
BSBCRT611

Apply critical thinking for complex
problem solving

Topic 1: A critical thinking approach to identifying complex issues



A CRITICAL THINKING APPROACH

- Some decisions are quick and easy to make.
- Often times the solution to your issue is not straight forward and its resolution requires more than your intuition.
- Some decisions you make are critical, whereas others are non-critical.

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ACTIVITY: RESEARCH AND DISCUSS

Do research to answer the following:

- What is meant by the term 'critical decision' and what does it encompass?
- Provide at least two examples of critical decisions relevant to your workplace or industry of interest.
- What is meant by the term 'non-critical decision'?
- List at least two examples of non-critical decisions relevant to your workplace or industry of interest.

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ACTIVITY: REFLECT

Think about some of the issues you have been required to resolve over the past few weeks.

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A CRITICAL THINKING APPROACH

Critical thinking includes six vital skills:

- analysis
- problem solving
- creative thinking
- interpretation
- evaluation
- reasoning.

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THE DECISION-MAKING PROCESS

The decision-making process includes elements such as:

- Identifying and defining the problem
- sourcing information
- generating alternatives
- making a decision
- communicating a decision
- reviewing a decision.

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ACTIVITY: READ

If you're interested, read through the 'Good decision-making Guide' written by the Queensland Ombudsman.

Article: <http://www.tdsa.org.au/wp-content/uploads/2016/03/Qld-Govt-Ombudsman-Good-Decision-making-Guide.pdf>

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IDENTIFYING COMPLEX ISSUES IN THE WORKPLACE

ACTIVITY: REFLECT

Are there any complex issues or problems in your workplace or place of study?

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IDENTIFYING COMPLEX ISSUES IN THE WORKPLACE

- Identifying a problem is in fact sometimes just as important as the solution itself.
- The speed of light would not have been calculated if Galileo had not identified the problem in the first place.

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ACTIVITY: DISCUSS

In small groups, think of a few complex issues that may present in the workplace. Provide at least one example for each of the bullet points listed above.

Your trainer will facilitate a group discussion to form a complete list of examples. Take notes and keep them for future reference.

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FORMAL PROBLEM IDENTIFICATION

- Often times, only the symptoms of a complex issue are evident and further investigation is required to correctly identify the issue.
- As you seek to identify issues in the workplace, you may be required to interpret and analyse numeric or financial information to identify patterns and trends.

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ACTIVITY: EXPLORE

There are many existing (and sometimes free) market research reports that can provide a comprehensive understanding of the customer, competitor and market as a whole. If you're interested, explore the website below to familiarise yourself with the type of information available.

Website: <https://ciradar.com/competitive-intelligence-blog/insights/2017/10/18/free-market-research-tools>

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ACTIVITY: GROUP WORK

Work in small groups to practise interpreting, analysing and representing numeric or financial information to identify patterns and trends (as oftentimes required when identifying workplace issues).

You may access financial information of your choice or use information from one of the free resources listed above.

Present your work to a larger group and seek feedback.

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INFORMAL PROBLEM IDENTIFICATION

Sometimes, a formal method is not needed to identify complex issues and issues are raised by an outside source.



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ACTIVITY: BRAINSTORM

Work together in small groups and brainstorm as many informal ways a complex issue can be identified in the workplace.

Your trainer/assessor will facilitate a larger group discussion to create a complete list.

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ACTIVITY: READ

Read the articles below outlining an example of a complex issue faced by Rio Tinto.

Article 1: <https://www.abc.net.au/news/2020-05-26/rio-tinto-blast-destroys-area-with-an-ancient-aboriginal-heritage/12286652>

Article 2: <https://www.smh.com.au/business/companies/rio-tinto-blasted-ancient-aboriginal-caves-for-135m-of-iron-ore-20200807-p55jia.html>

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ACTIVITY: PRACTICAL

After reading the article, work in small groups to identify at least two ways the issue was brought to Rio Tinto's attention.

