

# TANZANIA INSTITUTE OF EDUCATION



## GUIDELINES FOR DEVELOPING PORTFOLIO AND CONDUCTING PROJECT WORK IN ADVANCED SECONDARY SCHOOLS

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## Table of contents

<b>Acknowledgements</b> .....	<b>v</b>
<b>Abbreviations and acronyms</b> .....	<b>vi</b>
<b>Preface</b> .....	<b>vii</b>
<b>Background information</b> .....	<b>viii</b>
Aim of the guidelines .....	viii
How to use these guidelines .....	ix
Structure of the guidelines .....	ix
Teaching and learning materials/aids/tools .....	ix
Mode of learning .....	x
Symbols and their interpretation .....	x
<b>Unit One</b> .....	<b>1</b>
Developing a portfolio .....	1
<b>Unit Two</b> .....	<b>21</b>
Conducting project work .....	21
<b>Unit Three</b> .....	<b>33</b>
Managing and evaluating projects .....	33
<b>Unit Four</b> .....	<b>56</b>
Writing and disseminating project work reports .....	56

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Dr Aneth A. Komba

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**Tanzania Institute of Education**

## Abbreviations and acronyms

TIE	Tanzania Institute of Education
MoEVT	Ministry of Education and Vocational Training
MoEST	Ministry of Education, Science and Technology
ESR	Education for Self-Reliance
CPDL	Continuous Professional Development Learning
TRC	Teachers' Resource Centre
WEO	Ward Education Officer
SQAO-EZ	School Quality Assurance Office – Eastern Zone
Po-RALG	President's office Regional Administration and Local Government
TIPS	Think, Ink, Pair, Share

## Preface

The guidelines for Developing Portfolios and Conducting Project Work for Advanced Secondary Schools have been written specifically for advanced secondary school teachers and students in the United Republic of Tanzania. These guidelines have been prepared following the requirement of the Curriculum for Secondary Education Form V-VI, issued by the Ministry of Education, Science and Technology in the year 2023.

The contents of these guidelines have been developed based on the requirements of the curriculum, whereby a teacher is required to use a portfolio to assess the student's learning progress. Meanwhile, all students are required to conduct and report project work, which will contribute to their continuous assessment, weighing ten (10) marks. The guidelines consist of four units, namely Developing a portfolio, Conducting project work, Managing and evaluating project work and Writing and disseminating a project work report.

These guidelines contain engaging activities, exercises and reflective activities that will enable teachers to guide students in developing portfolios and conducting project work in their respective subjects' combinations. The developed portfolios will be used to assess the students' project work. Moreover, these guidelines will equip students with competencies that will enable them to develop and use portfolios and conduct project work.

Additional learning resources are available in the TIE e-Library at <https://ol.tie.go.tz> or [ol.tie.go.tz](http://ol.tie.go.tz)



**Tanzania Institute of Education**

## Background information

The Tanzania Institute of Education (TIE) is a public institution under the Ministry of Education, Science and Technology (MoEST) which was established by the Act of Parliament No. 13 of 1975. The Institute is responsible for interpreting government policies on education, curriculum programmes and instructional materials to facilitate the provision of quality education at pre-primary, primary, secondary and teacher education levels. The Act also gave TIE the mandate of designing and developing curriculum materials, providing technical advice and conducting orientation training concerning the implementation of curricula at pre-primary, primary, secondary and teacher education levels. The orientation training sessions are attached to continuous professional learning modalities to support teachers in implementing the curricula and using the curricula materials prepared.

These guidelines have been prepared to cater for the requirements of the New Curriculum for Secondary Education, Form V–VI of 2023, which was prepared following the 2014 Education and Training Policy, the 2023 Edition. This Curriculum specifies seven general competencies that are to be developed by students at the Advanced Level Secondary Education. It also specifies the main and specific competencies to be developed by Form V and VI students. One of the main competencies specified by the New Curriculum is to conduct project work. All Advanced Level Secondary School students must develop competencies that will enable them to conduct project work in their individual subjects and report the findings. It is within this requirement that the current guidelines have been developed. These guidelines are envisaged to assist teachers and students endeavours to develop relevant knowledge and skills to enable students to develop competences in conducting project work.

