what kinds of evidence and examples are provided.			**For each category, reflect on the information from the sources and consider:** • Interesting relationships between what the different sources say. • The nature of the connections between the sources. Is there debate or agreement? • Your own position on this idea and how it relates to the other sources.
	Source A	**Source B**	**Source C**	**Comments/Conclusions**
Points	**Prensky**	**Wohlsen**	**Jenkins**	
Point 1 – *Access to information* What does the research have to say about how digital technology affects the way we access information?	Prensky focuses on how the "digital natives" access information in fundamentally different ways because of exposure to digital tech: "as a result of this ubiquitous environment and the sheer volume of their interaction with it, today's students think and process information fundamentally differently from their predecessors" (p. 1). Point is Prensky's fundamental assumption that allows him to make his argument about changing curriculum; Interesting note: Wohlsen and Jenkins try to expose places where they need more skills to work with information, assuming, unlike Prensky, that they have significant skill gaps.	For Wohlsen, key skills in coding and algorithmic thinking are necessary primarily as they will enable the younger generation to be able to interpret and use the mass of information that is generated in a digital culture. Kids, he argues, need to be "skilled in the ways of information technology" because most career paths are "data-driven."	For Jenkins the emphasis is on the skills necessary for participatory culture – in which participation in culture means the ability to produce and share information. With the skills to do so, individuals will be fully participating in culture as citizens.	Prensky focuses on a preference for how to consume or engage information, but Wohlsen and Jenkins are more focused on how digital literacy skills will enable the ability to produce and share information within society. For Prensky, digital technology has changed the way young people consume information. While this may be true, this view, perhaps because he writes in 2001, is only a small part of the issue. In the digital age, information and data are key, and Wohlsen and Jenkins emphasize the skills in interpreting, producing and sharing information as the cornerstone of digital literacy. In section – emphasize writers' concern for this issue ranges from consumption, to production and sharing of information.

Point 2 – *Effects on Communication* What does the research have to say about how digital technology affects the way we communicate?	Prensky's notes that the "digital natives" and "digital immigrants" communicate and so learn in fundamentally different ways, causing friction.	Wohlsen's focus is on coding skills to be able to participate in new ways in which information is produced and circulated.		
Point 3 – *21st Century Skills* What does the research say about what skills we need to ensure we can continue to access information and communicate effectively in the 21st century?		Wohlsen emphasis for skills is the ability to make a computer do what you want it to do – coding and "logarithmic" thinking The rationale is to ensure success in "data-driven" environment.	Jenkins argues that in the era of "participatory culture" characterized by more integrated affiliations through social media and more collaboration, we need new skills; they list and explain these new skills which include problem-solving through "play", "networking, collaboration or "collective intelligence" and "appropriation" or the ability to remix media content. All these skills are defined as necessary to help participate in the creation and sharing of information and communication in new participatory culture.	Wohlsen's arguments are really smaller version of what Jenkins encapsulates in his major study of 21st century skills – the dominant features, if take all authors' works together – collaboration, mixing and remixing, multi-media productions and distribution of media to share information and communicate.

Sample Answers

Sample Paragraph (Sample Answers)

Part 1 - Instructions:

Below you will find five pieces of a paragraph. These pieces are all mixed up, and your task it to drag them into a logical order to make an effective paragraph. Think about the topic sentence – what is the main idea of the paragraph? And then consider the logical development of information.

Rearrange the sections into a logical order.

However, writing years after Prensky, Wohlsen and Jenkins tackle his early assumption that "digital natives" know more about how to use technologies than they actually do, and argue that education should be designed with this in mind.

Writing in 2001, Marc Prensky argues that "digital natives" "think and process information fundamentally differently from their predecessors" (p. 1) as a result of experience with digital technology. This assumption allows Prensky to make his argument about changing the curriculum to include game-focused learning.

The need to close skill gaps in digital technology is supported by both Wohlsen, in the field of computer programming, and Jenkins' arguments on 21st century literacy.

Use of digital technology effects not only how we access information, but also our ability to produce and interpret the information around us.

Wohlsen argues kids need to be "skilled in the ways of information technology" because most career paths are "data-driven." And Jenkins argues that skills to produce and share digital information are necessary to fully participate in culture as citizens.

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Part 2 Instructions

Read over the completed paragraph, and locate all the transition language and key words and phrases that are repeated. Locate any words or phrases that help you to understand the relationships between the different ideas.

Use of digital technology effects not only how we **access information**, but also our ability to **produce and share** the information around us. Writing in 2001, Marc Prensky argues that "digital natives" "think and process information fundamentally differently from their predecessors" (p. 1) as a result of experience with digital technology. **This assumption** allows Prensky to make his argument about changing the curriculum to account for this shift in **information access**, and include game-focused learning. **However,** writing years after Prensky, Wohlsen and Jenkins tackle his early assumption that "digital natives" know more about how to use technologies than they actually do, and argue that education should be designed with this in mind. **The need to close skill gaps in digital technology** is supported by both Wohlsen, in the field of computer programming, and Jenkins' arguments on 21st century literacy. **Wohlsen argues** kids need to be "skilled in the ways of information technology" because most career paths are "data-driven" (2014). **More generally,** Jenkins (2009) argues that skills to **produce and share** digital information are necessary to fully participate in culture as citizens.

Explanation:

Notice that the bolded words and phrases help guide the reader by linking ideas in repeating words and phrases, as well as indicating a relationship between the ideas. In the sample paragraph, the reader can follow a progression of thought about the main topic from 2001 to 2015. The reader understands there was a shift in assuming how much young people really knew about how to use digital technology during this time period.

Boot Camp 1 – Writing with Process

Introduction

A strong writing process is crucial to the successful completion of both academic and professional writing projects. The goal of this lesson is to give you a practical set of tools for planning and organizing a writing project. You will have a chance to participate and practice using these tools as we go along

Facing a new assignment and a blinking cursor on the computer screen can be intimidating.

I'm totally overwhelmed by new assignments. I never know where to start!?

We can all feel like that sometimes. Follow along with us and learn how to plan your writing.

Even experienced writers must remind themselves that writing, like other everyday activities, is a process. Once you have a step-by-step plan for how to start and develop your assignment, it becomes much easier.

Think about it this way: in Math, you must learn how to solve a new kind of problem. And if you get a new cell phone you must learn how all the features work.

Well, the same is true of writing. We all have to learn how to write, especially when we are writing something formal like an academic essay. We must learn all the rules and conventions that are expected in an essay, and we must learn tips and tricks for getting all our great ideas from our heads onto the blank page.

You will appreciate how much easier it is to write an essay if you spend the time at the beginning to figure out exactly what you want to achieve.

Planning this way will not only help you develop better ideas, it will help you concentrate on better writing technique when you sit down to write! These skills will be useful not only for typical university essays, but also for any writing challenges you may have in your professional life.

How To Start

Go ahead and complete this Boot Camp in order, or dip in and try any of the sections that appeal to you!

Warm Up – Test your skills

Workout – Interactive skill-building lessons

- Basic Writing Process (Workout A)
- Interpret the Topic (Workout B)
- Focus the Topic (Workout C)
- Think and Learn (Workout D)
- Organize Information (Workout E)
- Write a thesis statement (Workout F)
- Produce a Detailed Outline (Workout G)

Cool down – Practice your skills

Warm Up

How do you feel about writing? Which parts of the writing process do you find challenging? Which parts are rewarding? Consider the following questions and write down your thoughts below.

Writing Process Reflection (Practice)

1. Reflect on the last time you completed a written project, either for work or for school. How do you feel about writing? What is the most difficult part of writing for you? Why? What part of the writing experience do you enjoy? Why?
2. Reflect on your own writing process. How do you come up with the ideas for your writing? Do you usually make an outline before you write? Do you ever edit your writing after you've finished? What could you do to make it easier to complete a writing project?

Basic Writing Process (Workout A)

Are you ready to go?

I'm ready!

This lesson will develop your skills in the first six steps of this basic writing practice. To sharpen your skills in writing the full draft and revising an essay, consider visiting Boot Camp 2 and Boot Camp 4.

1. **Interpret the topic**

   *Step one is to understand the requirements and goals of the proposed essay. You will learn to look for the **key terms** in an assignment and to **identify the requirements** of your essay.*

   See Interpret the Topic (Workout B) for more information.

2. **Focus the topic**

   *Step two is to decide what kind of approach you want to take and what kind of information you need. You will identify the **goal** and **scope** of your essay.*

   See Focus the Topic (Workout C) for more information.

3. **Think and learn**

   *Step three is to do all your research and critical thinking. You will draw together **all the information** you need for your essay.*

   See Think and Learn (Workout D) for more information.

4. **Organize information**

   *Step four is to **organize and group** all the information, and to think about relationships between all your ideas and research. You will decide how all your information fits together and what **headings or main categories** of ideas emerge.*

   See Organize Information (Workout E) for more information.

5. **Write a thesis statement**

   *Step five is to decide what your reader will learn when the essay is finished. Based on this, you will develop a **thesis statement**.*

   See Write a Thesis Statement (Workout F) for more information.

6. **Produce a detailed outline**

   *Step six is to outline all your ideas, thinking about **details and examples**. You will make sure that all your points are consistent with your **thesis statement**.*

   See Produce a Detailed Outline (Workout G) for more information.

7. **Write a draft**

   *Step seven is to write a first draft. When you write, you will make sure all your ideas link together with **effective transitions** and that you have enough support for these ideas.*

   See Boot Camp 2 (Writing a Full Draft) for more information.

8. **Edit and edit again**

   *Step eight is to go back and revise your paper, looking at the overall structure as well as the quality of the writing, including **paragraphs** and **sentences**.*

   See Boot Camp 4 (Revising an Essay) for more information.

Writing with Process

In practice, writing is messy. This lesson follows a number of linear steps to study a basic writing practice, but, in fact you are likely to move back and forth between these steps all the time until the essay is finished.

For example, you might spend a lot of time thinking about and gathering information, and then begin to organize and draft the essay, only to realize you need more planning and research. That new research may then alter your thesis, or make you re-think your original plans for the essay.

Revision and editing rarely happens at the end of the essay alone, but instead happens all the way through the writing process.

Interpret the Topic (Workout B)

Interpretation

This general sample topic offers few clues to help you know what to write about. What type of education? What kind of video games? And what kind of relationship is there between them?

The topic contains very little information about the scope and goal of the proposed essay. *Scope* refers to the context of the essay – what kind of information will be included? *Goal* refers to the work the essay will do – what will we learn from reading your essay?

You need more information to help you understand what your essay should do. You need a more clearly defined essay topic or research question. Sometimes it's your job to develop this essay topic. Sometimes, your instructor gives it to you!

Revised Topic

Often, when you are given an essay topic, your instructor is very clear about the expectations for that project. Part of your challenge is to be able to interpret what the instructor is asking you to do!

Let's practice this.

Interpreting the Topic Question (Practice)

Read over the revised essay topic in the box.

Find what you think are some key words that help you understand your task. The task is what you need to do. Circle what you think are the key words.

Review how video games are used in primary school classrooms.

How about this for a sample essay topic?

Sample Topic:

Video Games in Education

Sure, it looks like fun!

You won't get to play any video games...

Oh...

What is this question asking me to do?

Revised Topic:

Review how video games are used in primary school classrooms.

Writing with Process

Let's try another topic!

Read over the essay topic in the below.

Find what you think are some key words that help you understand the task. The task is what you need to do. Circle what you think are the key words.

Discuss why video games are a useful tool in the primary school classroom.

I see. In the first essay, I have to provide information about something.

Right! And, in the second essay, you have to take a position in a debate and convince your readers.

Review how video games are used in primary school classrooms.

Discuss why video games are a useful tool in the primary school classroom.

Focus the Topic (Workout C)

Once you have a clear idea of what you are expected to do, you can start developing your own approach to the essay. To focus the topic, you must do two things:

1. Determine the goal of the essay. The goal is what the essay needs to accomplish.
2. Define the scope and terms of the essay. The scope and terms are the context of the essay and they will determine what you will and won't include in the essay.

Each student will approach an essay differently, but it must always fulfil the expected goal and scope.

Have a look at the sample essay topics below and try to identify the goal and scope of each.

Identify Goal and Scope (Practice)

Sample essay topic 1: **Review how video games are used in primary school classrooms**
What is the Goal of this essay? What does it have to accomplish?
What is the Scope of this essay? How will you set limits on the essay?
Sample essay topic 2: **Discuss why video games are a useful tool in the primary school classroom**
What is the Goal of this essay? What does it have to accomplish?
What is the Scope of this essay? How will you set limits on the essay?

Think and Learn (Workout D)

Once you understand the goal and scope of your essay topic, you need to have something to say!

The next step in the essay writing process is to think and learn. Some of the ideas in an essay will come from your own creativity and critical thinking and some will come from reading and research.

For this activity, let's focus on the topic:

Discuss why video games are a useful tool in the primary school classroom.

For our example, we won't do any research. Let's make up an essay based on ideas we might already have about the topic.

Ok, go ahead, … .1, 2,3 …. Think. Are you thinking?

No, probably not yet. This is hard; it's where all the work happens for the essay. Too often students skip this part and go straight to the writing stage and try to think while staring at that blinking curser. We need some tools to help us think.

Thinking Questions

It's always a good idea to start by identifying what you need to know. We know the goal of this essay is to present conclusions about why video games are (or are not) useful in the primary school classroom.

Now you can develop a set of smaller questions for each different part of the essay topic – we in a variety of ways call these 'thinking questions.'

Let's try that.

Look again at the essay question and write some smaller questions that will draw out what you need to know.

Thinking Questions (Practice)

Goal:

To present conclusions about why video games are (or are not) useful in the primary classroom.

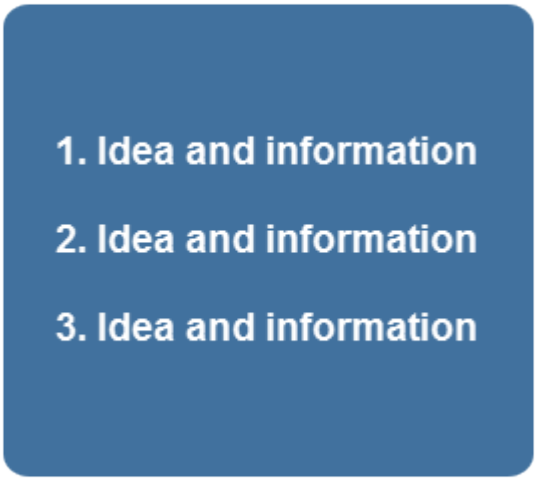
Write in some *Thinking Questions* that could help you come up with the information you need to come up with the information you need to know to write this essay.

What kinds of information do you need to know to write this essay?

Brainstorming

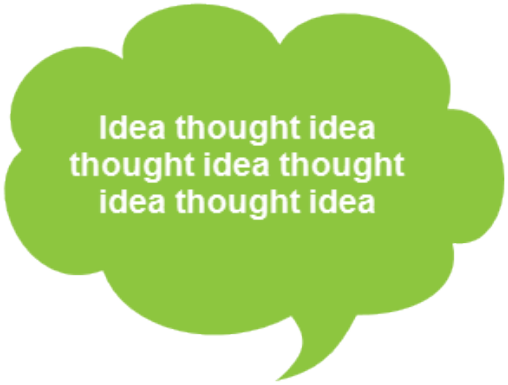
We can use our *thinking questions* to help us generate ideas for the content of our essay. This is often called brainstorming and people do in a variety of ways.

Sometimes students like to make lists of ideas and information.

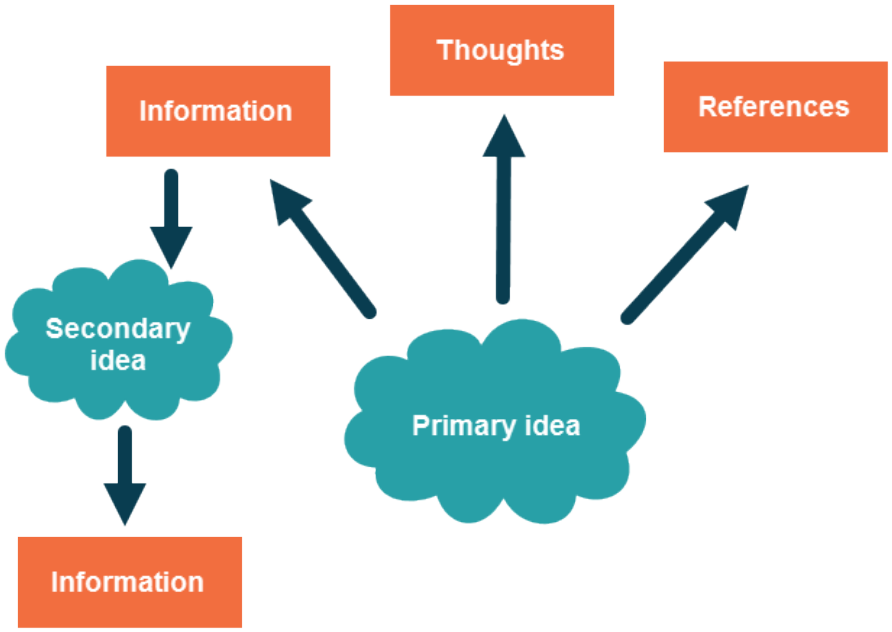


Writing with Process

Sometimes students like to free write and see what comes out. Free-writing is when you just sit and face that flashing curser and start writing without any thought to order or grammar. It can be a great way to tap into your problem-solving skills or to think creatively about a topic.



And sometimes students like to draw maps and diagrams of their ideas. These can help create a visual representation of the ideas and explore connections between them.



I like to work online. Can I brainstorm on my computer?

Of course. Search out brainstroming and mind mapping tools online. Many of them are free.

Ok, it's time to get back to work. Using our thinking questions as a guide, spend some time brainstorming ideas for this essay. Use whatever style of brainstorming that suits you! Try different ways for fun!

Essay Question: Discuss why video games are a useful tool in the primary school classroom.

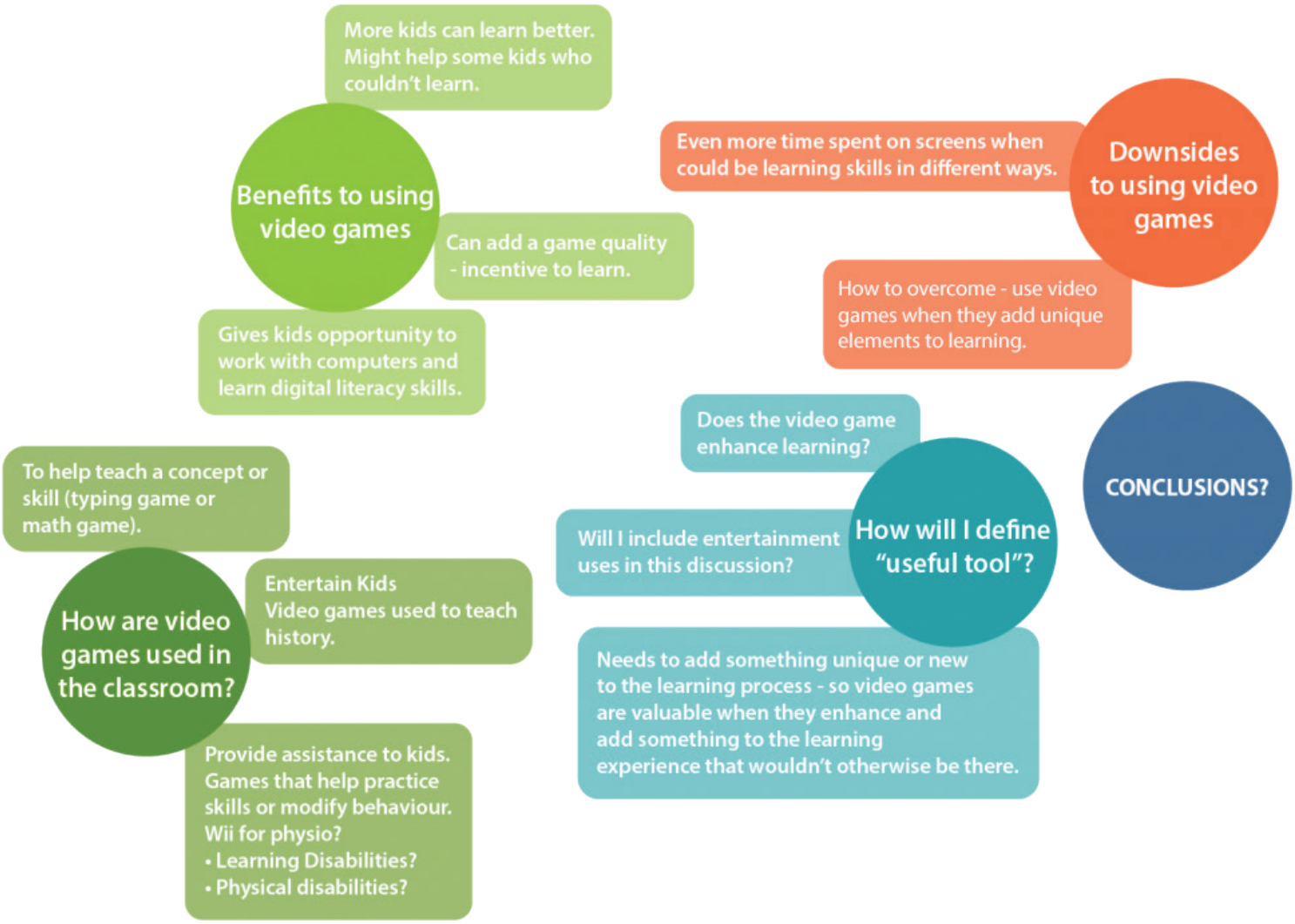
Brainstorming (Practice)

Use these questions as a guide for your brainstorming.

1. How are video games actually used in primary classroom? Are there examples?
2. How will I define “useful” when I talk about video games? Can I find other people who have defined this?
3. What benefits are there to using video games in the classroom?
4. What is the downside of using video games in the classroom?
5. Do I think video games are useful in the primary classroom? Why? Why not? Are there examples to support my thoughts?

Write in your ideas here. You may also prefer to do this exercise on a piece of paper or straight into your word processor. As well, you might want to try online tools.

Take few minutes now to compare your ideas with this sample mind map. I'm sure some of the ideas might be like the ones you came up with, and you may have some that we didn't even think of!



The green bubbles lists how video games could be used in the classroom and ideas about the pros and cons of using them.