Your trainer will facilitate a larger group discussion to consolidate your findings.

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WICKED PROBLEMS

- Sometimes issues can be so complex they are highly resistant to resolution.
- These issues have been collectively named 'wicked' problems.
- The term 'wicked' in this context does not imply evil, but rather highlights the complexity of the matter.

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TASK OBJECTIVES

Once you've identified an issue, it's important to establish why you want to address it and what you want to achieve by resolving it.

Well-defined objectives are key to finding a successful solution.

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ACTIVITY: READ

Read the definition of an objective in a business context.

Article: <http://www.businessdictionary.com/definition/objective.html>

Take notes for future reference.

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ACTIVITY: WATCH

Watch the videos about objectives.

Video 1: <https://www.youtube.com/watch?v=gABgNjXpzQk> (01:49)

Video 2: <https://www.youtube.com/watch?v=voZI75TyeHI> (02:32)

Take notes and keep them for future. Your trainer will facilitate a group discussion to consolidate what you've learnt.

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ADVANTAGES OF ADDRESSING IDENTIFIED WORKPLACE ISSUES

- realising business vision
- reduced risk of legal ramifications
- improved financial performance
- social licence to operate.

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ACTIVITY: BRAINSTORM

As a group, brainstorm a few more advantages to addressing issues in the workplace.

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RISKS

- Risk is the chance of something going wrong or not as planned. No outcome is ever one hundred percent certain.
- As such, planning for risk helps mitigate any undesirable effects.

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ACTIVITY: REFLECT

What risks have you taken? Have you experienced the negative outcomes from any risks? Did you ever take a risk and benefit from your decision?

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ACTIVITY: PRACTICAL

Think back to the article you read about Rio Tinto earlier in this topic (<https://www.smh.com.au/business/companies/rio-tinto-blasted-ancient-aboriginal-caves-for-135m-of-iron-ore-20200807-p55jia.html>). Work in small group to answer:

1. What would the advantages for Rio Tinto have been of addressing the issue earlier in the decision-making process?
2. Identify any risks involved for Rio Tinto in addressing the issue.

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ACTIVITY: DEVELOP

Choose a workplace/industry you already work in or are interested in. Identify a relevant complex issue and answer the following questions:

1. How might you have identified the issue/problem in a real workplace?
2. Formulate at least two objectives of pursuing solutions for the issue.
3. What are the advantages of addressing the issue?
4. Identify at least two risks involved with pursuing the issue.

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Topic 2: A critical thinking approach to resolving complex issues



SOURCING INFORMATION

- In today's world, we are constantly confronted with information (both true and false). It is all around us, readily available and in large quantities.
- The quality of information available at the time you address complex issues has a direct impact on the quality of your solution.

Topic 2: A critical thinking approach to resolving complex issues

BIAS

As you address issues at work, always examine yourself for any actual or perceived bias.



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ACTIVITY: READ

Read the article that define and provide examples of bias.

Article 1: <https://dictionary.cambridge.org/dictionary/english/bias>

Take notes and keep them for future reference.

Topic 2: A critical thinking approach to resolving complex issues

BIAS

In many instances, Natural Justice legally disqualifies you from making decisions if you have a conflict of interest or are biased. Did you know that even perceived bias may legally disqualify you from making a decision?

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ACTIVITY: READ

If you're interested, read the article below for more information on natural justice in administrative decision-making:

Article: <https://www.ag.gov.au/sites/default/files/2020-03/best-practice-guide-2-natural-justice.pdf>

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FACT AND FICTION

Make sure you fully understand the issues you're facing by accessing a variety of reliable information sources. When you do this, you will be in a good position to establish what information is true and what is false.

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ACTIVITY: REFLECT

Reflect on the saying “Garbage in, garbage out”. How is this saying applicable to solving complex issues?

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LEGISLATION AND ORGANISATIONAL FRAMEWORKS

Legislation and organisational policies/procedures are put in place to make sure everyone is as safe as possible and to ensure a successful outcome for the business or organisation.