### **Aim of the guidelines**

These guidelines aim at guiding teachers and students in developing competencies that will enable students to:

- (a) Develop portfolios
- (b) Manage and evaluate portfolios
- (c) Conduct project work
- (d) Manage and evaluate project work
- (e) Write and disseminate project work reports

## **Target group**

These guidelines are designed to be used by both teachers and students at Advanced Level Secondary Schools. The purpose is to develop the required competencies in developing portfolios and conducting project work as well as using the portfolios to conduct and assess project work to ensure improved learning outcomes and quality of education.

## **How to use these guidelines**

These guidelines are designed for self-learning, peer learning and group learning. Both teachers and students are encouraged to read these guidelines carefully, carry out all activities and answer all the assigned questions. Readers are encouraged to collaborate with peers to carry out some of the activities as instructed.

Along with the regular teaching schedule, schools are required to assign a biweekly general session and a teacher to carry out the activities outlined in these guidelines. The assigned teacher shall guide the students at the beginning of Form V studies by developing their own portfolios that will be used throughout the course of study. The teacher shall also guide students through conducting and managing project work and reporting the findings. After the general sessions, students will be required to select an area of interest from their respective subjects for conducting their project work. Core subject teachers will then be required to continue guiding students' project work along with their portfolios.

**Note:** The time for the portfolio and project work must be indicated in the general school teaching time table with at list two periods per week.

The process of assessing and evaluating portfolios and project work is ongoing, and both students and teachers will conduct it.

Besides, you need to share with your peers any challenges you face in developing portfolios and conducting project work to discuss and come up with solutions that will improve your work. These guidelines will build your confidence and competency as required in the Curriculum for Advanced Level Secondary Schools.

## **Structure of the guidelines**

These guidelines consist of two major parts: preliminary information about the guidelines and content. The preliminary part contains an introduction of the guidelines, acknowledgements, and a list of abbreviations and symbols. The content part consists of

four units, each composed of a general overview of the unit. It also includes the specific competences to be developed in that particular unit. Then, the means of developing the specific competences is described in the form of teaching/learning activities, teaching/learning resources, assessment and reflective questions. Moreover, the unit is concluded with a well-narrated summary that gives an overview of the unit. References used in each unit are written at the end of the guidelines.

### **Teaching and learning materials/aids/tools**










The proposed teaching and learning materials/aids can be used with other improvised aids you may create in your environment according to the competency you expect to develop. You are advised to be creative and flexible in using teaching and learning aids and tools according to their importance and availability in your environment.

### **Mode of learning**

This guide is a self-study material for Form V and VI students. However, the subject teacher and other teachers assigned by the school will guide students on how best to use the guide for establishing portfolios and conducting project work. You are expected to master the competencies as you proceed with the course of study. From carrying out activities in these guidelines, you are expected to use the knowledge and skills you acquire to develop a portfolio and conduct project work. Therefore, you need to read and carry out all the activities you have been assigned in the guidelines. In each unit, you need to carry out the activities and answer assessment and reflection questions to check what you have achieved in the activities you have carried out. The activities will be conducted individually, in pairs and in groups.

Teachers need to plan and arrange time in the school's general timetable to guide students through developing portfolios and conducting project work in their specialisations.




## Symbols and their interpretation

	Specific competences
	Teaching and learning activities
	Personal development plan
	Tools or practical resources that enhance teaching and learning
	Questions for reflection
	Assessment activities
	Take note
	A summary that includes the main ideas covered in each unit
	References

## UNIT ONE

### Developing a portfolio





A portfolio is an important tool for assessing learning progress. This tool enables students to observe what they have achieved and what they need to achieve throughout their learning process. A student is expected to create a portfolio at the beginning of the learning process. For example, Advanced Level Secondary School students are required to develop a learning portfolio at the beginning of Form V schoolwork. This portfolio will be useful in assessing the student's progress in learning activities, including project work throughout their studies. This unit guides the student in developing the necessary knowledge and skills for creating a portfolio.