The blue bubbles begin to explore how we might define the term "useful" and, thus, can take us towards how we might answer the question about "why video games are a useful tool in the classroom."

Now, we have plenty of raw ideas for the essay and we can start to think about how to organize them.

Organize Information (Workout E)

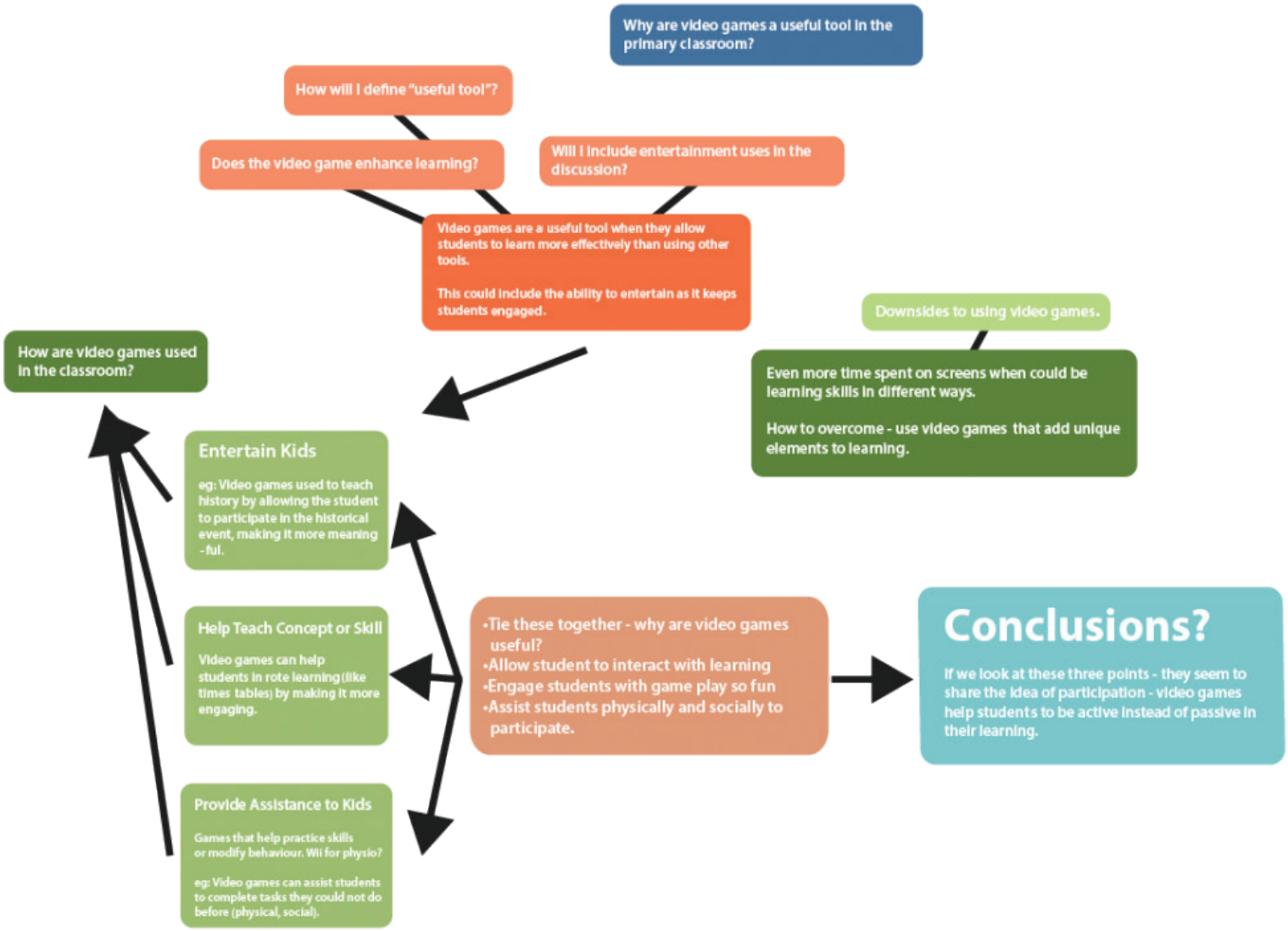
Once you have a lot of content to work with, the journey towards an essay becomes a bit like solving a jigsaw puzzle. How will you group and connect all the ideas together? Which ideas will fit into the picture and which ones need to be left out? What exactly is the overall big picture that you are building?

Keeping these questions in mind, you can work on organizing and grouping your ideas, while thinking about the connections between them.

Consider the following essay topic:

Discuss why video games are a useful tool in the primary school classroom.

Once we brainstorm a lot of ideas, we can consider how to organize them. This image shows an attempt to find connections and organize raw ideas for this essay topic.



Have a look at this more organized version of the ideas for the essay.

Start with the green boxes. We have identified three main ideas about how video games are used in the classroom and elaborated on the benefits of these uses.

The orange box links the three main ideas to the question of why video games are useful and reflects on some conclusions about how video games allow students to actively participate in their learning.

The point about the negative impact of video games increasing screen time remains on the page. Should we include this, or cut it from the essay? This is the type of decision that is made in the organization process.

Write a Thesis Statement (Workout F)

A thesis can be an argument or a descriptive summary, depending on your project. The thesis determines what can, and cannot, be included in the essay.

Consider the pieces of a jigsaw puzzle. If the picture for the jigsaw puzzle is a dolphin, then that is its thesis. In that case, only puzzle pieces that have parts of a dolphin belong in the puzzle. As well, all the pieces with dolphin on them must be put in the right place so that we can clearly understand that the picture is a dolphin.

Writing an essay with a strong thesis (or underlying picture) is the same – but it can be more challenging when you use words!

If you are clear about the goal of your essay and you know exactly what you want to tell your reader, then writing a thesis will come naturally.

English teachers are always talking about the thesis statement. What does that mean?

A thesis is the central idea that holds your essay together. It is what your reader will learn when they read your essay.

Essay Goal:

To present conclusions about why video games are (or are not) useful in primary classrooms.

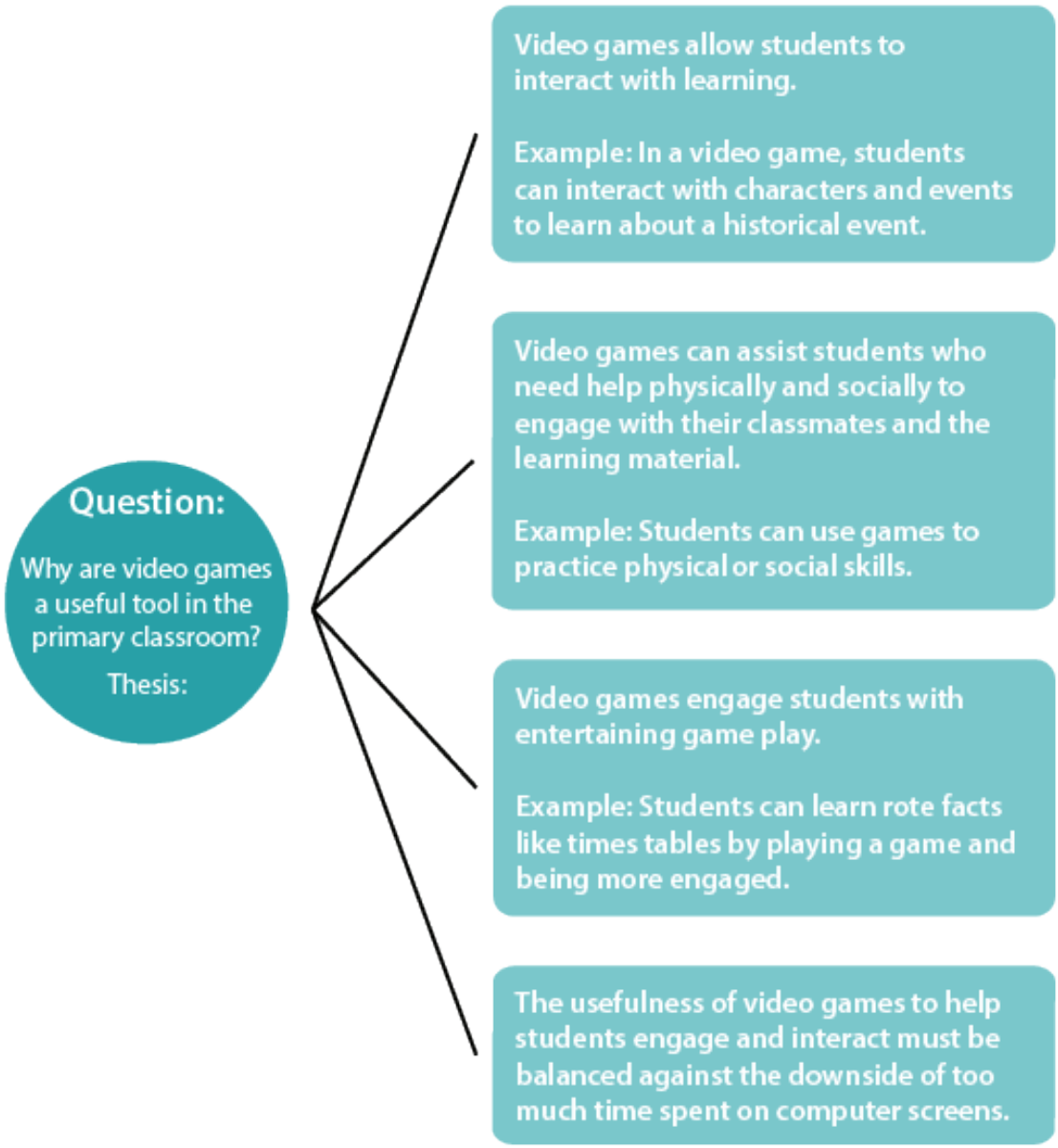
Thesis:

What conclusions does the essay make about why video games are (or are not) useful in classrooms?

So the thesis states how the essay achieves the goal!

Right!

Let's look at this practice essay outline.



Here we have the main ideas for our essay, generated by brainstorming. The blue boxes indicate four main points that will contribute to the body of the essay.

But how will we link them all together? What will be the overall central focus or underlying idea? It seems that all four ideas relate to actively participating in learning. How can we turn this into a thesis?

Writing a Thesis (Practice)

Why don't you try it? Try to write one sentence that would go at the beginning of our essay. When you read this sentence, you should understand what conclusion the essay will make about why video games are useful in the classroom.

Try writing a thesis for this essay, based on the information in the practice essay outline diagram on the previous page. What conclusion will the essay make about why video games are useful in the classroom?

When Thesis Statements Go Wrong

It's helpful to be able to identify common errors in writing thesis statements. In this activity, rank the three possible thesis statements from worst to best. Then, click each one to read an explanation.

Essay Question:

Why are video games useful tools in the primary classroom?

Possible Thesis statements:

A. In the primary classroom, video games can be very useful to help students.

This is not a good thesis because it does not say anything. This thesis essentially restates the question. It does not give any indication of the work the writer has done to think about the topic. Nor can we get a sense of what the essay will be about.

B. Video games allow students to interact with materials, to engage in fun game play, and to physically participate in activities.

While this thesis is better than the one before, it is also not a great thesis because it merely lists the three points that will be covered in the essay. It does not offer a larger unifying idea that can tie the three points all together.

C. Video games help students learn more effectively because they allow them to be active instead of passive learners in the classroom.

This example provides a clear and specific answer to the question.

Also, this thesis uses a working definition for "useful" – it assumes that useful means "to help students learn more effectively."

Finally, this thesis offers a conclusion or idea that is not already in the question; it brings in the idea of "active participation" as the unique contribution made by this essay.

Effective Thesis

Remember, an effective thesis does not just list the ideas of the essay; it adds the author's insight or conclusions about the content. The thesis must introduce a larger unifying idea to tie all the points together. In the example, the larger idea, the author's insight, is the idea of active compared to passive learners.

Certainly, there can be many possible thesis ideas for any essay and this is just one example. Now, go back and review the practice thesis statement that you wrote for this essay. Which of the models does it most clearly resemble? Can you revise your thesis so that it is effective and provides a real conclusion about the topic?

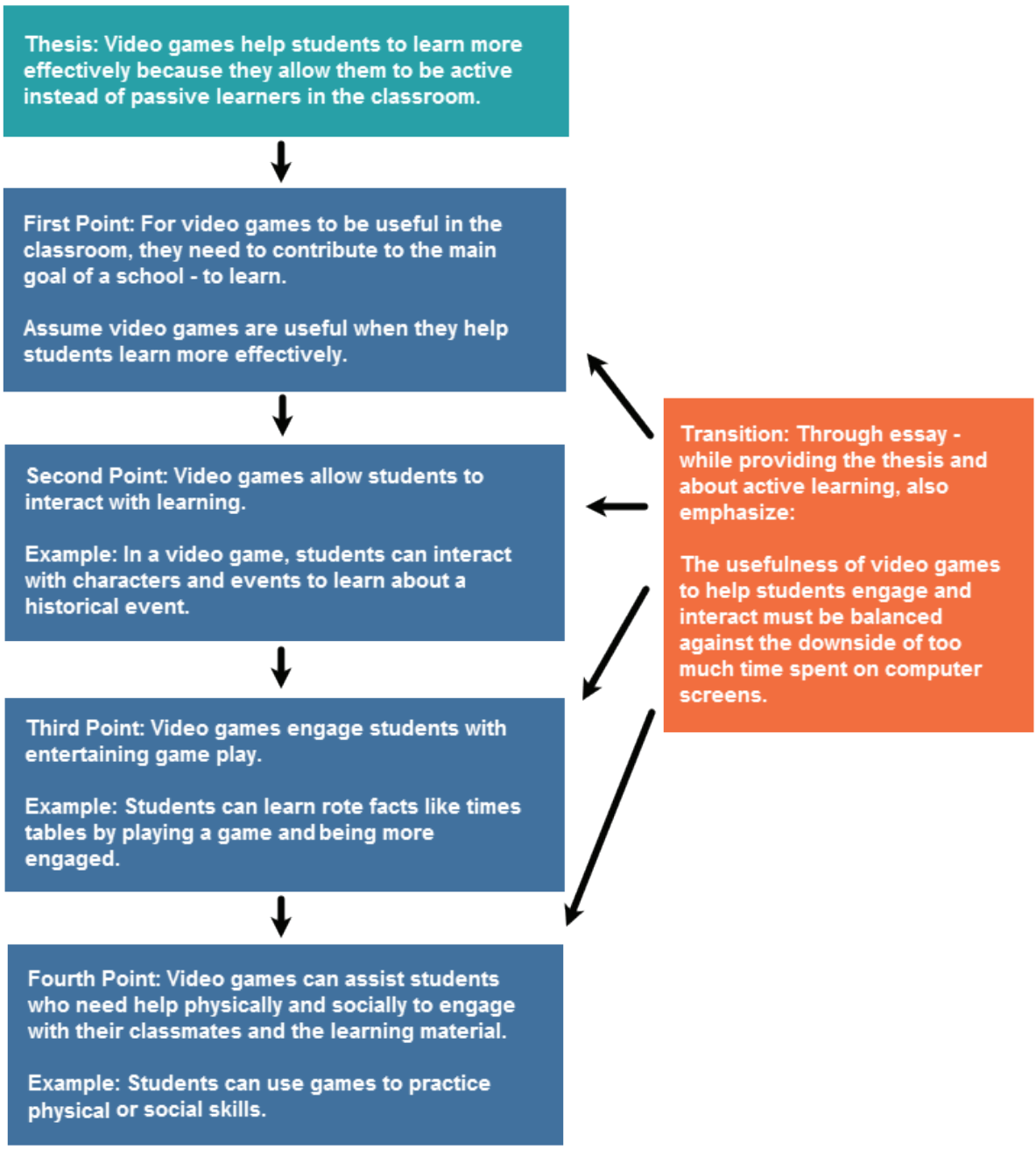
Produce a Detailed Outline (Workout G)

With a thesis statement and main points completed, you are well on our your to a detailed outline of your essay.

Our essay topic was:

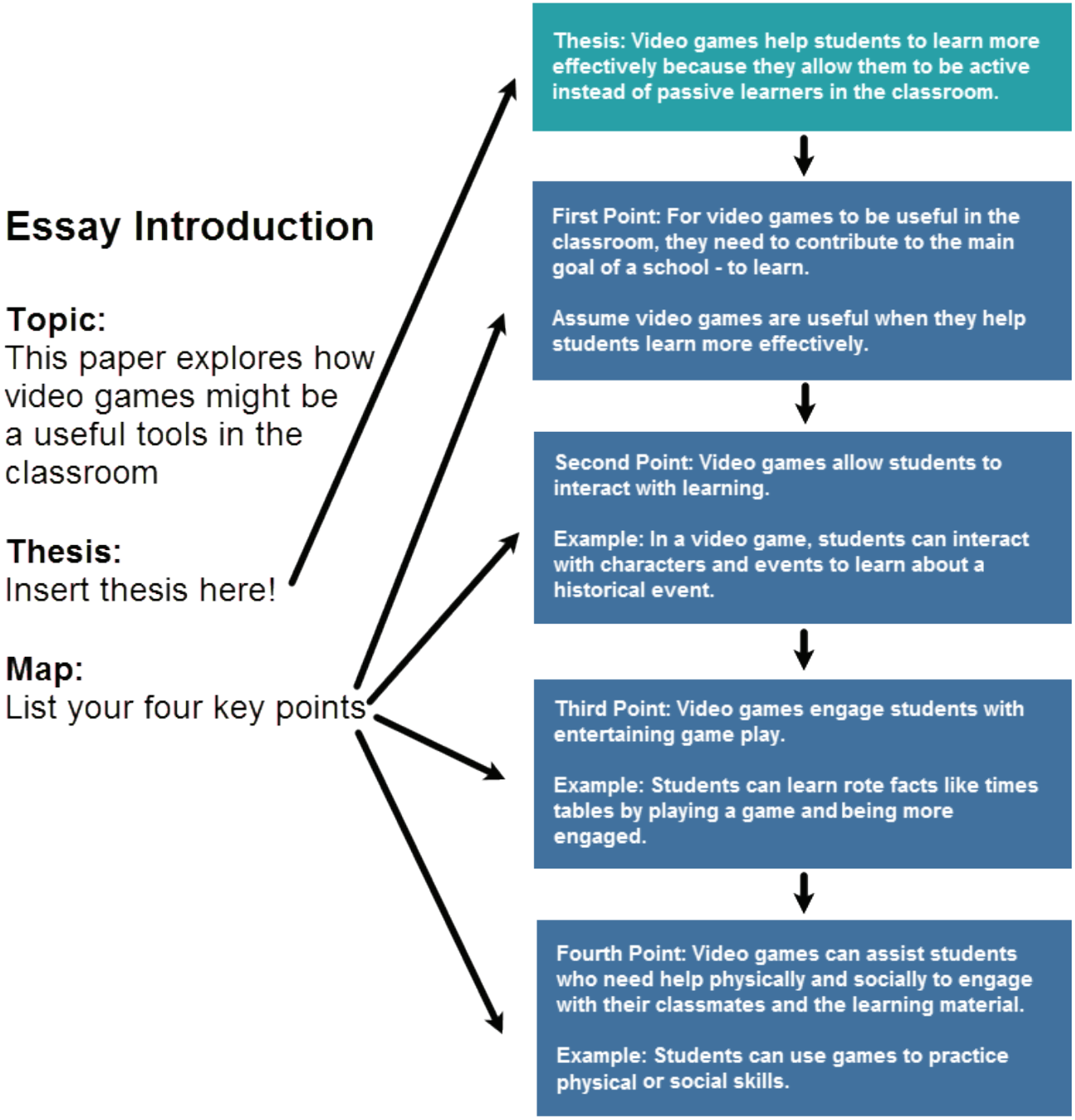
Discuss why video games are a useful tool in the primary school classroom.

Notice in the example below that we have added transitions to help link the main points together.



Shaping the Introduction

With all this information in the outline, you now have the building blocks for the essay introduction. The introductory paragraph contains three main things – a statement about the essay topic, the thesis statement, and a map of the essay:



Now we have a detailed outline for the paper. Much of the hard work has been done. Nothing left but to write the essay!

Cool down

You've worked hard! Take a few minutes to cool down and practice the skills covered in this boot camp.

Evaluating Thesis Statements (Practice)

Question:

Why are parents and teachers concerned with how much time children spend online?

Proposed Thesis:

Parents and teachers have significant concerns about the amount of screen time in a child's typical day.

Student Response. What is the problem with this thesis?

Interpreting Questions (Practice)

Compare these two writing topics. Explain the different expectations for each topic.

1. Discuss the arguments made for limiting the amount of screen time children have in a day.
2. Time spent on screens can have both positive and negative effects on children's learning. Make a conclusion about the most effective use of screen time for children.

The Planning Process (Practice)

Match the follow terms to their descriptions:

What will be the scope of your discussion? What will be your goal for the essay? What will your essay deliver?	**1. Interpret the topic**
How can you best categorize your ideas into major groups? How will you put your ideas into order? How will you link your ideas together?	**2. Focus**
How will your essay develop? Do all the points support and contribute to the thesis? Do you have enough support, explanation and evidence for your ideas?	**3. Think and Learn**
What do you need to know? What concepts, examples, and anecdotes could help you? What connections can you find between ideas? What kinds of research information could help you? What ongoing social debates or issues might be useful	**4. Organize**
What is your task? What key terms will need to be defined?	**5. Write a thesis**
How does you essay fulfill its goal? What conclusions does your essay make? Does your thesis add something unique? Does your thesis only restate the question?	**6. Generate a Map/ Detailed outline**

Sample Answers

Interpreting the Topic Question (Sample Answers)

Review how video games are used in primary school classrooms.

Review – To review means to look in depth into the topic. In this case, you are asked to provide information about how video games are currently being used in classrooms.

Video games – What kinds of games are included? You must decide how to define what counts as a video game in this context.

Used – This is the clue that determines the core categories of information that will make up the essay. What two or three or even six different ways are video games being used in classrooms? Your work in this review essay is to distinguish categories of use. Now you know what you must find out to write the paper!

Discuss why video games are a useful tool in the primary school classroom.

Discuss – Discuss means to engage in a debate where you use reason and evidence to make an argument.

Video Games – What types of video games will be included in your argument? For example, will your argument only apply to educational games?

Useful Tool – This phrase is the core assumption of the argument. You must choose whether to agree with this assumption, that they are useful, and argue why, or disagree, and argue why they are not useful. You can, of course, take a position somewhere in the middle and discuss why they are useful under certain circumstances. Also, you must define this phrase – How do we know when a video game is 'useful'? Useful for what?