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ACTIVITY: RESEARCH

Research legislation and codes of best practise associated with your workplace or industry of interest (such as mining, manufacturing, transport, education or health).

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ACTIVITY: RESEARCH

Read a few of the policies on the website below.

Website: <https://www.csusb.edu/policies>

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ACTIVITY: REFLECT

Do any of the policies you read (from the website above) address any complex issues?

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STAKEHOLDERS

Valuable information can be obtained from stakeholders through targeted questioning. To identify the stakeholders associated with an issue, think about:

- Who could be affected before, during or after the issue?
- Who has an interest in the outcome or solution to the problem?
- Who is responsible for the problem?

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ACTIVITY: WATCH

Watch the video on a questioning technique “5 Whys”.

Video: https://www.mindtools.com/pages/article/newTMC_5W.htm

Take notes and keep them for future reference.

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RESOURCES REQUIRED FOR SOLUTION DEVELOPMENT

The information you obtain from legislation, policies and procedures and discussion with stakeholders will help you calculate the resources you require to develop solutions to workplace issues.

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PRESENTING SCOPE TO RELEVANT STAKEHOLDERS

If required (for example by an organisational policy or procedure) present the scope of your issue to any relevant stakeholders to obtain approval to continue addressing it.

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ACTIVITY: PRACTICAL

Think back to the article you read in topic 1, outlining Rio Tinto's bombing of an ancient traditional site (<https://www.smh.com.au/business/companies/rio-tinto-blasted-ancient-aboriginal-caves-for-135m-of-iron-ore-20200807-p55jia.html>).

Undertake the tasks provided.

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GENERATING SOLUTIONS TO WORKPLACE PROBLEMS

Creativity is required to generate ideas and solutions to solve real world problems and meet new or existing needs. It has the potential to transform life as we know it, so as you think of alternative solutions to workplace issues, be creative!

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ACTIVITY: PRACTICAL

Consider the article you read about Rio Tinto. Work in small groups to:

1. Choose at least one critical thinking technique.
2. Practise generating solutions to Rio Tinto's issue using that technique.
3. Present your solutions to a larger group by outlining the problem, explaining the critical-thinking method you followed and summarising the ideas generated.