	<p>The competencies developed in this unit will enable you to:</p> <ul style="list-style-type: none"><li>(a) Describe a portfolio</li><li>(b) Develop a portfolio</li><li>(c) Manage the portfolio</li><li>(d) Assess the portfolio</li></ul>
	<ol style="list-style-type: none"><li>1. What essential knowledge do I need to describe a portfolio?</li><li>2. What kind of activities can I use to create an effective portfolio?</li><li>3. Which activities can I use to manage my portfolio?</li><li>4. What tools will I use to assess the quality of the portfolio?</li></ol>
	<p>Writing materials such as notebook, pen, ICT facilities (computer/laptop and internet devices), curriculum and syllabi for advanced level secondary schools of the United Republic of Tanzania, samples of portfolios</p>





## 1.1 Describing a portfolio

A portfolio is a purposeful collection of a learner's work, self-assessment and goal statements reflecting learning progress. Learners generally choose work samples to include in their portfolios, but the supervisor may also recommend specific work samples to include. The portfolio is a tool that enables the learner to see the learning progress. This subunit will expose you to activities that will enable you to develop competencies to describe the meaning and importance of portfolios and identify types of portfolios.

### 1.1.1 Explaining the meaning of a portfolio





	<p>(a) From the internet and other references, study the meaning of a portfolio and write down what you have captured as the meaning of a portfolio.</p> <p>(b) Share the captured meaning of a portfolio in pairs and re-write the meaning of the portfolio as it is used in the learning environment.</p>
	<ol style="list-style-type: none"><li>1. What is a student portfolio?</li><li>2. What is the meaning of the portfolio in learning?</li></ol>
	<p>How can the knowledge of a portfolio be useful in your learning environment?</p>
	<p>A portfolio is a collection of the student's work that demonstrates skills and learning progress. The portfolio can be either digital or physical and has a physical or conceptual structure. Work samples from all curricula areas can be selected and included in the portfolio. These can include project worksheets, stories, tests and reflections about work samples.</p> <p>Meanwhile, the physical structure of a portfolio refers to the actual arrangement of the work samples, which can be organised according to a sequence of events in conducting project work, subject area, style or goal area. The conceptual structure refers to the learning goals. For example, the teacher may be required to complete a self-assessment on a work sample and set a goal for future learning. Note that the work sample selfassessment and the goal sheet may be included in the portfolio.</p>

### 1.1.2 Describing the importance of a portfolio

	<p>Perform these activities to describe the importance of a portfolio.</p> <ol style="list-style-type: none"><li>Think and write about the importance of a portfolio.</li><li>Sit in pairs and share with your partner the importance of the portfolio in learning.</li></ol>
	<p>In what ways does the portfolio influence the learning process?</p>
	<p>Why is the portfolio an important tool for learning?</p>
	<p>The portfolio has been identified as an important tool for students' self-assessment and teachers' assessment of the learning process. Several reasons make portfolios beneficial to both learners and the teachers, as follows:</p> <ol style="list-style-type: none"><li>Students' portfolios help keep track of their learning progress and skill development over time. It enables the students to record their learning and document their growth over time.</li><li>Portfolios motivate students to do their best as they know others will see their work. They provide a venue through which they can showcase their learning.</li><li>Portfolios can provide valuable feedback for teachers on what areas the student is struggling with and what areas they excel in. Portfolios provide a way for students to reflect on their own progress.</li><li>They assist students in locating their strengths and weaknesses and plan for future improvement.</li><li>They can be used as tools for self-assessment, self-reflection and personal development. They develop students' metacognitive skills (reflective practices) and help them control their learning.</li><li>They help students to focus on the learning process rather than the end product. They promote deeper learning as the students actively engage in the learning process.</li><li>They help students develop personal and academic identities, develop self-discoveries and build confidence.</li></ol>

**Note:** modern portfolios should focus on the process as much as the final products, giving the teacher insights into the learners’ thoughts and learning journey.