Sample Answers

Identify Goal and Scope (Sample Answers)

Sample essay topic 1: **Review how video games are used in primary school classrooms**
What is the Goal of this essay? What does it have to accomplish?
The goal of this essay is to present, in relevant categories, all the different ways that teachers, schools and students are using video games in primary school classrooms. The reader needs to understand the range of video game use in the classroom. The goal of the essay is not to argue whether it's a good idea to use video games in classrooms. That would be a different essay.
What is the Scope of this essay? How will you set limits on the essay?
The writer must limit their research only to primary classrooms. The writer must decide what will count as a video game and what kinds of video games to include. The writer must determine what categories of uses of video games to include in the review. For example, the writer could focus on only different types of educational uses, or extend the scope to include how video games are used for entertainment as well.
Sample essay topic 2: **Discuss why video games are a useful tool in the primary school classroom (Practice)**
What is the Goal of this essay? What does it have to accomplish?
The goal of this essay is to present conclusions about why video games are (or are not) useful tools in classrooms. The reader will gain an understanding of a particular point of view in this debate about the usefulness of video games in classrooms. The writer can accept the assumption of the question and prove several reasons why video games are useful. Or, the writer can reject the assumption, and argue reasons why video games are not useful. Finally, the writer could take a middle position and argue when they are and when they are not useful.
What is the Scope of this essay? How will you set limits on the essay?
The writer must decide how to measure the value of video games in the classroom by defining the term "useful tool." If being a useful tool means "to help kids learn" the essay will focus on the educational benefits. If it means "to keep kids engaged in learning, " the essay might focus on the social benefits as well, and perhaps lead to a more positive conclusion. The writer must also decide what kinds of video games to include.

Thinking Questions (Sample Answers)

Goal:

To present conclusions about why video games are (or are not) useful in the primary classroom.

Write in some *Thinking Questions* that could help you come up with the information you need to write this essay. What do you need to know?

What kinds of information do you need to know to write this essay?

1. How are video games actually used in primary classroom? Examples?
2. How will I define "useful" when I talk about video games? Can I find other people who have defined this?
3. What benefits are there to using video games in the classroom?
4. What are the downsides of video games in the classroom?
5. Do I think video games are useful in the classroom? Why? Why not? Examples?

Evaluating Thesis Statements (Sample Answers)

Question:

Why are parents and teachers concerned with how much time children spend online?

Proposed Thesis:

Parents and teachers have significant concerns about the amount of screen time in a child's typical day.

Student Response. What's the problem with this thesis?

This thesis statement merely repeats the question. The thesis must answer why.

Interpreting Questions (Sample Answers)

Compare these two writing topics. Explain the different expectations for each topic.

1. **Discuss the arguments made for limiting the amount of screen time children have in a day.**
2. **Time spent on screens can have both positive and negative effects on children's learning. Make a conclusion about the most effective use of screen time for children.**

Essay 1 would summarize a variety of different reasons for limiting screen time based on research. To complete this essay, the writer would need to find several different perspectives and collect them together in a single discussion.

Essay 2 would be more argumentative than explanatory. It would focus on developing an argument (conclusion) about screen time and learning by evaluating what others have to say about it.

Sample Answers

The Planning Process (Sample Answers)

What will be the scope of your discussion? What will be your goal for the essay? What will your essay deliver? **Answer:** 2. Focus	1. **Interpret the topic** 2. **Focus** 3. **Think and Learn** 4. **Organize** 5. **Write a thesis** 6. **Generate a Map/ Detailed outline**
How can you best categorize your ideas into major groups? How will you put your ideas into order? How will you link your ideas together? **Answer:** 4. Organize	
How will your essay develop? Do all the points support and contribute to the thesis? Do you have enough support, explanation and evidence for your ideas? **Answer:** 6. Generate a Map/Detailed outline	
What do you need to know? What concepts, examples, and anecdotes could help you? What connections can you find between ideas? What kinds of research information could help you? What ongoing social debates or issues might be useful? **Answer:** 3. Think and Learn	
What is your task? What key terms will need to be defined? **Answer:** 1. Interpret the topic	
How does you essay fulfill its goal? What conclusions does your essay make? Does your thesis add something unique? Does your thesis only restate the question? **Answer:** 5. Write a thesis	

Boot Camp 2 – Writing Effectively and Accurately

Introduction

All your ideas and thoughtful arguments count for nothing if you cannot get them on the page in an accurate and effective writing style.

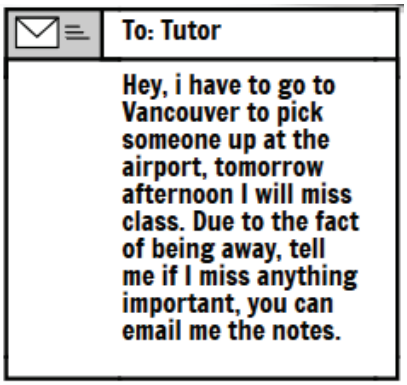
How you write says a lot about who you are. If your audience does not perceive you as professional or intelligent, they will not place value in the ideas you want to share, and they may not take you seriously.

The goal of this lesson is to strengthen your ability to identify and correct common errors in sentence and paragraph structure, identify and fix common grammatical errors, and make informed choices about the style and tone of writing for an academic context.

Students too often limit their success, both in academic and professional contexts, when they submit weak writing.

I received this email from a student today …

I doubt they will get their extension!



Note the several grammatical errors and the overly familiar tone in the sample email. These red flags alienate the reader. The message is presumptuous, impolite, and suggests the writer does not have respect for the reader.

To be taken seriously, both at school and in the work place, take the time to focus on the mechanics and tone of your writing. Make sure the paragraphs are well organized, make sure the sentences make sense, and make sure you fix any errors in grammar and style.

How to start?

Boot Camp 2 has eight lessons for writing clearly and effectively: four lessons are about writing strong sentences and the other four are about writing strong paragraphs. You can use these lessons and the models provided to help you complete the practice exercises. Remember, each person has unique problem areas. Focus on the suggested tips in areas you find particularly difficult.

Go ahead and complete Boot Camp 2 in order, or dip in and try any of the sections that appeal to you!

Warm Up – Test your skills

Workout – Interactive skill-building lessons

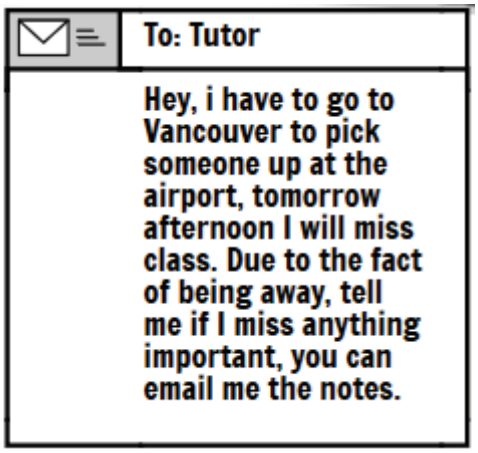
- Be Concise (Workout A)
- Be Precise (Workout B)
- Be Accurate (Workout C)
- Be Appropriate (Workout D)
- Have Unity (Workout E)
- Have Development (Workout F)
- Have Organization (Workout G)
- Have Transitions (Workout H)

Cool down – Practice your skills

Warm Up

Email Revision (Practice)

As a warm up, revise this email so that it is grammatically correct and has a better tone.



Write your revised email here.

When you've finished rewriting the email, make a list of the types of errors that you found.

Then, make a list of the types of errors you often make in your own writing. This will help you focus your efforts as you complete the workout!

Be Concise (Workout A)

A **concise sentence** states its meaning directly and clearly with no extra words. Every word should contribute to the meaning of the sentence.

In this workout, you will practice three strategies for eliminating wordiness and making concise sentences.

1. Avoid extra "to be" verbs
2. Avoid sentences that begin with "There are" and "It is"
3. Avoid empty phrases

Let's get started.

Avoid extra "to be" Verbs

Example:

☹ Students **should be** required **by** the teachers to complete their homework.

☺ Teachers should require students to complete their homework.

Problem:

Passive voice uses extra words and hides the central action and message of the sentence.

Fix the problem:

Identify and focus on the **subject** and **main action**

In the revised sentence, the wordy phrase "should be required by" is replaced with the direct and clear "should require" for a more concise expression.

Avoid Sentences that begin with "There are" and "It is"

Example:

☹ **It is necessary for** the teacher to remind us when the essay is due.

☺ The teacher **needs** to remind us when the essay is due.

Problem:

The use of "It is" has forced the writer to use the longer opening "It is necessary for" before we even get to the main meaning of the sentence. You can almost always rewrite a sentence that begins with "It is" or "There are" and it will naturally make the sentence more concise.

Fix the problem:

Start with the subject of the sentence, and determine the relevant verb for meaning. In this case, “to need” is used; you could also use must or could. With specific words, you can shape the meaning of the sentence so it is more precise.

Here’s another example:

☹ **There are** three solutions that researchers would like to investigate.

☺ Researchers would like to investigate three solutions.

Problem:

When a sentence begins with “There are”, it has extra words that limit rather than add to the meaning. This sentence focuses on announcing three solutions rather than opening the possibility to discuss them.

Fix the problem:

Rewrite the sentence to take out the “There are” phrasing. This will make the main meaning more direct. The revised sentence invites us to read more about these solutions.

Avoid empty phrases

Example:

☹ **In view of the fact that** students depend on social media, they must learn to use it responsibly.

☺ Students must learn to use social media responsibly **because** they depend on it.

Problem:

Empty opening phrases add extra words and may obscure the real meaning. In this case, the empty opening phrase makes it difficult to show the specific cause and effect relationship between the two ideas.

Fix the problem:

Select the best linking word to illustrate the relationship between the ideas. In this case, we used **because**.

Be Concise (Practice)

Rewrite each sentence so that it is more concise. Write the revised sentences in the box provided. When you're finished, compare your answers with the sample answers.

A. The articles were published in the magazine by the student council.

Tip: Identify and remove the extra "to be" verb. Find the subject and main action (verb) in the sentence.

B. The students were at the rally to protest increasing tuition fees.

Tip: Sometimes extra "to be" verbs are used to soften action words or delay the main idea. Remove the "to be" verb and use the specific action verb.

C. There are several reasons why students should learn how to edit their writing.

Tip: Start by removing "There are" and begin the sentence with the subject.

D. During the time that students are at university, they often acquire a lot of debt.

Tip: First erase the empty phrase. Look at what is left and decide on the most direct way to state the idea.

Be Precise (Workout B)

In strong writing, ideas are expressed with precision. To do this, you need to be very sure in your mind about what you want to say. Unclear ideas can be the cause of unclear writing, with weak transitions, over-generalizations, and skewed connotations. To fix these writing challenges, you may find that you must refine your thinking about the topic as well.

In this workout, you will practice three strategies for making your writing more precise:

1. Use effective transition language
2. Use specific and concrete language
3. Use appropriate connotation

So, to write well we need to know exactly what we want to say.

Precisely!

Let's get started.

Use Effective Transition Language

Example:

☹ Students like to use social media. Instagram is one kind of social media. Users post photos to Instagram.

☺ Students like to use social media such as photo-based Instagram.

Problem:

When you write without transitions, it's like leaving out road signs and traffic lights – the reader doesn't have any clues on how to navigate the information. When this happens, the reader must fill in the missing clues, and this can lead to confusion and miscommunication. In this case, the *relationship* between the different ideas is not made clear.

Fix the problem:

By *combining information*, you can highlight the relationship between the ideas. In the example, Instagram is given the adjective **photo-based** and is positioned as an **example** of social media.

Here's another example:

☹ Using social media like Instagram is fun. Students use it to connect with friends. Students must learn the risks of using Instagram. Photos on Instagram can sometimes be embarrassing.

☺ Using social media like Instagram is fun. **For example**, students use it to connect with friends. **However,** students must learn the risks of using Instagram **as** photos posted there can sometimes be embarrassing.

Problem:

The four distinct ideas in this example are too complicated to be combined into one sentence. But, the problem of the relationship between them remains; we are counting on the reader to fill in the implied relationships between these sentences. Why take that risk? Make the writing precise.

Fix the Problem:

It's amazing how powerful small words can be! Use transition language to make connections between the ideas. The second sentence is an example to illustrate the first – so we inserted "For Example." The third sentence seems to add a condition to the first sentence, and so we added **"**However" to indicate there is a limitation to the fun of Instagram. The final sentence explains the risks, and so we used "as."

Remember, while our example may look simple, clear transition words become much more important as the ideas, sentences and vocabulary in your writing become more complex.

Use Specific and Concrete Language

Example:

☹ Video games **are bad** for children.

☺ **Excessive** video game play can have **negative effects** on children's health.

Hey, that student over there is really lazy!

She's just relaxing. Don't be so mean.

Problem:

If the vocabulary we choose is too general, we lose the complexity and precision of our ideas. Sometimes we rely on general or vague vocabulary because we are rushing to finish an assignment, and sometimes this happens when our ideas are not fully developed.

Fix the Problem:

Attention to precise vocabulary makes writing specific instead of general. We need language that represents the depth and detail of our ideas.

Use Appropriate Connotation

Example:

☹ That student is really lazy. (negative connotation)

☺ That student is relaxing. (positive connotation)

Problem:

Language has both denotative meaning (the dictionary definition) and connotative meaning (the social or cultural definition). Your writing can be misunderstood if you fail to consider the connotative meaning of words. This can be particularly challenging if English is not your first language.

Fix the Problem:

Be mindful of the language that you choose for your ideas and ensure you have the right positive or negative connotation.

Be Precise (Practice)

1. Combine these sentences into one precise sentence that clarifies the relationship between ideas. Try different ways to combine them, and see how it changes the meaning.

   John went to Vancouver. He bought an iPhone. He was at the airport to fly home. He saw a great new Samsung. He was unhappy.

2. Rewrite each sentence so that it does not rely on generalizations. Select specific vocabulary to develop an interesting and detailed idea.

   Video games can make kids sick.

   Cell phones in the class room are a big problem.

Be Accurate (Workout C)

Grammatical errors in your writing will compromise the value of your ideas. A reader is unlikely to take your ideas seriously if they are poorly written. This workout covers some common errors in academic writing. If you really struggle with basic grammar, you might want to explore a wider range of support.

I went to the store and bought my friend, some milk and juice.

What?? How much did your friend cost?

In this workout, you will practice three strategies for improving the accuracy of your writing:

1. Avoid sentence fragments, run-on sentences and common splices
2. Avoid errors with modifiers
3. Avoid mixed construction sentences

Let's get started.

Avoid sentence fragments, run-on sentences and comma splices

Examples:

A. Children often surprise their teachers. **Having strong computer skills**.

B. **Although they had not been taught the lesson**. The children completed the assignment.

A. Children with strong computer skills often surprise their teachers.

B. The children completed the assignment although they had not been taught the lesson.

OR

Although they had not been taught the lesson**,** the children completed the assignment.

Problem:

Sentence fragments are very common in student writing. When the focus is on working out the ideas, we sometimes don't pay enough attention to how they are expressed. Incomplete ideas can sometimes be presented as proper sentences.

Fix the problem:

To fix a sentence fragment, it is necessary to write a complete thought. Look for the main subject and the main verb as the basis of a good sentence. Sometimes you will need to rewrite the sentence, and other times a comma could be used.

Here's another example:

Example:

☹ Students spend a lot of time using social media the problem is they need to spend more time reading their course work.

OR

Students spend a lot of time using social media**,** the problem is they need to spend more time reading their course work.

☺ Students spend a lot of time using social media**.** They need to spend more time reading their course work.

OR

Students spend a lot of time using social media**, but** they need to spend more time reading their course work.

OR

Students spend a lot of time using social media**, and after** they need to spend more time reading their course work.

OR

Students spend a lot of time using social media**; however,** they need to spend more time reading their course work.

Problem:

Sometimes our ideas can run away with us, creating **run-on sentences** where two full sentences are mashed together. But be careful; run-on sentences cannot be fixed with a simple comma – this leads to a **comma splice**, where two sentences are stuck together with only a comma.

Remember – commas don't have enough "glue" in them to stick sentences together; they need help.

Fix the Problem:

The solutions in the example use different linking words to join the two ideas together. A period can be used to simply make two distinct sentences. However, remember that we use **linking words** to shape and refine our meaning. Look carefully at the way the small linking words can shift the meaning in each sentence. Note the different punctuation required for "however," which is not a conjunction!

Avoid errors with modifiers

Example:

Changes to the course schedule **recently** affected the student's plans.

Recent changes to the course schedule affected the student's plans.

OR

The student's plans were **recently affected** by changes to the course schedule.

Problem:

Modifiers are words or groups of words that describe something in the sentence. If they are in the wrong place, the sentence will not make sense. In the example, the modifier "recently" could refer to the changes in the schedule or to the verb "affected."

Fix the Problem:

To reduce any confusion, restructure the sentence to ensure the use of the modifier is clear.

Avoid mixed construction sentences

Example:

By practicing our skills was how we developed strong writing techniques.

By practicing our skills, we developed strong writing techniques.

OR

Practicing our skills develops strong writing techniques.

Problem:

Mixed constructions happen when a sentence starts in one grammatical pattern, but ends in another. This happens when we start to say one thing but change our minds, or when we don't think through what we really want to say.

In the example, "By practicing our skills" cannot be the subject of the verb "was." This does not make sense.

Fix the Problem:

The key to solving mixed constructions is finding the logical subject of the sentence.

For example, we could keep the descriptive phrase "By practicing our skills," and make "we" the subject. Or, we can fix this sentence by changing the opening phrase into a logical subject. "Practicing our skills" becomes the subject of the verb "to develop."

Be Accurate (Practice)

1. Rewrite each sentence to remove any sentence fragments, run-on sentences, or comma splices. Try re-writing each sentence in two or three different ways, exploring how the linking words can shape and refine the meaning of the sentence.
The cost of internet is still too high, too many people cannot get high speed access.
Fixing sentences is not very exciting students do need the practice.
2. First, explain why the sentences below do not make sense. What is wrong with the reference for the modifier? Then, rewrite each sentence so that the reference for the modifier is clear.
To qualify for a scholarship, your address and email must be included.
Released this week on the app store, we were excited to play the new game!
3. Find the subject of each sentence, and rewrite so that the sentence is logical and grammatical.
By having learned how to edit videos was how she got a job in public relations.
The purpose of the lesson was written to help students with their writing.

Be Appropriate (Workout D)

Selecting appropriate tone and style ensures basic professionalism. This means that your writing is thoughtful, respectful and formal enough for the context.

We all have many voices. The challenge is to pick the appropriate one for each context.

It also means understanding the specific expectations of the writing you are doing. For example, a chemistry lab report will require a different tone and style than a history essay, and an engineering report will require different emphasis or description than a marketing report. All of these contexts require a unique tone and style, different from how you might express yourself on social media.

As a student, you are expected to become familiar with the expectations for writing style, format and special vocabulary associated with your course or area of study.

In this workout, you will practice three strategies for improving the appropriateness of your writing:

1. Use appropriate formal language
2. Use appropriate complexity of language
3. Avoid clichés and slang

Let's get started.

Use appropriate formal language

Example:

☹ In this essay, I want to say that people should not hate on social media just because some kids use it to be jerks and bullies.

☺ This essay argues that the benefits of social media should not be ignored just because it can be used to do harm.

Problem:

When the formality and style of language does not suit the more formal context of academic writing, the reader struggles to take the ideas seriously. These sentences say the same thing, but only the second one is suitable for academic writing.

Fix the Problem:

Select the most suitable language for the context. You may find it challenging to adopt a more academic style, especially when you first start your studies. With more reading and practice, it will start to feel natural.

Use appropriate complexity of language

Example:

I want to talk about how Facebook and things like that could be **bad** for us but we use them anyway because **it's fun**.

This essay will argue that while social media like Facebook **negatively affects how we interact with others**, we continue to **embrace it as a source of entertainment**.

Problem:

When a writer relies on very simple language or vocabulary, it can seem that the writer does not have anything interesting or complex to communicate. We often see writing like this when the student has not worked hard to develop more complex ideas.

Fix the Problem:

The challenge is to push deeper at our initial ideas and develop them with a complexity of thought and language suitable for academic contexts.

Avoid clichés and slang

Example:

At the end of the day, we are between a **rock and hard place** when it comes to social media. Its popularity is **awesome** but we will have to **crack down** on the risks of using it.

We face a **dilemma** when it comes to social media. Its popularity is **undeniable**, but we must **address the risks** of using it.

Problem:

When we write we want to impress, and for students this often means trying to express ideas in fancy ways. However, clear and direct writing is always more impressive because it reveals rather than obscures the message of the writing.

In this case the student's use of cliché and slang detracts from the ideas.

Fix the Problem:

The challenge is to find a professional vocabulary for sounding intelligent. Aim to substitute cliché and slang for university-level vocabulary.

Be Appropriate (Practice)

The following paragraph has many issues with the formality and complexity of its language. At times it relies on cliché to get the point across.

> It's silly to give mobile devices to children under 12. It's just a matter of time before they will do something bad and get into trouble with them. But children want the phones because their friends bug them if they don't have one. Also, children will be cut off from their friends. They chat through social media; to them, making phone calls is for the dinosaurs.

1. Identify all the words and phrases that should be changed to make this writing more suitable for an academic context.

2. Rewrite the paragraph with more appropriate language, replacing the vocabulary you have just identified. Aim for a more professional and appropriate tone.

Have Unity (Workout E)

Every paragraph needs **unity**, which means it develops one main idea that is stated in the topic sentence. That main idea must then be **developed** and explained adequately to be interesting and convincing.

Next, that fully-developed idea must be **organized** in a logical way for the reader to understand it. Finally, the developed and well-organized idea in the paragraph must be clearly linked to the thesis of the essay and the paragraphs around it with strong **transitions**.

In this workout, you will work on **Unity** – the first core building block of a good paragraph.

What should a paragraph do?

- **Have unity by developing one controlling idea.**
- **Provide adequate development of that controlling idea.**
- **Develop that idea with coherent organization.**
- **Provide transitions between ideas within and between paragraphs.**

Parts of a paragraph

To understand the idea of Unity in a paragraph, we need to understand not only the content, but also the function of each key part of a paragraph: the topic sentence, the body, the concluding sentence, and the transition words.

Take a moment to read the sample paragraph. When you've finished, read the text below about the function of each part of the paragraph.