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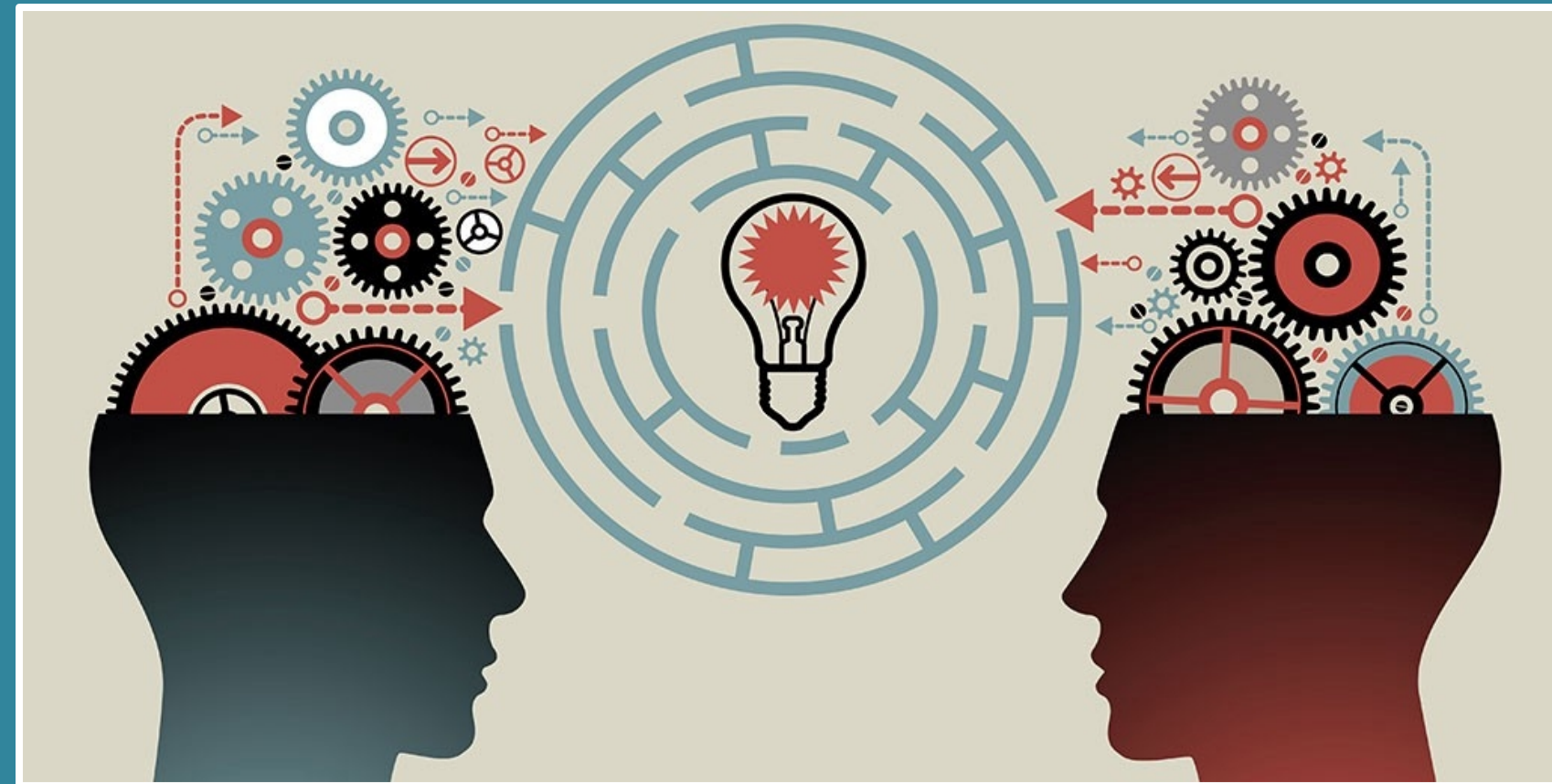


ACTIVITY: DEVELOP

Continue working on the problem you chose in the “Develop” activity at the end of Topic 1.

Topic 2: A critical thinking approach to resolving complex issues

Topic 3: A critical thinking approach to making and reviewing decisions



MAKING A DECISION

To choose the best solution to a workplace issue:

1. Consider all the information available to you.
2. Evaluate each option to make sure it is feasible.
3. Compare all feasible solutions to one another.

Topic 3: A critical thinking approach to making and reviewing decisions

EVALUATING OPTIONS

- Success criteria provide a framework against which potential solutions can be evaluated.
- Make sure your success criteria reflect the task objectives established at the start of the decision-making process.

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COMPARING OPTIONS

Once individual solutions have been evaluated, all feasible alternatives can be compared to one another using a variety of techniques. Choose the best solution.

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ACTIVITY: WATCH

Once technique to compare solution options is comparison analysis.

Watch the video that briefly explains what it involves.

Video: https://www.youtube.com/watch?v=m4o2aJ7YyZ8&feature=emb_logo (02:11)

Take notes and keep them for future reference.

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ACTIVITY: RESEARCH

Analysis in decision making is complex and takes effort. Research other analysis methods applicable to your workplace or industry of interest. Make sure you include numeric and financial analysis in your research.

Take notes and keep them for future reference. Share your research with another student and compare your findings.

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ACTIVITY: DISCUSS

How can the representation of numerical and financial data be misleading?

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ACTIVITY: PRACTICAL

Consider the financial and numeric data in the Rio Tinto article we've been analysing throughout this course (<https://www.smh.com.au/business/companies/rio-tinto-blasted-ancient-aboriginal-caves-for-135m-of-iron-ore-20200807-p55jia.html>).