> Despite the risks of overuse, video games can help children learn basic math skills. Many video games teach math skills, such as multiplication, in a fun way. For example, players can unlock levels or shoot space ships as they multiply. In addition, games encourage children to solve puzzles and problems (to advance in the game) so that they are empowered in their learning. Used in moderation, video games are an effective tool for math education.

"Despite the risks" "In addition," - The transition language ["Despite the risks of overuse" and "In addition"] is used to link the paragraph together and to make its function and connection to the rest of the essay clear.

"of overuse, video games can help children learn basic math skills." - The topic sentence determines the main idea of the paragraph.

"Many video games teach math skills, such as multiplication, in a fun way. For example, players can unlock levels or shoot space ships as they multiply;" "...games encourage children to solve puzzles and problems (to advance in the game) so that they are empowered in their learning." - The body of the paragraph develops the details of the main idea and holds most of the content.

"Used in moderation, video games are an effective tool for math education." - The concluding sentence summarizes the main idea and often links the paragraph to the larger thesis of the essay.

Unity and the Topic Sentence

We use paragraphs to separate our writing into manageable chunks – but these chunks are not random. We separate our writing into paragraphs so that each distinct idea is accessible and clear.

The topic sentence defines the scope, and tell us what to expect from the rest of the paragraph. The following sentences must then fulfill this expectation, creating a unified idea.

But sometimes paragraphs wander away from their intended purpose, and they lose unity.

Consider these examples:

☹ Despite the risks of overuse, video games can help children learn basic math skills. Many video games teach math skills, such as multiplication, in a fun way. *Too many children are not learning strong math skills. This gap limits their ability to succeed in fields such as engineering and computer studies.*

☺ Despite the risks of overuse, video games can help children learn basic math skills. Many video games teach math skills, such as multiplication, in a fun way. For example, players can unlock levels or shoot space ships as they multiply. In addition, games encourage children to solve puzzles and problems (to advance in the game) so that they are empowered in their learning. Used in moderation, video games are an effective tool for math education.

The problem:

The information in the last two sentences of the first example discusses the importance of math skills. This information does not work towards fulfilling the purpose of the paragraph, as it is set out by the topic sentence. As a result, the paragraph lacks unity because it attempts to discuss two different ideas.

Fix the problem:

Remember that the topic sentence sets the rules for the paragraph. As a writer, you can choose to follow the expectations you set up with the topic sentence or change the topic sentence to make a more unified paragraph.

Unity (Practice)

Read over the topic sentence and then circle the answer that best indicates what you expect to learn in this paragraph.

Topic sentence:

> Despite the risks of overuse, video games can help children learn basic math skills.

A. How children spend too much time using video games.

B. Examples of how video games help children learn math.

C. Why basic math skills are so important for children to learn.

Read the topic sentence. Then, circle the answer that best indicates the expected content needed to create a paragraph with unity.

Topic sentence:

> Video game designers need strong skills in both computer programming and creative design.

A. Explain the computer programming skills needed by game designers.

B. Explain the education needed to be a video game designer.

C. Explain the skills in both computer programming and creative design and how these two types of skills work together in video game development.

Have Development (Workout F)

What should a paragraph do?

- Have unity by developing one controlling idea.
- Provide adequate development of that controlling idea.
- Develop that idea with coherent organization.
- Provide transitions between ideas within and between paragraphs.

Every paragraph needs **unity**, which means it develops one main idea that is stated in the topic sentence. That main idea must then be **developed** and explained adequately to be interesting and convincing.

Next, that fully-developed idea must be **organized** in a logical way for the reader to understand it. Finally, the developed and well-organized idea in the paragraph must be clearly linked to the thesis of the essay and the paragraphs around it with strong **transitions**.

In this workout, you will work on the second of the core building blocks of a good paragraph – **Adequate Development**.

Let's get started.

Development of ideas

Each paragraph must have enough information and explanation to support the claim of its topic sentence. If we aren't sure what we want to say, we can end up saying very little.

Consider these examples:

☹ Despite the risks of overuse, video games can help children learn basic math skills. Video games provide a lot of support to learn math skills. Children must learn basic math like multiplication tables and video games are a useful tool for doing this.

☺ Despite the risks of overuse, video games can help children learn basic math skills. Many video games teach math skills, such as multiplication, in a fun way. For example, players can unlock levels or shoot space ships as they multiply. In addition, games encourage children to solve puzzles and problems (to advance in the game) so that they are empowered in their learning. Used in moderation, video games are an effective tool for math education.

The problem:

The first paragraph provides almost no development; in fact, it just repeats the idea in the topic sentence in different ways. The paragraph says nothing about how or why video games help children learn math.

Fix the problem:

This problem is fixed primarily through thinking. When we write, we need enough content to support and develop our ideas to satisfy the reader's expectation. If we find ourselves with empty paragraphs, we need to go back and write a strong set of supporting sentences.

Providing Adequate Development (Practice)

We have tools we can use to ensure adequate development in the body of our paragraphs. We can use any combination of reasons, facts and statistics, quotations from research, and examples to support our ideas.

Let's look at the types of support used in an example.

Match the label number to each sentence in body of the sample paragraph.

Sample paragraph:

Despite the risks of overuse, video games can help children learn basic math skills.

A. Many video games teach math skills, such as multiplication, in a fun way.	1. Reason 2. Example 3. Quotation 4. Fact or statistic
B. For example, players can unlock levels or shoot space ships as they multiply. In TuxMath, comets have math problems on them; solve the problem to destroy the comet.	
C. In addition, games encourage children to solve puzzles and problems (to advance in the game) so that they are empowered in their learning.	

Used in moderation, video games are an effective tool for math education

Now Your Turn (Practice)

Sample paragraph:

Despite the risks of overuse, video games can help children learn basic math skills. Many video games teach math skills such as multiplication in a fun way. For example, players can unlock levels or shoot space ships as they multiply. In Tux Math, comets have math problems on them; solve the problem to destroy the comet. In addition, games encourage children to solve puzzles and problems to advance in a game so that they are empowered in their learning.

This is a good paragraph, but it would benefit from more supporting information. In the following boxes, can you provide:

- **A quotation from a source that provides support for the topic sentence?**

  Topic sentence: Despite the risks of overuse, video games can help children learn basic math skills.

• **An example to support the following reason: In addition, video games encourage children to solve puzzles and problems to advance in a game so that they are empowered in their learning.**
• **A fact or statistic that supports the central idea that video games help children learn (you might have to look online)?**

Here's another one to try:

Providing Adequate Development II (Practice)

Sample paragraph:

> Video game designers need strong skills in both computer programming and creative design.

A. Video games are valued as much for being works of art as for their programming.	1. Reason 2. Example 3. Quotation 4. Fact or statistic
B. The artistic value of video games was illustrated by the 2012 exhibition "The Art of Video Games" at the Smithsonian American Art Museum.	
C. The Smithsonian website notes that the field of video game design "has attracted exceptional artistic talent."	
D. Today's most popular games blur the lines between innovations in programming, filmmaking and visual art.	

Have Organization (Workout G)

Every paragraph needs **unity**, which means it develops one main idea that is stated in the topic sentence. That main idea must then be **developed** and explained adequately to be interesting and convincing.

Next, that fully-developed idea must be **organized** in a logical way for the reader to understand it. Finally, the developed and well-organized idea in the paragraph must be clearly linked to the thesis of the essay and the paragraphs around it with strong **transitions**.

In this workout, you will work on the third of the core building blocks of a good paragraph – **Organization**.

Let's get started.

What should a paragraph do?

- **Have unity by developing one controlling idea.**
- **Provide adequate development of that controlling idea.**
- **Develop that idea with coherent organization.**
- **Provide transitions between ideas within and between paragraphs.**

Organization and Understanding

Every paragraph needs coherent organization which means it is possible to read through it without getting confused!

☹ Many video games teach math skills, such as multiplication, in a fun way. Despite the risks of overuse, video games can help children learn basic math skills. Games encourage children to solve puzzles and problems (to advance in the game) so that they are empowered in their learning. For example, players can unlock levels or shoot space ships as they multiply. Used in moderation, video games are an effective tool for math education.

☺ Despite the risks of overuse, video games can help children learn basic math skills. Many video games teach math skills, such as multiplication, in a fun way. For example, players can unlock levels or shoot space ships as they multiply. In addition, games encourage children to solve puzzles and problems (to advance in the game) so that they are empowered in their learning. Used in moderation, video games are an effective tool for math education.

The problem:

Organization is important. Without it even the most interesting and well-developed ideas are very difficult to follow and understand. In the first paragraph, the ideas have been mixed around. It begins with a specific reason and this takes our brain in one direction; but the second sentence does not follow in that same direction and so we are lost. Our pattern of expectation and fulfillment does not work.

Fix the problem:

We write down ideas as they occur to us. But the crafting of a paragraph comes later. We need to take the time to change all our ideas into a well-designed piece of writing that the reader can follow without getting confused or lost. The topic sentence provides the key to logical organization of the paragraph.

Practice Logical Organization (Practice)

Based on the topic sentence, organize the supporting sentences into the most logical order.

Topic Sentence:

Apple provides a more versatile operating system than Windows.

Supporting sentences:

A. These devices must be easy to use as all segments of the population are using them now.

B. Video entertainment is much easier to play on Apple than Windows systems.

C. The Windows system requires more user-customization before use.

D. A mobile device must have both work and entertainment capabilities.

E. The Apple system is truly plug and play.

F. Versatile means user-friendly.

Have Transitions (Workout H)

Every paragraph needs **unity**, which means it develops one main idea that is stated in the topic sentence. That main idea must then be **developed** and explained adequately to be interesting and convincing.

Next, that fully-developed idea must be **organized** in a logical way for the reader to understand it. Finally, the developed and well-organized idea in the paragraph must be clearly linked to the thesis of the essay and the paragraphs around it with strong **transitions**.

In this workout, you will work on the fourth of the core building blocks of a good paragraph – **Transitions**.

Let's get started.

What should a paragraph do?

- **Have unity by developing one controlling idea.**
- **Provide adequate development of that controlling idea.**
- **Develop that idea with coherent organization.**
- **Provide transitions between ideas within and between paragraphs.**

Identifying Transition Language

Transition language is used to make clear connections between ideas and help guide the reader's progress through the paragraph.

☹ Video games can help children learn basic math skills. Many video games teach math skills, such as multiplication, in a fun way. Players can unlock levels or shoot space ships as they multiply. Games encourage children to solve puzzles and problems (to advance in the game) so that they are empowered in their learning. Video games are an effective tool for math education.

☺ **Despite the risks of overuse**, video games can help children learn basic math skills. Many video games teach math skills, such as multiplication, in a fun way. **For example,** players can unlock levels or shoot space ships as they multiply. **In addition**, games encourage children to solve puzzles and problems (to advance in the game) so that they are empowered in their learning. **Used in moderation**, video games are an effective tool for math education.

The problem:

Without transition language, the reader must work hard to figure out the connections between the ideas in the paragraph. This extra work can lead to some confusion and reduce the overall clarity and strength of the message.

Fix the problem:

The transition language helps the reader to appreciate that an example or additional reasons are being offered in the body of the paragraph; it becomes easier to follow the connections between the ideas. Notice too that transitions can include the repetition of ideas – such as the phrases "overuse" and "used in moderation" – to signal meaning; in this case the writer wants us to understand that the risks in video games are easily managed.

Practice with Transitions (Practice)

Often, when revising our work, we need to go back and add transition words to help our reader figure out the connections between ideas.

Let's practice this.

In the sample paragraph, each sentence provides useful and valuable information. However, without transition words, the reader must work hard to figure out how all these sentences connect. What is the relationship between each idea? Which ideas are examples? Which ones are reasons? How do they link to the topic sentence?

Use transition words to link these sentences into a well-connected paragraph. Don't change the order of the sentences, but combine sentences if you like. When finished, compare your response to the sample answer.

Sentences:

Apple provides a more versatile operating system than Windows.

Versatile means user-friendly.

These devices must be easy to use as all segments of the population are using them now.

The Apple system is truly plug and play.

The Windows system requires more user customization.

A mobile device must be easy to use for both work and entertainment.

Video entertainment is much easier to play on Apple than Windows systems.

Cool down

You've worked hard! Take a few minutes to cool down and practice the skills covered in this boot camp.

Cool Down Questions (Practice)

Part A – Be Concise

Revise these sentences so they are more concise.

1. My role as team leader is to motivate the team to complete the project.

2. There are many questions that we need to answer about this project.

Part B – Be Precise

Combine these sentences to be more precise. Think carefully about the transition words you can use. When you've finished, combine them another way and see how you can change the meaning by changing the transitions words.

1. I'm going to stay in a condo. My friend invited me to Vancouver. There is an excellent concert on Saturday night.

Part C – Be Accurate

Revise these sentences to be more grammatically accurate.

1. We were exhausted at the end of the day. Having travelled by train all the way to Portland.

2. The instructor proposed a fascinating topic for the workshop, the students needed to sign up by Friday.

Part D - Paragraphs

1. Explain the four key qualities of an effective paragraphs and why each one is important to the successful communication.

Sample Answers

Be Concise (Sample Answers)

A. The articles were published in the magazine by the student council. **Tip: Identify and remove the extra "to be" verb. Find the subject and main action (verb) in the sentence.**
The student council published the articles in the magazine To publish is the main action. The subject is the student council.
B. The students were at the rally to protest increasing tuition fees. **Tip: Sometimes extra "to be" verbs are used to soften action words or delay the main idea. Remove the "to be" verb and use the specific action verb.**
The students protested increasing tuition fees at the rally. The specific action is highlighted for more direct effect.
C. There are several reasons why students should learn how to edit their writing. **Tip: Start by removing "There are" and begin the sentence with the subject.**
Students should learn how to edit their writing for several reasons. OR Students should learn how to edit their writing because …. (provide good content). Main idea of the sentence is emphasized.
D. During the time that students are at university, they often acquire a lot of debt. **Tip: First erase the empty phrase. Look at what is left and decide on the most direct way to state the idea.**
Students often acquire at lot of debt at University. Main idea of the sentence is emphasized.

Sample Answers

Be Precise (Sample Answers)

1. Combine these sentences into one precise sentence that clarifies the relationship between ideas. Try different ways to combine them, and see how it changes the meaning.

John went to Vancouver. He bought an IPhone. He was at the airport to fly home. He saw great new Samsung. He was unhappy.

At the airport about to fly home from Vancouver, John saw a new Samsung and so was unhappy that he'd bought an Iphone earlier.

John bought a new Iphone in Vancouver, but was later unhappy when he saw a Samsung at the airport just before he flew home.

2. Rewrite each sentence so that it does not rely on generalizations. Select specific vocabulary to develop an interesting and detailed idea.

Video games can make kids sick.

Children who play video games too much often don't get enough physcial exercise which can lead to problems of obesity.

Cell phones in the class room are a big problem.

Cell phones can distract students from learning in the classroom.

Be Accurate (Sample Answers)

1. Rewrite each sentence to remove any sentence fragments, run-on, or comma splices. Try re-writing each sentence in two or three different ways, exploring how the linking words can shape and refine the meaning of the sentence.

The cost of internet is still too high, too many people cannot get high speed access.

The cost of internet is still too high. Too many people cannot get high speed access.

OR

The cost of internet is still too high, and so too many people cannot get high speed access.

The first fix is grammatically accurate, but leaves out a lot of meaning. The phrase "and so" helps to show the cause and effect relationship between the sentences.

Fixing sentences is not very exciting students do need the practice.
Fixing sentences is not very exciting even though students do need the practice. OR, Fixing sentences is not very exciting; however, students do need the practice. In each case, the relationship between the two ideas is made more clear.
2. First, explain why the sentence does not make sentence. What is wrong with the reference for the modifier? Then, rewrite each sentence so that the reference for the modifier is clear.
To qualify for a scholarship, your address and email must be included.
First, note that "Your address and email" is the subject of the sentence. It is modified by the phrase "to qualify for a scholarship." But "your address and email" cannot qualify for a scholarship … only **you** can do that! This makes more sense: To qualify for a scholarship, **you** must include your address and email.
Released this week on the app store, we were excited to play the new game!
How **can** we be released on the app store? We were not released, the game was. This makes more sense: We were excited to play the new game which was released this week on the app store!
3. Finding the subject of each sentence, and rewrite so that the sentence is logical and grammatical.
By having learned how to edit videos was how she got a job in public relations.
"She" is the most logical subject of the sentence. So, revise: Having learned how to edit videos, she got a job in public relations.
The purpose of the lesson was written to help students with their writing.
In this case, the subject could be "the lesson" or "the purpose." The remaining sentence must comply with the chosen subject. You can have the phrase "The purpose" or the phrase "was written," but not both. Revise: The lesson was written to help students with their writing. Or The purpose of the lesson was to help students with their writing.

Sample Answers

Be Appropriate (Sample Answers)

The following paragraph has many issues with the formality and complexity of its language. In addition, at times it relies on cliché to get the point across.

> It's silly to give mobile devices to children under 12. It's just a matter of time before they will do something bad and get into trouble with them. But children want the phones because their friends bug them if they don't have one. Also, children will be cut off from their friends. They chat through social media; to them, making phone calls is for the dinosaurs.

1. **Identify all the words and phrases that should be changed to make this writing more suitable for an academic context.**

It's silly to give mobile devices to children under 12. It's just a matter of time before they will do something bad and get into trouble with them. But children want the phones because their friends bug them if they don't have one. Also, children will be cut off from their friends. They chat through social media; to them, making phone calls is for the dinosaurs.

Unity (Sample Answers)

Read over the topic sentence and then circle the answer that best indicates what you expect to learn in this paragraph.

Topic sentence:

> Despite the risks of overuse, video games can help children learn basic math skills.

Box Choices:

A. How children spend too much time using video games.

B. Examples of how video games help children learn math.

C. Why basic math skills are so important for children to learn.

Answer:

Examples of how video games help children learn math.

Once the topic sentence has been set, the paragraph has a purpose that must be met. In this example, the purpose of the paragraph is to look at how video games can help with math skills.

Read the topic sentence. Then, circle the answer that best indicates the expected content needed to create a paragraph with unity.

Topic sentence:

> Video game designers need strong skills in both computer programming and creative design.

Box Choices:

A. Explain the computer programming skills needed by game designers.

B. Explain the education needed to be a video game designer.

C. Explain the skills in both computer programming and creative design and how these two types of skills work together in video game development.

Box A

Explain the computer programming skills needed by game designers.

Explanation

Explaining the computer programming skills needed would be a good start to this paragraph. However, it would only cover half the expectations set out in the topic sentence. Without a discussion of creative design, the paragraph will lack unity. To fix this, information on creative design skills can be added, or the topic sentence can be changed.

Box B

Explain the education needed to be a video game designer.

Explanation

The topic sentence does suggest the overall idea of education for video game design; however, the purpose of this paragraph is to focus on two specific sets of skills and not the overall education needed. This paragraph might be part of a larger essay on the education needed for video game design.

Box C

Explain the skills in both computer programming and creative design and how these two types of skills work together in video game development.

Explanation

To have unity, this paragraph must explain the skills in both computer programming and creative design needed to be a video game designer. It might look at why and how these skills come together in this work.

Sample Answers

Providing Adequate Development (Sample Answers)

Answers to sentences
A – 1. Reason: A reason why video games can help children learn basic math.
B – 2. Example: An example of the reason.
C – 1. Reason: Is another reason why video games can help children learn.

Providing Adequate Development II (Sample Answers)

Answers to sentences
A – 1. Reason why to designers need both programming and design skills
B – 2. Example
C – 3. Quotation
D - 1. Reason

Practice Logical Organization (Sample Answers)

Supporting sentences:

A. These devices must be easy to use as all segments of the population are using them now.

B. Video entertainment is much easier to play on Apple than Windows systems.

C. The Windows system requires more user-customization before use.

D. A mobile device must have both work and entertainment capabilities.

E. The Apple system is truly plug and play.

F. Versatile means user-friendly.

Correct order:

F. Versatile means user-friendly.

A. These devices must be easy to use as all segments of the population are using them now.

E. The Apple system is truly plug and play.

C. The Windows system requires more user-customization before use.

D. A mobile device must have both work and entertainment capabilities.

B. Video entertainment is much easier to play on Apple than Windows systems.

Explanation

In this sample answer, the paragraph is organized around two points of comparison and each one has an example. As we read the paragraph, we can easily follow the step by step logic of each point of comparison. First the paragraph defines versatile as user-friendly. Then it offers one example of user-friendly – that they are easy to use. And it compares how apple is easier than pc to use. Second, it defines user-friendly as easy to customize for a user and compares apple and pc for that as well.

Sample Answers

Practice with Transitions (Sample Answers)

Use transition words to link these sentences into a well-connected paragraph. Don't change the order of the sentences, but combine sentences if you like. When finished, compare your response to the sample answer.

Sentences:

Apple provides a more versatile operating system than Windows.

Versatile means user-friendly.

These devices must be easy to use as all segments of the population are using them now.

The Apple system is truly plug and play.

The Windows system requires more user customization.

A mobile device must be easy to use for both work and entertainment.

Video entertainment is much easier to play on Apple than Windows systems.

Sample answer:

Here is a sample answer, but remember there are many ways to link these sentences together.

Apple provides a more versatile operating system than Windows. Versatile means user-friendly. **First**, these devices must be easy to use as all segments of the population are using them now. **For example, while the** Apple system is truly plug and play, the Windows system requires more user customization. **Second**, a mobile device must be easy to use for both work and entertainment. Video entertainment, **for example**, is much easier to play on Apple than Windows systems.

Cool Down Questions (Sample Aswers)

Part A – Be Concise

Revise these sentences so they are more concise.

1. **My role as team leader is to motivate the team to complete the project.**

As leader, I motivate the team to complete the project.

2. **There are many questions that we need to answer about this project.**

We need to answer many questions about this project.

Part B – Be Precise

Combine these sentences to be more precise. Think carefully about the transition words you can use. When you've finished, combine them another way and see how you can change the meaning by changing the transitions words.

1. **I'm going to stay in a condo. My friend invited me to Vancouver. There is an excellent concert on Saturday night.**

My friend invited me to stay in her Vancouver condo so I could attend the concert on Saturday night.

Part C – Be Accurate

Revise these sentences to be more grammatically accurate.

1. **We were exhausted at the end of the day. Having travelled by train all the way to Portland.**

Having travelled by train all the way to Portland, we were exhausted at the end of the day.

2. **The instructor proposed a fascinating topic for the workshop, the students needed to sign up by Friday.**

The instructor proposed a fascinating topic for the workshop, and the students needed to sign up by Friday.