Analyse and present the numeric/financial information in an appropriate format.

Compare your work with another student.

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SOLUTION PRESENTATION

The policies and procedures of an organisation guide how to brief and present a chosen solution to relevant stakeholders.

There is no set way to write a brief. Each organisation will have different requirements. The type of industry (and complex issue) will influence what the brief contains.

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ACTIVITY: READ

Take a look at the examples of different brief templates in the websites below:

Website 1: <https://www.wordtemplatesonline.net/project-brief-templates/>

Website 2: <https://www.smartsheet.com/free-project-proposal-templates>

Website 3: <https://www.smartsheet.com/business-case-templates>

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ACTIVITY: DISCUSS

As a group, discuss the similarities and differences in the template examples above.
Take notes and keep them for future reference.

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SOLUTION PRESENTATION

Generally, a solution brief may outline the issue and constraints, describe the solution (including how it meets objectives and success criteria), highlight advantages, risks and resources required and substantiate the solution with numerical or financial information.

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CONSIDERING FEEDBACK

- Workplaces need timely, accurate and constructive feedback in order to succeed.
- The time during or after a presentation is an opportunity to ask for feedback and then actively consider the feedback.

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ACTIVITY: BRAINSTORM

In a group, brainstorm ways to record and include feedback. Take notes and keep them for future reference.

Your trainer will facilitate a group discussion to summarise what you've brainstormed.

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ACTIVITY: READ

Take a look at the examples of different feedback registers in the websites below:

Website 1: https://www.dlsweb.rmit.edu.au/Toolbox/finservretail/intranet/procedures/recording_feedback.htm

Website 2: https://www.google.com/search?source=univ&tbm=isch&q=feedback+register&sa=X&ved=2ahUKEwj_-uG-qKHsAhW9zDgGHdLmBY0Q7Al6BAgLEEO&biw=1200&bih=581#imgsrc=vn7H3q76tHJiKM

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CONSIDERING FEEDBACK

Apart from receiving feedback from stakeholders, critical thinkers also reflect on their own performance. You may benchmark against your peers, your supervisors or recognised industry standards of excellence.

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ACTIVITY: WATCH

Watch the video on 10 tips for making a self-evaluation more meaningful.

Video: <https://www.youtube.com/watch?v=-bINWDCjDcQ> (05:11)

Take notes and keep them for future reference.

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ACTIVITY: REFLECT

What are your strengths? What are your weaknesses? How can you address your weaknesses? Do you currently have any skills that are unused in the workplace? What would you like to improve on?

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SEEKING APPROVAL

After careful consideration of feedback, follow the organisation's procedures to seek approval to implement the refined solution.



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ACTIVITY: DISCUSS

As a group, discuss your experiences with different approval processes at work. Why is approval to develop and implement a solution necessary even if you've already presented the solution to stakeholders and incorporated their feedback.

Take notes and keep them for future reference.

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ACTIVITY: READ

Take a look at the website explaining approval processes and their automation.

Website: <https://www.smartsheet.com/approval-process-workflow>

Take notes and keep them for future reference.

Topic 3: A critical thinking approach to making and reviewing decisions



BARRIERS TO EFFECTIVE DECISION MAKING

ACTIVITY: REFLECT

Think back to topic 1 where the decision-making process was mentioned for the first time. Why should you follow a systematic decision-making process? As you've worked through the contents of this course, can you see the benefits?

Topic 3: A critical thinking approach to making and reviewing decisions



ACTIVITY: READ

Take a look at the website outlining barriers to effective decision-making.

Website: <https://www.proschoolonline.com/blog/hurdles-faced-effective-decision-making>

Take notes and keep them for future reference.

Topic 3: A critical thinking approach to making and reviewing decisions



ACTIVITY: REFLECT

Have you experienced any of the barriers mentioned in the article?

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ACTIVITY: DEVELOP

Continue with the concept you refined in the previous “Develop” activity.

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