Part D - Paragraphs

1. **Explain the four key qualities of an effective paragraphs and why each one is important to the successful communication.**

Every paragraph needs unity, which means it develops one main idea that is stated in the topic sentence. That main idea must then be developed and explained adequately to be interesting and convincing.

Next, that fully-developed idea must be organized in a logical way for the reader to understand it. Finally, the developed and well-organized idea in the paragraph must be clearly linked to the thesis of the essay and the paragraphs around it with strong transitions.

Boot Camp 3 – Writing with Research

Introduction

When we first learn to write about our ideas–perhaps in high school English class or in our journals and blogs–we often explore our own unique ways of thinking about the world around us. Personal reflections, opinions and arguments are an interesting and often empowering form of expression, especially in today's context of social media.

However, when we shift into the context of university writing, the game changes. Now, we must embrace a more rigorous form of expression where we look for and build connections between our own ideas and the ideas circulating in the culture around us. Academic writing engages with other writers and thinkers to build knowledge.

Boot Camp 3 is designed to give you the technical skills you need to incorporate those ideas and words from other writers into your own writing accurately and effectively. This is called documentation.

About Style Guides

To manage our research material effectively, we will follow the rules and guidelines laid out in the APA (American Psychology Association) style guide. You can read more about the guide at http://www.apastyle.org/

Different fields of academic study use different style guides. Because APA is quite common, we've covered it in this lesson. Once you have learned one style guide, however, it's easy to learn the features of a new one. For any class you take, make sure you understand which style guide the instructor expects you to use.

How to Start

Boot Camp 3 has 5 lessons for documenting research material. The lessons will develop practical skills for bringing other people's ideas and words into your writing while avoiding plagiarism. Models and practice exercises will help you learn techniques for quotation, paraphrase, and attribution.

Menu

Go ahead and complete this Boot Camp in order, or dip in and try any of the sections that appeal to you!

Warm Up – Test your skills

Workout – Interactive skill-building lessons

- How do I build a reference list? (Workout A)
- How do I avoid plagiarism? (Workout B)
- How do I introduce sources into my writing? (Workout C)
- How do I quote information? (Workout D)
- How do I paraphrase information? (Workout E)

Cool down – Practice your skills

Warm Up

As a warm up, let's review some key terms that are used when documenting research material.

Warm Up (Practice)

Match the **key terms** to the different types of documentation techniques in the paragraph.

_____ In a 2016 article in WIRED, _____ Brian Raftery comments on the downside of music streaming and expresses some nostalgia for CDs. _____ Raftery reflects sadly on the CDs and Vinyl he should have kept, noting that _____ "there's no guarantee of permanence or stability in the streaming atmosphere."

From:

Raftery, B. (2016). I can't believe I'm saying this, but I miss my CDs. *WIRED*. Retrieved 8 August 2016, from http://www.wired.com/2016/07/i-miss-my-cds/

Key Terms:

- **Citation**
- **Attribution**
- **Paraphrase**
- **Quotation**

How do I build a reference list? (Workout A)

Each time we work with research material for an academic project, we need to create a reference list–a list of all the research material we cited (or referred to) in our project. A simple idea, right? Except this list must be organized and formatted correctly, according to the rules in the style guide.

In this workout, you will consider the features and purpose of a reference list and practice how to format the citations for each source.

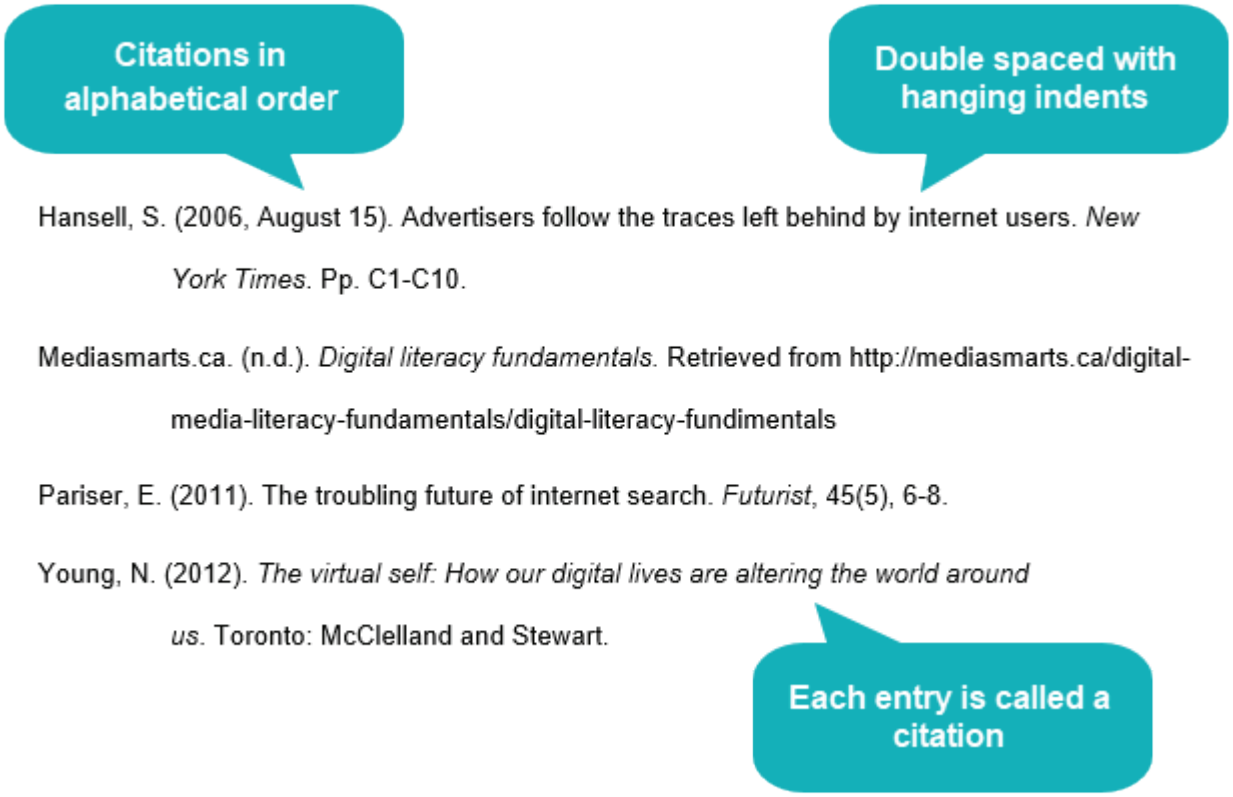
Remember, we are working with the APA style guide. Make sure you know which style guide rules you should follow for any specific assignment.

What is a Reference List?

Here's a sample of a reference list for a paper on the topic of internet privacy.

Each citation is a source that has been mentioned, quoted or paraphrased in the body of the essay. Each citation is written according to the APA conventions and provides all the information we need to find the source, including author, title, publication and date.

Take note of the spacing and organization of the information.



Have another look carefully at the four citations on the Reference List. Each one is a little bit different because each one is a different type of publication.

Identifying Citations (Practice)

Try to identify each type of publication. Write the corresponding type to the matching publication.

- Which one is the newspaper article?
- Which one is the book?
- Which one is the webpage?
- Which one is the magazine or journal article?

Reference List

Hansell, S. (2006, August 15). Advertisers follow the traces left behind by internet users. *New York Times*. Pp. C1-C10.

Type: _____

Mediasmarts.ca. (n.d.). *Digital literacy fundamentals*. Retrieved from http://mediasmarts.ca/digital-media-literacy-fundamentals/digital-literacy-fundimentals

Type: _____

Pariser, E. (2011). The troubling future of internet search. *Futurist*, 45(5), 6-8.

Type: _____

Young, N. (2012). *The virtual self: How our digital lives are altering the world around us*. Toronto: McClelland and Stewart.

Type: _____

Why do we need a Reference List?

We need a reference list for two reasons. First, we must acknowledge the work of other people. When we draw on ideas from other sources we must give credit to those sources, making sure our readers understand where the information has come from.

Second, we must provide a way for our readers to go back to our sources and check them out for themselves. The reference list works as a kind of road map for finding our sources.

If we cite (or refer) to another person's work in our writing, we must make a citation for that source in the reference list, providing enough information for our readers to go and find the source for themselves.

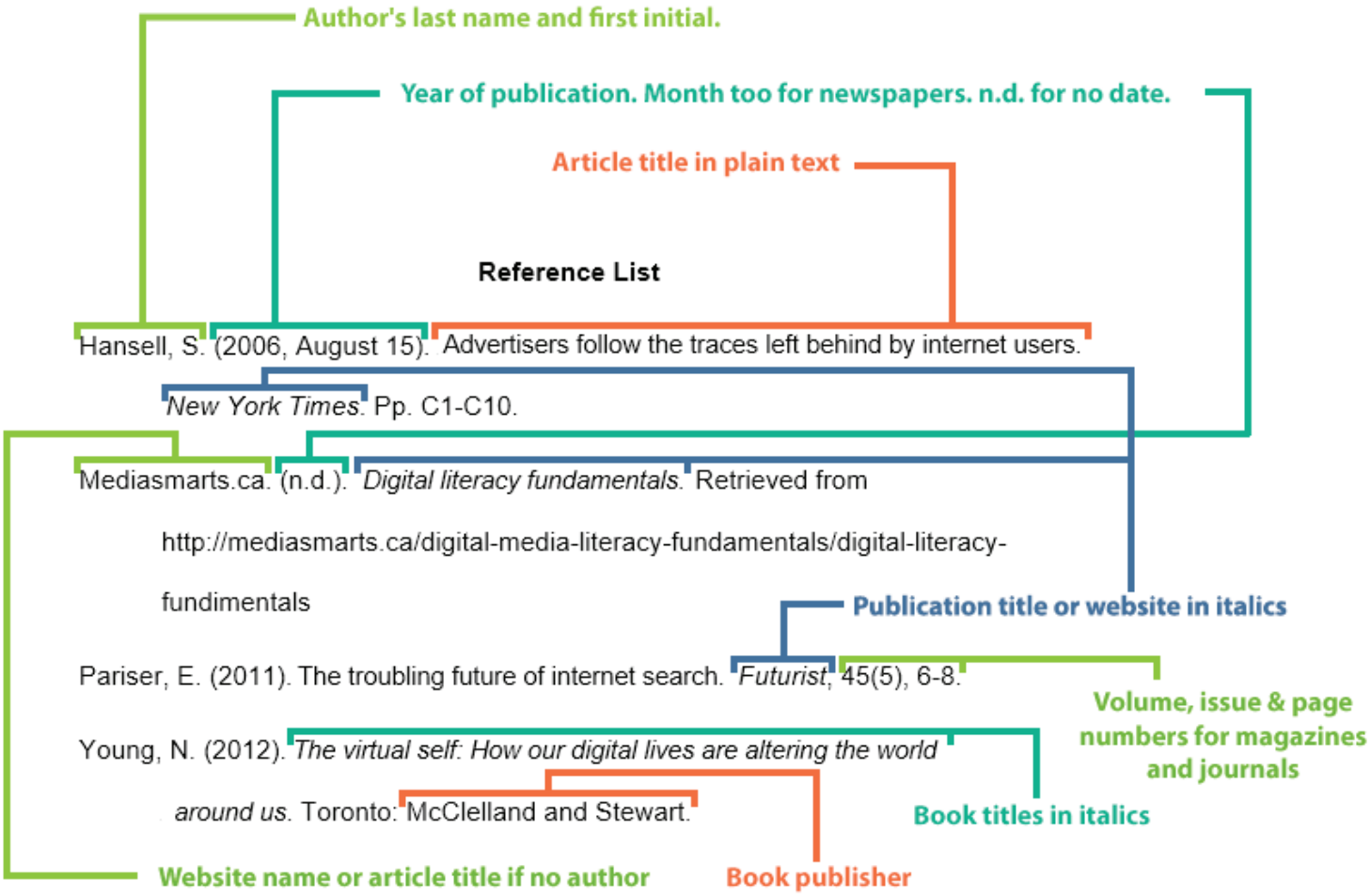
How do I format the Citations?

Formatting citations can be tricky work that involves knowing what pieces of information must be included in the citation and how to punctuate.

Students are often relieved to hear that software or online guides provide models for creating different citations and some will even generate those citations for you!

But be careful. These models and citation generators make mistakes. So, you do need to be familiar enough with the conventions to make sure you include the required information and can confirm the accuracy of the formatting.

Let's review the basic building blocks of a citation. All citations will include information on **author, title, publication, and date**. How this information is put together in a single citation depends on the type of source you are working with, such as a website, article or book.



Build a Citation (Practice)

To build a proper citation for a reference list, we need to know what type of source we are working with and what information we need to collect.

Let's practice this now.

1. For the first practice exercise, let's use a citation for Pariser with the model APA citation below for reference:

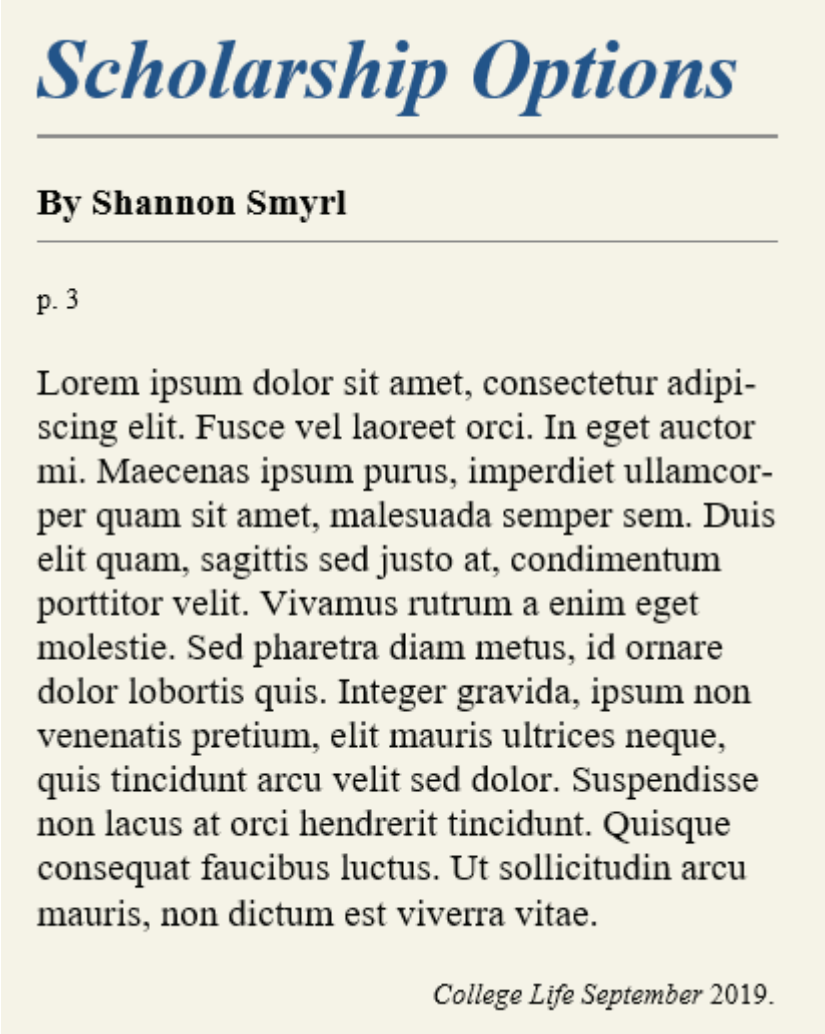
   Pariser, E. (2011). The troubling future of Internet search. *Futurist*, 45(5), 6-8.

   Author. (Year). Article title. *Journal Title*, Issue(Volume), page numbers.

In the area below, locate each piece of information you need to build this citation.

Types of information:

- author
- year
- article title
- magazine title
- month
- page



Scholarship Options

By Shannon Smyrl

p. 3

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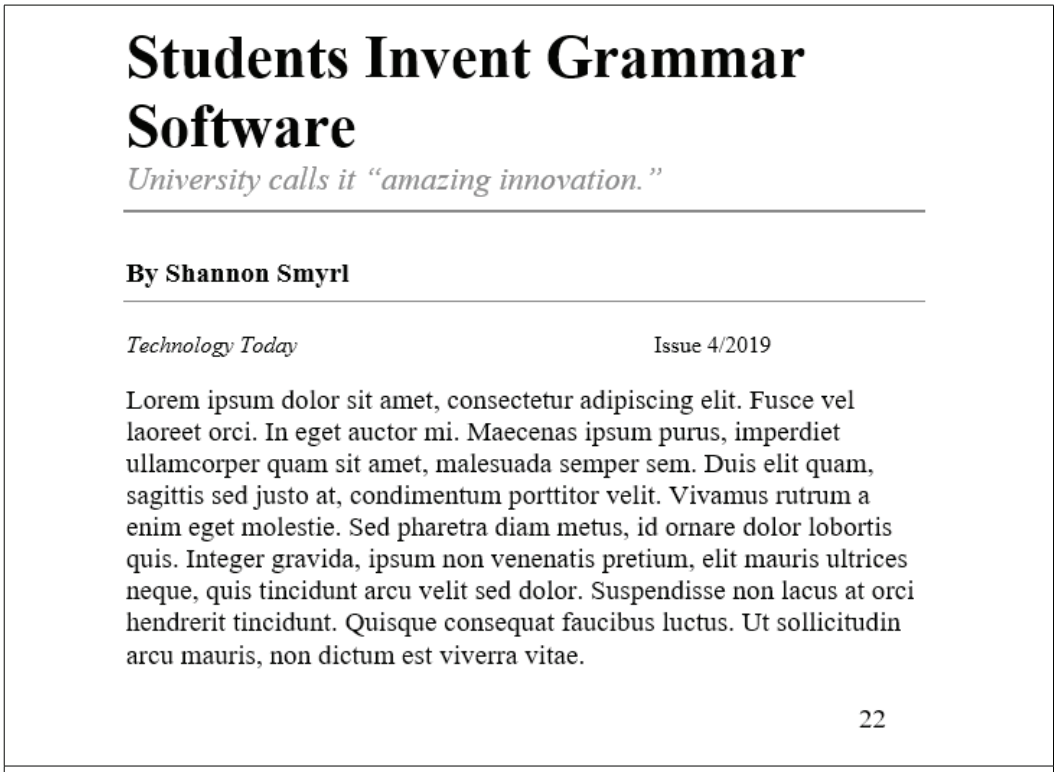
College Life September 2019.

2. This time, build the citation without a model. Start by thinking about what kind of publication this sample is, and then decide which information from the sample that you will need.

   Locate each piece of information you will need for the APA citation.



Students Invent Grammar Software

University calls it "amazing innovation."

By Shannon Smyrl

Technology Today Issue 4/2019

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce vel laoreet orci. In eget auctor mi. Maecenas ipsum purus, imperdiet ullamcorper quam sit amet, malesuada semper sem. Duis elit quam, sagittis sed justo at, condimentum porttitor velit. Vivamus rutrum a enim eget molestie. Sed pharetra diam metus, id ornare dolor lobortis quis. Integer gravida, ipsum non venenatis pretium, elit mauris ultrices neque, quis tincidunt arcu velit sed dolor. Suspendisse non lacus at orci hendrerit tincidunt. Quisque consequat faucibus luctus. Ut sollicitudin arcu mauris, non dictum est viverra vitae.

22

Based on this model citation for a journal article, write the correct citation for this article:

Model:

Author Lastname, First initial. (year). Article title. *Publication title*. Issue, pages.

Citation:

How do I avoid plagiarism? (Workout B)

Plagiarism means misrepresenting someone else's work as your own. Most of the time in academic contexts, plagiarism occurs because students are not aware of how to give credit to other people's work in their own writing.

Basically, it comes down to this. If you use someone else's **ideas**, their **actual words**, or any **data or images** they produce, you must give that person credit for their work. You must say where this information has come from by documenting it.

If you misrepresent others' work as your own, you could face profound consequences, depending on your situation. Each institution has its own policy of academic integrity. Take the time to review this policy and to understand how to avoid plagiarism.

Let's reflect on when we need to give credit for other people's work.

So – a complex argument about privacy and the internet. Did you think of this yourself?

Um, well I read the ideas in a book. But then I wrote them up in my own words for the paper. That's ok, right?

No, that's plagiarism.

Plagiarism Check (Practice)

Explain whether or not each is an example of plagiarism.
1. Words copied directly from a source into your own paper
2. Ideas, opinions, or arguments from another source that you write in your own words
3. Basic facts that are commonly understood to be true
4. An original essay purchased or borrowed from someone, modified by you, and submitted
5. Revisions on an essay done with the help of a tutor
6. An image you found on the internet put into your project

Avoid plagiarism with good note-taking

Look! I've taken notes from all these sources for my essay.

Wow, you've done a lot of reading. Have you kept track of where all the ideas have come from?

Um, kept track?

Avoiding plagiarism starts with understanding what counts as plagiarism. Then, you can reduce the risks of accidental plagiarism by learning to take good notes when working on a research project.

Working with research material can be overwhelming. We can easily lose track of where all our information has come from. But this tracking of the sources for your research material is an essential part of effective note-taking.

When taking notes, first make sure you always link them to their source. When you go back later to use you notes to write the essay, you need to know what source they came from. Otherwise, you might think they are your ideas!

The second task for keeping track of sources is to note whether you have written down an exact quotation or noted the author's ideas in your own words. This matters. If you later copy the author's own words from your notes into your essay without quotation marks, you could be accused of plagiarism.

Let's practice by improving a set of notes on an article.

On this page, a student has taken a set of notes from Eli Pariser's 2011 article "The Troubling Future of Internet Search." But there are problems with these notes.

Source:

Computers | Sci/Tech

The Troubling Future of Internet Search

Data customization is giving rise to a private information universe at the expense of a free and fair flow of information, says the former executive director of Moveon.org.

By Eli Pariser

Someday soon, Google hopes to make the search box obsolete. Searching will happen automatically.

"When I walk down the street, I want my smartphone to be doing searches constantly—'did you know?' 'did you know?' 'did you know?' 'did you know?' In other words, your phone should figure out what you would like to be searching for before you do," says Google CEO Eric Schmidt.

This vision is well on the way to being realized. In 2009, Google began customizing its search results for all users. If you tend to use Google from a home or work computer or a smartphone—i.e., an IP address that can be traced back to a single user (you)—the search results you see incorporate data about what the system has learned about you and your preferences. The Google algorithm of 2011 not only answers questions, but it also seeks to divine your intent in asking and give results based, in part, on how it perceives you.

This shift speaks to a broader phenomenon. Increasingly, the Internet is the portal through which we view and gather information about the larger world. Every time we seek out some new bit of information, we leave a digital trail that reveals a lot about us, our interests, our politics, our level of education, our dietary preferences, our movie likes and dislikes, and even our dating interests or history. That data can help companies like Google deliver you search engine results in line with what it knows about you.

Other companies can use this data to design Web advertisements with special appeal. That customization changes the way we experience and search the Web. It alters the answers we receive when we ask questions. I call this the "filter bubble" and argue that it's more dangerous than most of us realize.

In some cases, letting algorithms make decisions about what we see and what opportunities we're offered gives us fairer results. A computer can be made blind to race and gender in ways that humans usually can't. But that's only if the relevant algorithms are designed with care and acuteness. Otherwise, they're likely to simply reflect the social mores of the culture they're processing—a regression to the social norm.

The use of personal data to provide a customized search experience empowers the holders of data, particularly personal data, but not necessarily the seekers of it. Marketers are already exploring the gray area between what can be predicted and what predictions are fair. According to Charlie Stryker, a financial services executive who's an old hand in the behavioral targeting industry, the U.S. Army has had terrific success using social-graph data to recruit for the military—after all, if six of your Facebook buddies have enlisted, it's

Using a Source (Practice)

1. Using the screen shot of the article's first page, fill in the necessary source details so that later you will know where these ideas came from.

2. Identify which part of the notes copy Pariser's exact wording, and should therefore be in quotation marks.

Sample Notes

Source Details: [fill in]

Google internet searches

- 2009/11 – Google using algorithms to keep track of what we search for
- Sells our searches to companies who design direct advertising information
- Customization of our web searches changes the way we experience and search the web.

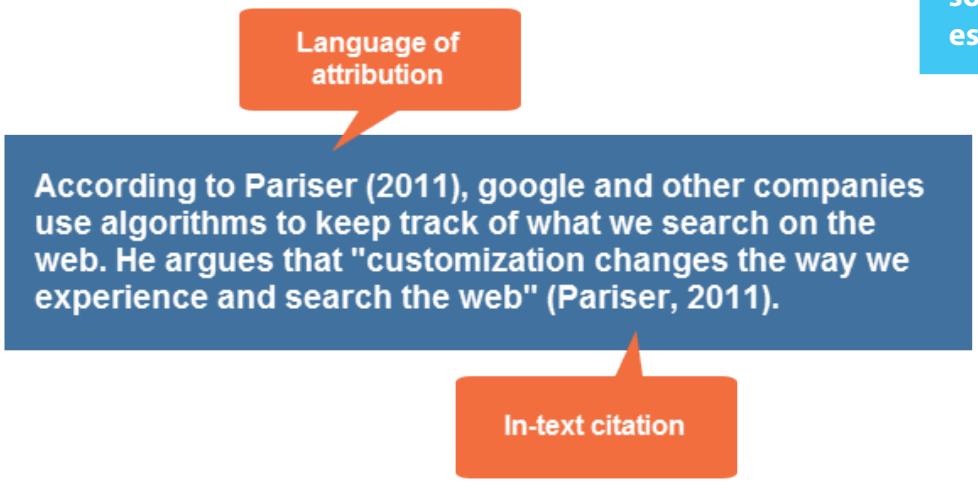
How do I introduce sources into my writing? (Workout C)

You need documentation skills to bring other people's ideas and words into your essay.

First, we use a **language of attribution** to indicate another voice in our essay. We use common phrases for that, including "According to Pariser" or "Pariser argues that …".

Second, we use **in-text citation** to tell the reader what specific source the ideas and words come from. In-text citation in APA includes the **author's family name** and the **year of publication**.

How do I indicate I'm using someone else's idea in my essay?



Locating Items in a Paragraph (Practice)

Read over the following paragraph which brings together ideas on plagiarism from two different authors – McLean and Horkoff.

A. Locate all the examples of attribution language.

B. Locate all the examples of in-text citation.

C. Locate the direct quotation.

D. Locate the one phrase in the paragraph that represents the writer's own voice.

Paragraph:

> Writers who plagiarize accidentally do so because they haven't been taught how to cite sources (McLean, 2012). In contrast, according to Horkoff (2015), writers who plagiarize other work on purpose do so mostly out of desperation. She goes on to argue that "intentional" plagiarism happens as writers leave work to the last minute or do not fully understand a writing task. (p. 316).

Reference List

- McLean, S. (2012). *Writing for success.* (1st ed). BC Open Textbook Project.
- Horkoff, T. (2015). *Writing for success*. (1st ed). BC Open Textbook Project.

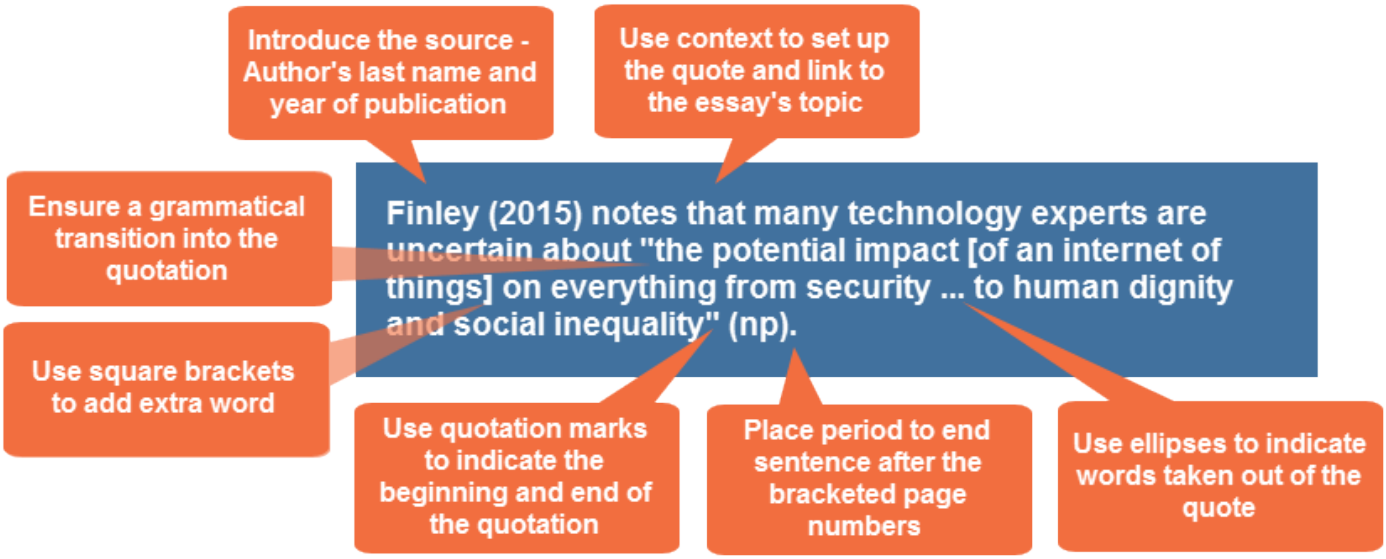
How do I quote information? (Workout D)

One of the ways we incorporate other people's work into our writing is through **direct quotation**. Direct quotation is when we take the **exact words** (or an image, or data) and replicate them in our work.

When you insert a direct quotation into your work, you are interrupting your words and inserting someone else's. This can be a powerful thing to do. But it can also be disruptive to the writing. It's important not to include too many direct quotations in your work as this can be distracting and make your paper difficult to read.

You should have a good reason for using a direct quotation, such as to highlight unique or interesting language or to reinforce the authority of the source.

Let's look at an example of how to build quotes into your writing.



In the example, the writer includes a quotation from an article by Klint Finley. After reading this quote in the essay, the reader could turn to the Reference List and find this citation:

> Finley, K. (2015). Why tech's best minds are very worried about the Internet of things. *WIRED*. Retrieved 8 October 2015, from http://www.wired.com/2014/05/iot-report/

Now, take note of the key features of the direct quotations above:

- Introduce quotations. Avoid dropping them unannounced into your writing. Use a language of attribution – such as the phrase "Finley notes that" – and in-text citation to do this.
- Write grammatical sentences when incorporating quotations. Use punctuation and the necessary transition language to make an effective sentence.
- Use quotation marks to indicate which words are part of the quotation. Include the page number if there is one, or np to indicate no page numbers. Notice the period comes after the page number.

- Use square brackets to indicate information has been added to a quote – sometimes necessary for clarity or grammatical accuracy.
- Use ellipses to remove information from a quote – sometimes necessary for clarity or grammatical accuracy. Make sure you never change the intended meaning of a quotation.

This model demonstrates the basic approach to incorporating quotations. As you get more involved in documenting research material, you are encouraged to refer to the APA reference guide and/or your school's library for more details.

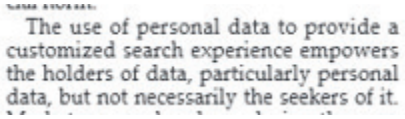
Now, let's practice building a quotation into some writing.

Quotation Revision (Practice)

Look at the sample passage from the original source. First, note the problems with the attempted quotation and then revise. When finished, compare your answer to the sample answer.

Original source from page 6 of:

Pariser, E. (2011). "The troubling future of Internet search." *Futurist*, 45(5), 6-8.


The use of personal data to provide a customized search experience empowers the holders of data, particularly personal data, but not necessarily the seekers of it.

Attempted Quotation:

> Many people are concerned about the lack of privacy when we share information online. Pariser: "The use of personal data to provide a customized search experience empowers the holders of data but not necessarily the seekers of it. (np).

Revise this quotation so that it is formatted correctly.

Revision:

How do I paraphrase information? (Workout E)

Most of the time, when we want to bring ideas from our research into our essays we do so using paraphrasing. This means understanding an idea or argument in the source material and restating it in our own essay **using our own words**. Then, of course, indicating where the idea came from **using in-text citation.**

Paraphrase is the unique expression of someone else's idea. When we bring other people's ideas into our writing, we have two choices. Direct quotation uses the **exact words** from the source. Paraphrase uses **none of the original words** or phrasing from the source.

Paraphrasing is more efficient than using direct quotation as it lets us focus on the specific ideas we want to bring into our essay, and lets us do this in our own voice and style.

Key features of a good paraphrase:

- Uses unique vocabulary and grammatical structure. The idea from the source must be written in your own words.
- Includes language and attribution and in-text citation so we know where the idea came from.
- Quotes any unique phrasing, if necessary.

Process for paraphrase

To write effective paraphrase, we must make sure we really understand the ideas we want to restate in our own words. It helps to follow a specific process.

Let's go through this process using an example.

For this exercise, we'll use this passage from Finey's 2015 article on the Internet of Things.

> THE INTERNET OF Things is coming. And the tech cognoscenti aren't sure that's a good thing.
>
> For years, the prospect of an online world that extends beyond computers, phones, and tablets and into wearables, thermostats, and other devices has generated plenty of excitement and activity. But now, some of the brightest tech minds are expressing some doubts about the potential impact on everything from security and privacy to human dignity and social inequality.

Finley, K. (2015). Why tech's best minds are very worried about the Internet of things. *WIRED*. Retrieved 8 October 2015, from http://www.wired.com/2014/05/iot-report/

Process for Paraphrase (Practice)

Step 1. Start by reading over the passage with the idea that you want to paraphrase, and make sure you really understanding what it says. You might take a note or two, but be careful you don't repeat exactly what's written on the page. Step 2. Now, put the source away. That's right, don't look at it. Write down from memory the idea that you have found in this passage. Type the idea into the box. Step 3. Now, go back to the original passage and compare to your unique phrasing of the idea in your own words. Have you captured the idea accurately? Have you accidently copied any words or phrases from the original? Sometimes, there are key terms and phrases that we really want to use. We can do that – but we must put them in quotation marks.

Paraphrase Evaluation Activity

Let's complete two practice activities to evaluate strong and weak examples of paraphrase.

1. Read the sample paraphrase of the passage below. List the reasons why this is not an acceptable paraphrase.

> THE INTERNET OF Things is coming. And the tech cognoscenti aren't sure that's a good thing.
>
> For years, the prospect of an online world that extends beyond computers, phones, and tablets and into wearables, thermostats, and other devices has generated plenty of excitement and activity. But now, some of the brightest tech minds are expressing some doubts about the potential impact on everything from security and privacy to human dignity and social inequality.

Finley, K. (2015). Why tech's best minds are very worried about the Internet of things. *WIRED*. Retrieved 8 October 2015, from http://www.wired.com/2014/05/iot-report/

Paraphrase Evaluation Activity (Practice)

Weak paraphrase:

The brightest tech minds have doubts about the internet of things which may have an impact on security and privacy to human dignity and social inequality. The internet of things will extend the online world to wearables and household appliances.

What are the problems with this paraphrase?

2. In the next activity, read over the original source and the sample paraphrase. Then, identify all the types of errors that you can see in the sample paraphrase.

   Original Passage from Eli Pariser's 2011 article "The Troubling Future of Internet Search."

In some cases, letting algorithms make decisions about what we see and what opportunities we're offered gives us fairer results. A computer can be made blind to race and gender in ways that humans usually can't. But that's only if the relevant algorithms are designed with care and acuteness. Otherwise, they're likely to simply reflect the social mores of the culture they're processing—a regression to the social norm.

6 THE FUTURIST September-October 2011 www.wfs.org

Paraphrase Evaluation Activity Continued (Practice)

Sample paraphrase:

Sometimes, if we let algorithms make decisions about what we see and get online things will be more fair. For example, computers don't see race and gender. For this to happen, algorithms have to be designed with care and acuteness or else they reflect the culture around us. This reinforces the social norm.

1. Indicate all the problems you can identify with the sample paraphrase.
2. Now, try to write a better paraphrase of this passage, making sure to correct the problems identified above.

Cool down

You've worked hard! Take a few minutes to cool down and practice the skills covered in this boot camp.

Cool Down (Practice)

1. Revise these examples of in-text documentation. Look for problems with punctuation, attribution, and grammatical structure. The correct citation is provided. Assume that quoted material is accurate and that there are no page numbers.

   Citation:

   > Raftery, B. (2016). I can't believe I'm saying this, but I miss my CDs. *WIRED*. Retrieved 8 August 2016, from http://www.wired.com/2016/07/i-miss-my-cds/

   a. According to Raftery, the popularity of music streaming has led to "the steadily eroding sales of compact discs".

   b. The popularity of music streaming leads Raftery to argue "the steadily eroding sales of compact discs" (2016).

   c. "The steadily eroding sales of compact discs" can be attributed to the popularity of music streaming.

2. Here's a sample passage from the Raftery article, followed by a sample paraphrase. Make a list of the weaknesses in the paraphrase and then try to re-write it.

   Source:

   > To be fair, we all knew from the beginning that we wouldn't be able to hear everything we wanted via streaming, even in a best-case scenario. There were so many labels, artists, and rights-holders to be satisfied—and so many arcane releases to track down—that it would be impossible for services like Spotify or Apple Music to entirely replicate our collections. In a best-case scenario, we could achieve Nirvana, but never nirvana.

   From: Raftery, B. (2016). I can't believe I'm saying this, but I miss my CDs. *WIRED*. Retrieved 8 August 2016, from http://www.wired.com/2016/07/i-miss-my-cds/

   Sample paraphrase:

   > Streaming music does have its limits, even in a best-case scenario we knew we wouldn't' be able to hear everything we wanted. Sites like Apple and Spotify would not be able to replicate our whole collections because many labels and artists would be difficult to track down.

   What weaknesses can you identify?

Sample Answers

Warm Up (Sample Answers)

Citation In a 2016 article in WIRED, Paraphrase Brian Raftery comments on the downside of music streaming and expresses some nostalgia for CDs. Attribution Raftery reflects sadly on the CDs and Vinyl he should have kept, noting that Quotation "there's no guarantee of permanence or stability in the streaming atmosphere." From: Raftery, B. (2016). I can't believe I'm saying this, but I miss my CDs. *WIRED*. Retrieved 8 August 2016, from http://www.wired.com/2016/07/i-miss-my-cds/	**Key Words:** • Citation • Attribution • Paraphrase • Quotation

Identifying Citations (Sample Answers)

Reference List

Hansell, S. (2006, August 15). Advertisers follow the traces left behind by internet users. *New York Times*. Pp. C1-C10.

Type: Newspaper article

Mediasmarts.ca. (n.d.). *Digital literacy fundamentals*. Retrieved from http://mediasmarts.ca/digital-media-literacy-fundamentals/digital-literacy-fundimentals

Type: Website

Pariser, E. (2011). The troubling future of internet search. *Futurist*, 45(5), 6-8.

Type: Magazine or journal article

Young, N. (2012). *The virtual self: How our digital lives are altering the world around us*. Toronto: McClelland and Stewart.

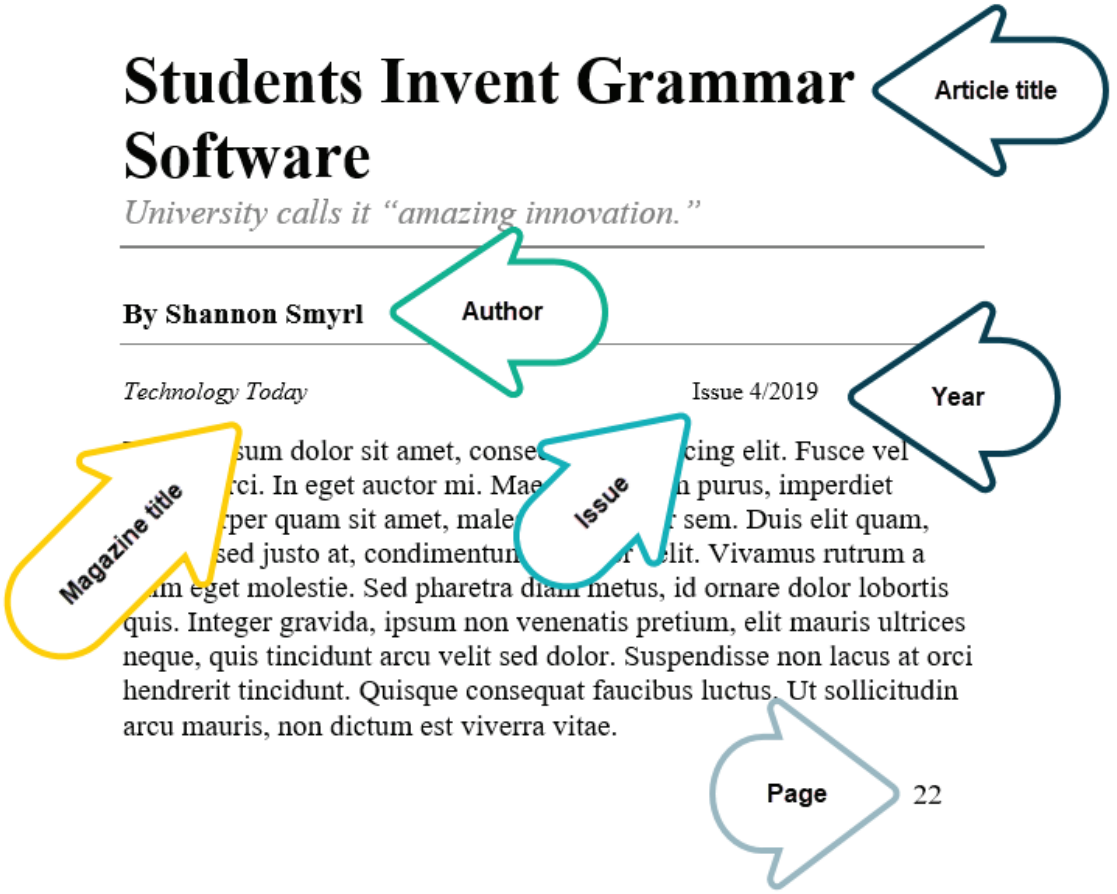
Type: Book

Build a Citation (Sample Answers)

1. In the image, locate each piece of information you need to build this citation.

Sample Answers

2. In the image, locate each piece of information you will need for the APA citation.



Based on this model citation for a journal article, write the correct citation for this article:

Model:

Author Lastname, First initial. (year). Article title. *Publication title*. Issue, pages.

Citation:

Smyrl, S. (2019). Students Invent Grammar Software. *Technology Today*, 4, 22.

Plagiarism Check (Sample Answers)

1.	Words copied directly from a source into your own paper
	Plagiarism
2.	Ideas, opinions, arguments from another source that you write in your own words
	Plagiarism
3.	Basic facts that are commonly understood to be true
	Not Plagiarism
4.	An original essay purchased or borrowed from someone, modified by you, and submitted.
	Plagiarism
5.	Revisions on an essay done with the help of a tutor
	Not Plagiarism
6.	An image you found on the internet put into your project.
	Plagiarism

Sample Answers

Using a Source (Sample Answers)

1. Using the screen shot of the article's first page, fill in the necessary source details so that later you will know where these ideas came from.

author, title, year, publication title

2. Identify which part of the notes copy Pariser's exact wording and so should be in quotation marks.

Sample Notes

Source Details: [fill in]

Google internet searches

- 2009/11 – Google using algorithms to keep track of what we search for
- Sells our searches to companies who design direct advertising information
- Customization of our web searches changes the way we experience and search the web.

Sample Notes

Source Details: [fill in]

Google internet searches

- 2009/11 – Google using algorithms to keep track of what we search for
- Sells our searches to companies who design direct advertising information
- **Customization of our web searches changes the way we experience and search the web**. [copied directly should be in quotation marks]

Locating Items in a Paragraph (Sample Answers)

Read over the following paragraph which brings together ideas on plagiarism from two different authors – McLean and Horkoff.

A. **According to Horkoff** - Attribution language – attribution language helps us prepare for who's voice we are reading, and helps us know when we've moved from one voice to another. We should always know whose ideas we are reading.

B. **(2015), (McLean, 2012), (p.316)** - In-text citation – it's possible to vary how the in-text citation is used for style, as long as the author's name and year of publication are included somewhere.

C. **"intentional"** - Direct Quotations – most of the paragraph consists of ideas from McLean and Horkoff written in the writer's own words, except this one direct quote of a key term.

D. **In contrast** - Writer's own voice – phrase "in contrast" – explains that the writer's work here is to bring together these two different ideas on plagiarism to compare them. It's ok that most of the ideas in the paragraph belong to other people.

Paragraph:

> According to McLean (2012), writers who plagiarize accidently do so because they haven't been taught how to cite sources. In contrast, writers who plagiarize other work on purpose do so mostly out of desperation (Horkoff, 2015). She goes on to argue that "intentional" plagiarism happens as writers leave work to the last minute or do not fully understand a writing task (p. 316).
>
> **Reference List**
>
> - McLean, S. (2012). *Writing for success.* 1st ed. BC Open Textbook Project.
> - Horkoff, T. (2015). *Writing for success*. BC Open Textbook Project.

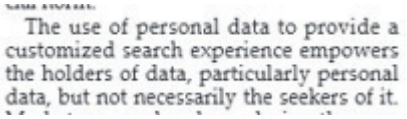
Sample Answers

Quotation Revision (Sample Answers)

Look at the sample passage from the original source. First, note the problems with the attempted quotation and then revise. When finished, compare your answer to the sample answer below.

Original Source from page 6 of:

Pariser, E. (2011). The troubling future of Internet search. *Futurist*, 45(5), 6-8.


The use of personal data to provide a customized search experience empowers the holders of data, particularly personal data, but not necessarily the seekers of it.

Attempted Quotation:

> Many people are concerned about the lack of privacy when we share information online. Pariser: "The use of personal data to provide a customized search experience empowers the holders of data but not necessarily the seekers of it. (np).

Revise this quotation so that it is formatted correctly.

Revision:

Sample answer:

> Many people are concerned about the lack of privacy when we share information online. As Eli Pariser notes in his 2011 article, "the use of personal data to provide a customized search experience empowers the holders of data … but not necessarily the seekers of it" (6).

Explanation:

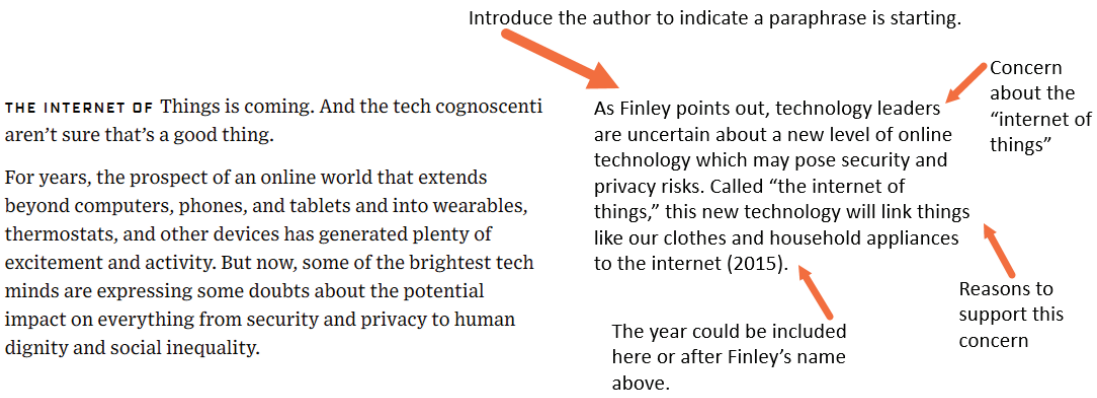
The quotation needs a stronger language of attribution and the year of publication. The quotation should be accurate and use ellipses to indicate words left out. The page number should be included, along with correct punctuation at the end.

Process for Paraphrase (Sample Answers)

Step 1. Start by reading over the passage with the idea that you want to paraphrase and make sure you really understanding what it says. You might take a note or two, but be careful you don't repeat exactly what's written on the page.

Step 2. Now, put the source away. That's right, don't look at it. Write down from memory the idea that you have found in this passage. Type the idea into the box.

Step 3. Now, go back to the original passage and compare to your unique phrasing of the idea in your own words. Have you captured the idea accurately? Have you accidently copied any words or phrases from the original? Sometimes, there are key words and phrases that we really want to use. We can do that – but we must put them in quotation marks.



Paraphrase Evaluation Activity (Sample Answers)

What are the problems with this paraphrase?

1. This paraphrase takes many words and phrases from the original and changes and moves them around. It is neither an accurate direct quotation nor a unique phrasing of the original passage. The reader has no way of knowing whether the words and phrases are from the writer or come from a source.

   Sample:

   The brightest tech minds have **doubts about** the **internet of things** which may have an **impact on security and privacy to human dignity and social inequality**. The internet of things will **extend the online world to wearables** and household appliances.

2. In addition, there is no language of attribution and no in-text citation.

   For these reasons, this passage could be considered plagiarism.

Sample Answers

Paraphrase Evaluation Activity Continued (Sample Answers)

1. Indicate problems you can identify with this paraphrase:

Problems in the sample paraphrase:

- No attribution (Author's name and the year are not included).
- Too much word-for-word copying (the same phrases and words are copied from the original without quotation marks; this is more like lazy quotation that paraphrase).
- Structure and grammar are too much like the original (the overall organization of information is too similar; the paraphrase should be unique expression of the idea).
- Meaning does not match the intended meaning of the original (the meaning in the paraphrase is not particularly accurate, especially in the point about computer's not "seeing race and gender."

2. Now you take a turn. Try to write a better paraphrase of this passage, making sure you correct the problems identified above:

Sample Effective Paraphrase:

In his 2011 article, Pariser argues that while it's possible that the algorithms that shape what information we see online could make society fairer, in fact the opposite is more likely. It's more likely that the algorithms will replicate the inequalities of society that already exist and reinforce them.

Notice in this improved paraphrase:

- The author is introduced so we know whose ideas we are reading.
- The vocabulary and structure of the paraphrase are unique and don't attempt to mimic the original.
- The meaning accurately reflects the author's intended meaning.

Cool Down (Sample Answers)

1. Revise these examples of in-text documentation. Look for problems with punctuation, attribution, and grammatical structure. The correct citation is provided. Assume that quoted material is accurate and that there are no page numbers.

   Citation:

   > Raftery, B. (2016). I can't believe I'm saying this, but I miss my CDs. *WIRED*. Retrieved 8 August 2016, from http://www.wired.com/2016/07/i-missmy-cds/

   a. According to Raftery, the popularity of music streaming has led to "the steadily eroding sales of compact discs".

   b. The popularity of music streaming leads Raftery to argue "the steadily eroding sales of compact discs" (2016).

   c. "The steadily eroding sales of compact discs" can be attributed to the popularity of music streaming.

Revised in-text documentation:

a. According to Raftery, the popularity of music streaming has led to "the steadily eroding sales of compact discs."

b. The popularity of music streaming has led, Raftery argues, to "the steadily eroding sales of compact discs" (2016).

c. "The steadily eroding sales of compact discs" can be attributed to the popularity of music streaming (Raftery, 2016).

Sample Answers

2. Here's a sample passage from the Raftery article, followed by a sample paraphrase. Make a list of the weaknesses in this paraphrase and then try to re-write it.

   Source:

   > To be fair, we all knew from the beginning that we wouldn't be able to hear everything we wanted via streaming, even in a best-case scenario. There were so many labels, artists, and rights-holders to be satisfied—and so many arcane releases to track down—that it would be impossible for services like Spotify or Apple Music to entirely replicate our collections. In a best-case scenario, we could achieve Nirvana, but never nirvana.

   From: Raftery, B. (2016). I can't believe I'm saying this, but I miss my CDs. *WIRED*.Retrieved 8 August 2016, from http://www.wired.com/2016/07/i-miss-my-cds/

   Sample paraphrase:

   > Streaming music does have its limits, even in a best-case scenario we knew we wouldn't' be able to hear everything we wanted. Sites like Apple and Spotify would not be able to replicate our whole collections because many labels and artists would be difficult to track down.

   What weaknesses can you identify?

Problems with the sample paraphrase:

No attribution; direct copy of exact phrasing without quotation marks

Boot Camp 4 – Writing and Editing

Introduction

We all feel a sense of accomplishment when we finally finish an assignment. It can be very satisfying to see the final product of all our hard work. And let's face it, with the demands of school, family and work, sometimes it's all we can do to get that essay finished before the due date!

I finished my essay – and still a ½ hour before it's due!

Congratulations! Have you revised it?

Revised it?

But, let's be honest here. To really give yourself a chance to be successful at writing, you need to leave time – and energy – for revision. Yes, revision. That means reading your essay over again to find all the weak bits. It isn't fun for anyone, but it can make the difference between appearing competent and appearing lazy.

Boot Camp 4 presents a global editing process that you can apply to all your future writing projects. You will have an opportunity to learn and practice your skills in revising essay focus, structure, organization, documentation, and writing.

Getting past the excuses

In truth, our reluctance to revise our written work is grounded in many excuses. We need to overcome these to become effective writers.

Below are the most popular excuses used to avoid revising your written work. How many have you used?

1. **"I don't have enough time to revise my work. The paper is due right now!"**

   Truth behind the excuse:

   The truth is that if you take pride in the quality of your work, you will learn to leave more time for the completion of your assignment. Aim to give yourself a full day between completing the assignment and submitting it. You will be able to review and correct your work with an objective eye in this time.

2. **"I don't need to rewrite anything – it's perfect. Or, at least it's as good as I can make it."**

   Truth behind the excuse:

   The truth is that ideas develop in layers and with each draft or critical re-reading of our work, the ideas and writing will get stronger. Revision is difficult because we must go back and read with a critical eye. No one likes to go looking for their own mistakes! But to honor your hard work, you need to complete the process and take time for revision.

3. **"I don't really know how to revise my essay."**

   Truth behind the excuse:

   The truth is that revision is the ability to apply the best practices of academic writing. We often write intuitively and forget to apply what we know about academic writing. Revision allows us to move past writing from instinct towards writing as an academic skill.

Writing and Editing

How to Start

Boot Camp 4 has 5 lessons that make up the steps of a global editing process. Taken in order, the steps move progressively from big picture questions about the scope and structure towards detailed improvements in writing and documentation.

Menu

Go ahead and complete this boot camp in order, or dip in and try any of the sections that appeal to you!

Warm Up – Test your skills

Workout – Interactive skill-building lessons

- Revise the Introduction (Workout A)
- Revise the Organization (Workout B)
- Revise the Paragraph Structure (Workout C)
- Revise the Documentation (Workout D)
- Revise the Sentences (Workout E)

Cool down – Practice your skills

Warm Up

As a warm up, let's reflect on our own writing practice. How do you feel about revision?

Answer these survey questions on revision as part of the academic writing process.

Warm Up (Practice)

1. How much time do you spend revising your work?
   a. What do you mean by revising?
   b. I read it over on my way to handing it in.
   c. I basically re-write my essay again and sometimes revision takes longer than the first draft.

2. When you revise, what kinds of corrections will you make to improve your work?
   a. I work at improving the organization of the ideas and my grammar.
   b. I might fix a few typos or spelling mistakes before I submit it.
   c. I rarely change anything from my first draft.

3. Do you ever get help with your writing?
   a. Nope. I just do my best.
   b. I might look up some vocabulary or a point about grammar if I'm not sure. I might ask a friend how to do something like cite a source.
   c. I ask a tutor or a friend to read over my work and make comments and I review the course assignments to make sure I've done everything required.

Revise the Introduction (Workout A)

So I've read your introduction. What is your essay about?

You can't tell? I guess I need to fix up my writing.

The introduction of the essay is where we make our first impressions with our readers. If we want our readers to keep reading, we need to prove to them that it's worth their time.

The introduction tells your readers what they can expect from the essay. It's like a tourist brochure and map all rolled into one carefully crafted paragraph. When we read it, we should know what we will find out and be able to picture how the ideas will be developed.

If you confuse or bore your readers at the beginning, it might be hard to recover!

Checklist for an Effective Introduction

Let's begin by considering the essential elements of an effective introduction.

Does your introduction:

- ✓ **State the overall topic of the essay?**

  Remember, the introduction sets the agenda for the essay. It determines what the main goal of the essay will be and what information should and should not be included.

  Does your introduction tell the reader what the essay will be about?

- ✓ **Provide a cohesive thesis for the essay?**

  Remember, the thesis statement is your main message.

  Does your introduction tell the reader what your essay will say about the topic?

- ✓ **Map the basic structure of the essay?**

  Remember, the introduction provides a sense of the structure and development of the essay to help orient your readers and set their expectations.

  Does your introduction say how you will develop the thesis?

Revising an Introduction

Let's practice revising a sample introduction, making sure it clearly provides the topic, thesis and map for the essay.

In this activity, you will need to reorganize an introductory paragraph. This paragraph is an introduction for an essay on the skills students need today to do university research.

Revising an Introduction (Practice)

Read over the paragraph and consider a more logical order for the sentences, using the guiding questions. When ready, rewrite the sentences into a more effective order.

State the Topic – What will the essay be about?	This technological literacy can be gained by developing skills to use internet search engines such as google, by understanding how information is filtered online, and by acknowledging the potential of libraries to filter information.
	To be able to filter information, students require technological literacy – the ability to use technology effectively.
Provide a Thesis – What will this essay say about the topic?	However, the internet and global search engines such as Google have changed the nature of this challenge.
	In the past, students had to learn how to find useful information in their college library.
	Conducting research has always been a challenge for college students.
Provide a Map – How will this essay develop the thesis?	Now, overwhelmed with information accessible on their mobile devices, students must learn how to filter information effectively.

Revise the Organization (Workout B)

The introduction of an essay creates expectation for the reader. We know what the topic and thesis of the essay will be, and we know the basic structure and development of the essay. As the essay develops, it needs to fulfill these expectations.

If the organization of information in the essay does not match what was promised in the introduction, the reader may get confused and the essay itself will not be very cohesive.

Checklist for Effective Organization

Let's begin by considering the essential elements of effective organization.

Does your essay:

- ✓ **Include all the information promised in the introduction?**

  Remember, the essay should develop all the points necessary to fulfill the promise of the introduction. Have you made the argument you said you would make? Have you included all the examples that are needed?

- ✓ **Avoid including extra information that is not expected based on the introduction?**

  Remember, the essay should not stray from the topic and scope set out in the introduction. Does everything fit in your essay? Are there sections that need to be cut out?

- ✓ **Provide clear sections in the essay for each idea promised in the introduction?**

  Remember, the reader needs to be guided through the logical development of your ideas. Can your reader follow the development of your main ideas in clear sections of the essay? Do the topic sentences act as road signs?

Revising Organization

Let's practice revising the basic organization of an essay. Your reader should be able to read the introduction and topic sentences of your essay and have a clear idea of what the essay accomplishes.

Read over the Introduction to the essay.

Conducting research has always been a challenge for college students. However, the internet and global search engines such as Google have changed the nature of this challenge. In the past, students had to learn how to find useful information in their college library. Now, overwhelmed with accessible information on their mobile devices, students must learn how to filter information effectively. To be able to filter information, students require technological literacy – the ability to use technology effectively. This technological literacy can be gained by developing skills to use internet search engines such as Google, by understanding how information is filtered online, and by acknowledging the potential of libraries to filter information.

Revising Organization (Practice)

A. Now, read the list of sample topic sentences, indicating four main points for the essay. Some of these topics seem relevant, but others don't really seem to fit.

Decide which topic sentences belong in this essay. [2 stay, 2 go:]

- Technological literacy includes deep working knowledge of the tools we use to navigate and search the internet.
- Google is by far the most significant and powerful search engine available for research.
- Finally, technological literacy for students includes appreciating the potential of university library search portals even though they appear more difficult than commercial online search engines.
- University libraries are becoming unnecessary as students can find everything they need online.

B. Look again at the remaining topic sentences. Clearly, they match the information promised in the introduction. However, are they enough? A key piece of expected information is missing!

Write a topic sentence for the missing information. When finished, review the sample answer.

Revise the Paragraph Structure (Workout C)

Paragraphs are, of course, the central building blocks of an essay. We use them to organize and structure our writing, making it easy for our readers to follow our discussion. We need effective paragraphs to provide well-developed ideas and logical connections between those ideas.

Checklist for Effective Paragraphs

Let's begin by considering the essential elements of an effective paragraph.

Does your essay:

- ✓ **Have a strong topic sentence?**

  We can think of a paragraph as a mini essay and the topic sentence is like a thesis, telling the reader what the paragraph will be about. Without this, the reader has no context for reading.

- ✓ **Provide enough information to be effective?**

  The rest of the paragraph must fulfill the expectation created by its topic sentence with adequate supporting information. Without this, the reader will not be convinced or have a clear understanding.

- ✓ **Use effective transitions?**

  Each paragraph needs transition language to show connections both within the paragraph and with other paragraphs in the essay. Without this, the reader will not appreciate the development of, and relationship between, ideas in the essay.

- ✓ **Present information in a logical order?**

  Each paragraph should be organized in a logical way to show the clear development of an idea. Without this, the reader may get lost or confused and not fully understand the meaning.

Let's practice revising a paragraph. Our goal is a well-crafted paragraph with logical organization and a clear purpose.

Revising Paragraphs (Practice)

1. Read through this sample paragraph before we revise it.

   As Melanie Pinola notes, "everyone knows how to 'Google,' but not everyone Googles efficiently" (2014). For example, to find useful information through Google, students need to employ its many useful filtering features. Technological literacy includes deep working knowledge of the tools we use to navigate and search the internet.

   This paragraph is difficult to read. It begins with a quotation instead of the writer's own voice. This indicates the lack of a topic sentence! As a result, we don't know what the purpose of the paragraph will be as we start reading.

   Locate the topic sentence and rewrite the paragraph below with the topic sentence at the start.

2. Look at the paragraph again, but this time consider how much information it contains. Does the paragraph provide enough information to develop the Google example as a difficult skill to learn?

   Technological literacy includes deep working knowledge of the tools we use to navigate and search the internet. As Melanie Pinola notes, "everyone knows how to 'Google,' but not everyone Googles efficiently" (2014). For example, to find useful information through Google, students need to employ its many filtering features.

   In the box below, consider what kind of information you might add to this paragraph to finish the idea. For example, you might consider what filtering features Google uses, and perhaps ideas for how students could learn to use these filtering features.

3. Finally, look again at this paragraph and identify the use of transition language. Transition language is the small linking words that help the reader understand the connections and relationships between ideas. Without it, the paragraph would be difficult to follow. It also includes attribution language that helps us know whose ideas we are reading.

   Identify the transition words, attribution words, and repetitions that help guide the reader through the paragraph:

   Technological literacy includes deep working knowledge of the tools we use to navigate the internet. As Melanie Pinola notes, "Everyone knows how to 'Google,' but not everyone Googles efficiently" (2014). For example, to find useful information through Google, students need to employ its many useful filtering features. Google can seem almost magical, linking us to millions of sources; however, we do not need millions of random sources, we need one or two quality sources. Therefore, learning to use filtering features like Google scholar, and important search codes, such as ***site****: and* ***filetype****: are necessary to make Google useful for university students (Pinola). Students can make use of tutorials on Google research techniques – for example, the one offered by Lifehacker. com -- to improve their technological literacy.*

Revise the Documentation (Workout D)

We use documentation to cite the research material in our essays. When we want to quote or paraphrase ideas from someone else, we must document where the ideas come from.

Good documentation includes accurate in-text citation, which links ideas directly to their source in the body of the essay, and a properly formatted Reference page. In addition, quotes and paraphrase must be formatted and presented accurately.

The stakes for accurate documentation are much higher than just better grades. Errors in documentation must be fixed before you submit your essay. Such errors could cause you to have plagiarism in your writing, which has serious consequences even if it's unintentional.

Checklist for Effective Documentation

Let's begin by considering the essential elements of effective documentation.

Does your essay:

- ✓ **Use direct quotation and paraphrase accurately?**

  Direct quotation must *exactly* match the source and be placed in quotation marks. Paraphrase, used more commonly, is the *unique* re-expression of someone else's idea in your own words and the attribution of that idea to the source.

- ✓ **Use accurate in-text citation?**

  Direct quotation and paraphrase both require an in-text citation linking the information to the source. In APA format, this includes the author's last name and the year of publication.

- ✓ **Have a properly formatted Reference Page?**

  The format of a Reference Page will depend on the style guide used. In APA, the Reference Page must include *all* the research material *referred to* in the essay. It does not include other source material that was consulted but not mentioned in the essay.

Revising Documentation

Let's practice revising some documentation. Remember, the goal is that the reader always knows whose ideas they are reading; we never want our reader to be confused over whether an idea comes from us or from one of our sources.

Revising Documentation (Practice)

1. Consider the use of documentation in the following paragraph. Make a list of any problems you can identify with the documentation. When finished, view the sample answer.

   In addition to learning how to use the search engines, students need to understand how a search engine works. Technological literacy includes understanding how information online is filtered using algorithms. The idea of the filter bubble explains how algorithms shape what information is presented to us through tools like Google. The more we search for certain kinds of information, the more likely we are to find the same kinds of information. This means it can be difficult to research a diverse range of opinions and arguments about a topic (Eli Pariser).

   Pariser, E. (2011). Beware online "filter bubbles". Ted.com. Retrieved 15 November 2015, from https://www.ted.com/talks/eli_pariser_beware_online_filter_bubbles?language=en

   What problems can you identify with the documentation?

2. Now that we have an idea of the problems, let's fix them.

   Here's a revised paragraph. Locate the following features that fix the documentation errors:

   a. The correct in-text citation with author name and date.

   b. Direct quotation for phrase taken exactly from the source

   c. Language of attribution that shows how the paraphrase of Pariser continues in the paragraph.

   d. Language of attribution that introduces the author in the paragraph

Revise the Sentences (Workout E)

The key to revising sentences is patience. After working on an essay, we get tired and very familiar with the ideas. This makes it difficult to pay attention to errors in specific sentences.

To overcome this, try reading your writing out loud. Your eyes will gloss over errors when you read something very familiar, but your ears will hear everything that sounds not quite right.

When revising at the sentence level, you are looking at the detail of the writing. The goal is to ensure your reader can think about your ideas without being distracted by errors or lack of clarity in the sentences.

Revise ALL the sentences? That's so hard!

Read your essay out loud so you can hear your mistakes. This makes it easier.

Out loud? How embarrassing!

Checklist for Effective Sentences

Let's begin by considering the essential elements of effective sentences.

Does your essay:

- ✓ **Have grammatically accurate sentences?**

  Learn to identify and correct grammatical errors, which include the incorrect use of commas, verb forms, and sentence structure.

- ✓ **Use a vocabulary, style, and tone appropriate to academic writing?**

  Learn how to identify and improve your use of vocabulary and style to ensure it meets the expectations of academic communication.

- ✓ **Express ideas clearly and concisely?**

  Learn to craft sentences that provide meaning without any extra work for the reader.

Revising Sentences

Let's practice revising some sentences.

Let's tackle these paragraphs sentence by sentence. After you read the highlighted sentence, type a revision in the space provided. Review the sample answers to compare.

Revising Sentences (Practice)

1. Have a look at the first sentence:

Finally, technological literacy includes knowing how to use the university library search tools. There are the university search tools can appear more difficult then commercial online search engines. Tools like Google are easy and accessible. But present students with unfiltered information that they must evaluate for quality and relevance. University library automatically filter research information to suit the needs of academic study, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

2. Consider the next sentence in bold:

Finally, technological literacy includes knowing how to use the university library search tools**. There are the university search tools can appear more difficult then commercial online search engines.** Tools like Google are easy and accessible. But present students wit unfiltered information that they must evaluate for quality and relevance. University librar automatically filter research information to suit the needs of academic study, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learni to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

Write a revision to the sentence here:

3. Let's keep going. Consider the next two sentences in the paragraph, in bold here:

Finally, technological literacy includes knowing how to use the university library search tools. ~~There are the~~ **University search tools can appear more difficult** ~~then~~ **than commercial online search engines. Tools like Google are easy and accessible. But present students with unfiltered information that they must evaluate for quality and relevance.** University library automatically filter research information to suit the needs of academic study, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

Write a revision for these two sentences:

4. Let's move on to the next sentence:

Finally, technological literacy includes knowing how to use the university library search tools. ~~There are the~~ **University search tools can appear more difficult** ~~then~~ **than commercial online search engines. Tools like Google are easy and accessible**~~.~~**, but they present students with unfiltered information that they must evaluate for quality and relevance. University library automatically filter research information to suit the needs of academic study, they are a necessary resource that students need to be successful.** Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

Write a revision for the sentence in bold:

5. Ok, we're almost done. Have a look at this sentence:

Finally, technological literacy includes knowing how to use the university library search tools. ~~There are the~~ **University search tools can appear more difficult ~~then~~ than commercial online search engines. Tools like Google are easy and accessible~~.~~, but they present students with unfiltered information that they must evaluate for quality and relevance. University libraries automatically filter research information to suit the needs of academic study, and, because of this, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.**

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

6. Have a look at this sentence:

Finally, technological literacy includes knowing how to use the university library search tools. ~~There are the~~ **University search tools can appear more difficult ~~then~~ than commercial online search engines. Tools like Google are easy and accessible~~.~~, but they present students with unfiltered information that they must evaluate for quality and relevance. University libraries automatically filter research information to suit the needs of academic study, and, because of this, they are a necessary resource that students nee to be successful. Students can take in-class and online tutorials to learn how to use thei library search portals.**

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available

Good or Revise?

Write your revision here:

7. And, finally, the last sentence:

Finally, technological literacy includes knowing how to use the university library search tools**. ~~There are the~~ University search tools can appear more difficult ~~then~~ than commercial online search engines. Tools like Google are easy and accessible~~.~~, but they present students with unfiltered information that they must evaluate for quality and relevance. University libraries automatically filter research information to suit the needs of academic study, and, because of this, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.**

In conclusion, ~~it is~~ the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

Write your revision to the sentence:

Cool down

You've worked hard! Take a few minutes to cool down and practice the skills covered in this boot camp.

Build a master checklist for a Global Editing Process. Write out the tasks so they sit under the right stage of the global editing process.

Master Checklist for Global Editing (Practice)

1. Revise the introduction.	
	Does your essay: **State the overall topic of the essay?** **Provide a cohesive thesis for the essay?** **Map the basic structure of the essay?**
2. Revise the overall organization.	**Include all the information promised in the introduction?**
	Avoid including extra information that is not expected based on the introduction?
3. Revise the paragraph structure	**Provide clear sections in the essay for each idea promised in the introduction?** **Have a strong topic sentence?**
	Provide enough information to be effective? **Use effective transitions?** **Present information in a logical order?**
4. Revise the use of research material	**Use direct quotation and paraphrase accurately?**
	Use accurate in-text citation? **Have a properly formatted Reference Page?**
5. Revise the sentences	**Have grammatically accurate sentences?**
	Use a vocabulary, style, and tone appropriate to academic writing? **Express ideas clearly and concisely?**

Sample Answers

Warm Up (Sample Answers)

1. How much time do you spend revising your work?
   a. What do you mean by revising? (1 mark)
   b. I read it over on my way to handing it in. (2 marks)
   c. I basically re-write my essay again and sometimes revision takes longer than the first draft. (3 marks)

2. When you revise, what kinds of corrections will you make to improve your work?
   a. I work at improving the organization of the ideas and my grammar. (3 marks)
   b. I might fix a few typos or spelling mistakes before I submit it. (2 marks)
   c. I rarely change anything from my first draft. (1 marks).

3. Do you ever get help with your writing?
   a. Nope. I just do my best. (1 mark)
   b. I might look up some vocabulary or a point about grammar if I'm not sure. I might ask a friend how to do something like cite a source. (2 marks)
   c. I ask a tutor or a friend to read over my work and make comments and I review the course assignments to make sure I've done everything required. (3 marks)

- 9 marks - "Revision Expert" – You clearly appreciate the importance and function of revision as part of the writing process.
- 6-8 marks "Considering Revision" – You probably know revision is a good idea, but you aren't committed to making it part of your writing process all the time.
- 3-5 marks. "What is Revision?" – You consider an essay finished when you've typed the last word and you never want to look at it again! You need to be persuaded that revision is a significant part of the writing process.

Sample Answers

Revising an Introduction (Sample Answers)

Read over the paragraph and then rewrite the sentences into a more logical order. Use the guiding questions to help you.

State the Topic – What will the essay be about?	This technological literacy can be gained by developing skills to use internet search engines such as google, by understanding how information is filtered online, and by acknowledging the potential of libraries to filter information.
	To be able to filter information, students require technological literacy – the ability to use technology effectively.
Provide a Thesis – What will this essay say about the topic?	However, the internet and global search engines such as Google have changed the nature of this challenge.
	In the past, students had to learn how to find useful information in their college library.
	Conducting research has always been a challenge for college students.
Provide a Map – How will this essay develop the thesis?	Now, overwhelmed with information accessible on their mobile devices, students must learn how to filter information effectively.

The essay is about the new challenges students face when learning how to do academic research. Students now need to know how to filter information, rather than simply find it.

Conducting research has always been a challenge for college students. However, the internet and global search engines such as Google have changed the nature of this challenge. In the past, students had to learn how to find useful information in their college library. Now, overwhelmed with accessible information on their mobile devices, students must learn how to filter information effectively. To be able to filter information, students require technological literacy – the ability to use technology effectively. This technological literacy can be gained by developing skills to use internet search engines such as Google, by understanding how information is filtered online, and by acknowledging the potential of libraries to filter information.

The thesis is that students need technological literacy to know how to filter information.

The map indicates that the essay will discuss three ways students can gain this much-needed technological literacy.

Revising Organization (Sample Answers)

A. Now, read the list of sample topic sentences, indicating four main points for the essay. Some of these topics seem relevant, but others don't really seem to fit.

Decide which topic sentences belong in this essay. [2 stay, 2 go:]

- Technological literacy includes deep working knowledge of the tools we use to navigate and search the internet.
- Google is by far the most significant and powerful search engine available for research.
- Finally, techno'ogical literacy for students includes appreciating the potential of university library search portals even though they appear more difficult than commercial online search engines.
- University libraries are becoming unnecessary as students can find everything they need online.

Topic Sentence that belong in the essay:

- Technological literacy includes deep working knowledge of the tools we use to navigate and search the internet.
- Finally, technological literacy for students includes appreciating the potential of university library search portals even though they appear more difficult than commercial online search engines.

B. Look again at the remaining topic sentences. Clearly, they match the information promised in the introduction. However, are they enough? A key piece of expected information is missing!

Write a topic sentence for the missing information. When finished, review the answer.

Sample Topic Sentence to meet essay expectations:

In addition to learning how to use the search engines, students need to understand how a search engine works.

Sample Answers

Explanation:

Now you have the three key sections of the essay clearly outlined and matched to the map provided in the introduction. The outline for the essay, without the supporting details, would look like this:

To be able to filter information, students require technological literacy – the ability to use technology effectively. This technological literacy can be gained by developing skills to use internet search engines such as google, by understanding how information is filtered online, and by acknowledging the potential of libraries to filter information.

Technological literacy includes deep working knowledge of the tools we use to navigate and search the internet.

In addition to learning how to use the search engines, students need to understand how a search engine works.

Finally, technological literacy for students includes appreciating the potential of university library search portals even though they appear more difficult than commercial online search engines.

Revising Paragraphs (Sample Answers)

1. Read through this sample paragraph before we revise it.

   As Melanie Pinola notes, "everyone knows how to 'Google,' but not everyone Googles efficiently" (2014). For example, to find useful information through Google, students need to employ its many useful filtering features. Technological literacy includes deep working knowledge of the tools we use to navigate and search the internet.

   This paragraph is difficult to read. It begins with a quotation instead of the writer's own voice. This indicates the lack of a topic sentence! As a result, we don't know what the purpose of the paragraph will be as we start reading.

   Locate the topic sentence and rewrite the paragraph below with it at the start.

Sample Answer:

Technological literacy includes deep working knowledge of the tools we use to navigate and search the internet. As Melanie Pinola notes, "everyone knows how to 'Google,' but not everyone Googles efficiently" (2014). For example, to find useful information through Google, students need to employ its many filtering features.

Explanation:

Now, as readers, we know that this paragraph will discuss one example of technological literacy – the ability to use tools for searching the internet effectively. We can expect that the rest of the paragraph will explain this idea. The quote from Pinola supports this ideas with the example of Google.

2. Look again at the paragraph, but this time consider how much information it contains. Does the paragraph provide enough information to develop the Google example as a difficult skill to learn?

   Technological literacy includes deep working knowledge of the tools we use to navigate and search the internet. As Melanie Pinola notes, "everyone knows how to 'Google,' but not everyone Googles efficiently" (2014). For example, to find useful information through Google, students need to employ its many filtering features.

   In the box below, consider what kind of information you might add to this paragraph to finish the idea. For example, you might consider what filtering features Google uses? And, perhaps ideas for how students could learn to use these filtering features?

Sample Answers

Sample Answer:

Technological literacy includes deep working knowledge of the tools we use to navigate the internet. As Melanie Pinola notes, "Everyone knows how to 'Google,' but not everyone Googles efficiently" (2014). For example, to find useful information through Google, students need to employ its many useful filtering features. Google can seem almost magical, linking us to millions of sources; however, we do not need millions of random sources, we need one or two quality sources. Learning to use filtering features like Google scholar, and important search codes, such as site: and filetype: are necessary to make Google useful for university students (Pinola). Students can make use of tutorial on Google research techniques, such as the one offered by Lifehacker.com to improve their technological literacy.

Explanation:

The additional information uses the Google example to illustrate how difficult and yet essential it is to learn good search techniques such as filtering as an example of gaining technological literacy.

3. Finally, look again at this paragraph and identify the use of transition language. Transition language is the small linking words that help the reader understand the connections and relationships between ideas. Without it, the paragraph would be difficult to follow. It also includes attribution language that helps us know whose ideas we are reading.

   Identify all the transition words, attribution words, and repetitions that help guide the reader through the paragraph:

   > *Technological literacy includes deep working knowledge of the tools we use to navigate the internet. As Melanie Pinola notes, "Everyone knows how to 'Google,' but not everyone Googles efficiently" (2014). For example, to find useful information through Google, students need to employ its many useful filtering features. Google can seem almost magical, linking us to millions of sources; however, we do not need millions of random sources, we need one or two quality sources. Therefore, learning to use filtering features like Google scholar, and important search codes, such as site: and filetype: are necessary to make Google useful for university students (Pinola). Students can make use of tutorials on Google research techniques – for example, the one offered by Lifehacker.com -- to improve their technological literacy.*

Technological literacy includes deep working knowledge of the tools we use to navigate the internet. *As Melanie Pinola notes*, "Everyone knows how to 'Google,' but not everyone Googles efficiently" (2014). *For example*, to find useful information through Google, students need to employ its many useful filtering features. Google can seem almost magical, linking us to millions of sources; *however*, we do not need millions of random sources, we need one or two quality sources. *Therefore*, learning to use filtering features like Google scholar, and important search codes, *such as* site: and filetype: are necessary to make Google useful for university students (Pinola). Students can make use of tutorials on Google research techniques – for example, the one offered by Lifehacker.com -- to improve *their technological literacy*.

Revising Documentation (Sample Answers)

1. Consider the use of documentation in the following paragraph. Make a list of any problems you can identify with the documentation. When finished, view the sample answer below.

> In addition to learning how to use the search engines, students need to understand how a search engine works. Technological literacy includes understanding how information online is filtered using algorithms. The idea of the filter bubble explains how algorithms shape what information is presented to us through tools like Google. The more we search for certain kinds of information, the more likely we are to find the same kinds of information. This means it can be difficult to research a diverse range of opinions and arguments about a topic (Eli Pariser).
>
> Pariser, E. (2011). Beware online "filter bubbles". Ted.com. Retrieved 15 November 2015, from https://www.ted.com/talks/eli_pariser_beware_online_filter_bubbles?language=en

What problems can you identify with the documentation?

- In-text citation is not correct as the date is missing.
- Pariser invented the phrase "filter bubble" and it should be clear that these are his words by using quotation instead of paraphrase.
- Location of the in-text citation is not specific enough as it is unclear how much of the paragraph belongs to Pariser. Is it all the paragraph? Or the last three sentences?
- Pariser is not introduced in the paragraph.

2. Now that we have an idea of the problems, let's fix them.

Here's a revised paragraph. Locate the following features that fix the documentation errors:

a. The correct in-text citation with author name and date.
b. Direct quotation for phrase taken exactly from the source
c. Language of attribution that shows how the paraphrase of Pariser continues in the paragraph.
d. Language of attribution that introduces the author in the paragraph

> In addition to learning how to use the search engines, students need to understand how a search engine works. Technological literacy includes understanding how information online is filtered using algorithms. Eli Pariser (2011) argues that we need to be aware of the "filter bubble," his term to explain how algorithms shape what information is presented to us through tools like Google. The more we search for certain kinds of information, the more likely we are to find the same kinds of information. According to Pariser, this means it can be difficult to research a diverse range of opinions and arguments about a topic.
>
> Pariser, E. (2011). Beware online "filter bubbles". Ted.com. Retrieved 15 November 2015, from https://www.ted.com/talks/eli_pariser_beware_online_filter_bubbles?language=en

Sample Answers

Revised paragraph:

In addition to learning how to use the search engines, students need to understand how a search engine works. Technological literacy includes understanding how information online is filtered using algorithms. Eli Pariser (2011) ***(a)*** *argues that* ***(d)*** *we need to be aware of the "filter bubble,"* ***(b)*** *his term to explain how algorithms shape what information is presented to us through tools like Google. The more we search for certain kinds of information, the more likely we are to find the same kinds of information. According to Pariser,* ***(c)*** *this means it can be difficult to research a diverse range of opinions and arguments about a topic.*

Revising Sentences (Sample Answers)

1. Have a look at the first sentence:

Finally, technological literacy includes knowing how to use the university library search tools. There are the university search tools can appear more difficult then commercial online search engines. Tools like Google are easy and accessible. But present students with unfiltered information that they must evaluate for quality and relevance. University library automatically filter research information to suit the needs of academic study, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learnin to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

Yes, off to a good start. The topic sentence is grammatically correct.

2. Consider the next sentence in bold:

Finally, technological literacy includes knowing how to use the university library search tools**. There are the university search tools can appear more difficult then commercial online search engines.** Tools like Google are easy and accessible. But present students with unfiltered information that they must evaluate for quality and relevance. University library automatically filter research information to suit the needs of academic study, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

Yes, Revise. Hint: consider the clarity between the subject and the verb.

Revision: Compare your revision to this sample with annotated explanations:

Finally, technological literacy includes knowing how to use the university library search tools**. ~~There are the~~ University search tools can appear more difficult ~~then~~ than commercial online search engines.** Tools like Google are easy and accessible. But present students with unfiltered information that they must evaluate for quality and relevance. University library automatically filter research information to suit the needs of academic study, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Avoid starting sentences with "There are" or "There is" as it can leads to weakness and confusion with verbs. "There are the university search tools can appear" makes no sense. Also – watch out for the difference between then and than.

3. Let's keep going. Consider the next two sentences in the paragraph, in bold here:

Finally, technological literacy includes knowing how to use the university library search tools**. ~~There are the~~ University search tools can appear more difficult ~~then~~ than commercial online search engines. Tools like Google are easy and accessible. But present students with unfiltered information that they must evaluate for quality and relevance.** University library automatically filter research information to suit the needs of academic study, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

Sample Answers

Yes, Revise. Hint: Consider how the sentences could be connected.

Revision: Compare your revision to this sample with annotated explanations:

Finally, technological literacy includes knowing how to use the university library search tools. ~~There are the~~ University search tools can appear more difficult ~~then~~ than commercial online search engines. **Tools like Google are easy and accessible~~,~~, but <u>they</u> present students with unfiltered information that they must evaluate for quality and relevance.** University library automatically filter research information to suit the needs of academic study, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

The first sentence is fine. However, the second sentence is actually a sentence fragment – an incomplete thought. The fragment needs to be linked to the main sentence with a comma. The extra pronoun "they" is added for clarity.

4. Let's move on to the next sentence:

Finally, technological literacy includes knowing how to use the university library search tools. ~~There are the~~ University search tools can appear more difficult ~~then~~ than commercial online search engines. Tools like Google are easy and accessible~~,~~, but <u>they</u> present students with unfiltered information that they must evaluate for quality and relevance. **University library automatically filter research information to suit the needs of academic study, they are a necessary resource that students need to be successful.** Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

Yes, Revise. Hint: Watch for subject-verb agreement and comma use.

Revision: Compare your revision to this sample with annotated explanations:

Finally, technological literacy includes knowing how to use the university library search tools**. ~~There are the~~ University search tools can appear more difficult ~~then~~ than commercial online search engines. Tools like Google are easy and accessible~~.~~, but they present students with unfiltered information that they must evaluate for quality and relevance. University libraries automatically filter research information to suit the needs of academic study, and, because of this, they are a necessary resource that students need to be successful.** Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

First we need to correct the subject-verb agreement and make the subject plural to match the verb. Next, we need to correct the comma splice, where a comma is being used incorrectly to connect two sentences together. We could simply change it to a period to make two sentences. Or, as we've done here, we could add in some linking words to clarify the relationship between the two sentences. We add the conjunction "and" and a causal statement.

5. Ok, we're almost done. Have a look at this sentence:

Finally, technological literacy includes knowing how to use the university library search tools**. ~~There are the~~ University search tools can appear more difficult ~~then~~ than commercial online search engines. Tools like Google are easy and accessible~~.~~, but they present students with unfiltered information that they must evaluate for quality and relevance. University libraries automatically filter research information to suit the needs of academic study, and, because of this, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.**

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

Yes good, this sentence makes sense and is written clearly.

Sample Answers

6. Have a look at this sentence:

Finally, technological literacy includes knowing how to use the university library search tools**. ~~There are the~~ University search tools can appear more difficult ~~then~~ than commercial online search engines. Tools like Google are easy and accessible~~.~~, but they present students with unfiltered information that they must evaluate for quality and relevance. University libraries automatically filter research information to suit the needs of academic study, and, because of this, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.**

In conclusion, it is the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Good or Revise?

Yes, Revise. Hint: look at the subject and the verb for clarity

Revision: Compare your revision to this sample with annotated explanations:

Finally, technological literacy includes knowing how to use the university library search tools**. ~~There are the~~ University search tools can appear more difficult ~~then~~ than commercial online search engines. Tools like Google are easy and accessible~~.~~, but they present students with unfiltered information that they must evaluate for quality and relevance. University libraries automatically filter research information to suit the needs of academic study, and, because of this, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.**

In conclusion, ~~it is~~ the development of technological literacy will help students to achieve stronger research skills to support their academic study. These skills involve learning to use tools and learning to evaluate the potential of the research tools available.

Sometimes sentences have mixed construction. We start them one way, but finish them differently. Here, the phrase "it is" is a false start and does not match the verb. Once we cut out "it is," the sentence is fine.

7. And, finally, the last sentence:

Finally, technological literacy includes knowing how to use the university library search tools. ~~There are the~~ University search tools can appear more difficult ~~then~~ than commercial online search engines. Tools like Google are easy and accessible~~.~~, but they present students with unfiltered information that they must evaluate for quality and relevance. University libraries automatically filter research information to suit the needs of academic study, and, because of this, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, ~~it is~~ the development of technological literacy will help students to achieve stronger research skills to support their academic study. **These skills involve learning to use tools and learning to evaluate the potential of the research tools available.**

Good or Revise?

Yes, Revise. Hint: this sentence is grammatically accurate but poorly written with repetition.

Revision: Compare your revision to this sample with annotated explanations:

Finally, technological literacy includes knowing how to use the university library search tools. ~~There are the~~ University search tools can appear more difficult ~~then~~ than commercial online search engines. Tools like Google are easy and accessible~~.~~, but they present students with unfiltered information that they must evaluate for quality and relevance. University libraries automatically filter research information to suit the needs of academic study, and, because of this, they are a necessary resource that students need to be successful. Students can take in-class and online tutorials to learn how to use their library search portals.

In conclusion, ~~it is~~ the development of technological literacy will help students to achieve stronger research skills to support their academic study. **These skills involve learning both to use tools and to evaluate the potential of the research tools available.**

The word learning is repeated in the sentence, making it wordy and unnecessarily complicated. We can restructure the sentence to make it more direct and clear.

Sample Answers

Master Checklist for Global Editing (Sample Answers)

1. Revise the introduction.
Does your essay: **State the overall topic of the essay?** **Provide a cohesive thesis for the essay?** **Map the basic structure of the essay?**
2. Revise the overall organization.
Does your essay: **Include all the information promised in the introduction?** **Avoid including extra information that is not expected based on the introduction?** **Provide clear sections in the essay for each idea promised in the introduction?**
3. Revise the paragraph structure
Does your essay: **Have a strong topic sentence?** **Provide enough information to be effective?** **Use effective transitions?** **Present information in a logical order?**
4. Revise the use of research material
Does your essay: **Use direct quotation and paraphrase accurately?** **Use accurate in-text citation?** **Have a properly formatted Reference Page?**
5. Revise the sentences
Does your essay: **Have grammatically accurate sentences?** **Use a vocabulary, style, and tone appropriate to academic writing?** **Express ideas clearly and concisely?**