### 1.1.3 Identifying types of portfolios

	<p>Sit in groups and do the following tasks:</p> <ol style="list-style-type: none"> <li>Observe various samples of portfolios and check them from internet resources.</li> <li>Outline features of the portfolios observed based on the nature of documentation, types of materials kept and themes of the contents.</li> <li>Identify various types based on the criteria used.</li> <li>Share your findings in class discussion on various types of portfolios you have identified.</li> </ol>
	<ol style="list-style-type: none"> <li>Which types of portfolios do you think can be used at school?</li> <li>Which type of portfolios can be used to keep records of project work?</li> </ol>
	<p>Why is it important to get insight into the types of portfolios?</p>
	<p>There are different types of portfolios, and the right type for a particular learner depends on the learner’s needs and learning goals. Two major types of students’ portfolios are showcase portfolios and developmental portfolios.</p> <ol style="list-style-type: none"> <li><b>Showcase portfolios:</b> These are types of portfolios which emphasize the product of learning. Learners select and submit their best work for others to learn. These portfolios are useful for summative assessment. They focus on the output rather than the process towards achievement.</li> <li><b>Developmental portfolios:</b> In these types of portfolios, learners select and submit pieces of work that can show evidence of growth or changes over time. They emphasize the process of learning. They form a useful tool for formative assessment.</li> </ol> <p>Portfolios may also be categorised based on the platform used to develop them. The types of portfolios based on the platform used include:</p>



- (a) **Digital portfolios:** These are also known as online portfolios or e-portfolios. They are created and shared online. Digital platforms may use tools like Spaces, Google Docs, or WordPress.
- (b) **Physical portfolios:** Physical portfolios usually involve using a binder or folder. They can store physical copies of assignments or the learner's work. This type of portfolio is usually used when the learner needs to submit a physical copy of his/her work in a portfolio. Materials used in physical portfolios are pieces of paper, photos, folders and binders.

Other types of portfolios are based on the learning activities. These include progress- and process-oriented portfolios.

- (a) **Process-oriented portfolios:** These are portfolios that focus on learners' thought processes and work habits rather than the final product. They can assist learners when reflecting on their own learning processes and identifying areas for improvement. This type of portfolio is typically used in combination with other portfolio types.
- (b) **Progress-oriented portfolios:** These portfolios focus on learning progress over time. They can be used to track learners' growth and development in a particular subject or skill area. In many cases, a progress-oriented portfolio will be used in conjunction with other assessment tools, such as standardised test scores. It is beneficial for vocational students. The following are examples of portfolios under this category:

#### Project-based portfolios

- (i) Project-based portfolios are created around a specific project or assignment. They are useful for showcasing learning progress on a particular task or goal.

#### Subject-specific portfolios





- (ii) Subject-specific portfolios are created for subjects such as Mathematics, Language, Social Sciences or Natural Sciences. They can help track learning progress in a particular subject area over time.

Note that when choosing a type of portfolio to be used in a certain situation, the learner should consider the portfolio goals, learning needs and available resources.

## 1.2 Developing a portfolio

A portfolio is important for assessing learning progress and evaluating project work. Various methods can be used to prepare digital or physical portfolios. A learner and a teacher can share the developed portfolios to evaluate the outcomes of the learning process. In this subsection, you will develop competencies to identify the components of a portfolio and create a portfolio.






### 1.2.1 Identifying key components of a portfolio

	<p>In pairs, think, write and share the following:</p> <ol style="list-style-type: none"> <li>What items will be included in a portfolio?</li> <li>Although there are various types of portfolios, they include key components. Mention them.</li> <li>Share your findings with your neighbours to learn more about the components of a portfolio.</li> </ol>
	<p>What are the important components of the portfolio?</p>
	<p>What will make a portfolio an effective tool for assessing learning growth and achievement of the learning goals?</p>
	<p>A portfolio serves as a comprehensive collection of academic and personal accomplishments. It showcases their skills, growth, failures and achievements. Although various types of portfolios exist, important components will enable users to get the desired information. Here are some key components to include in your portfolio.</p> <ol style="list-style-type: none"> <li><b>Cover page:</b> Include your personal information such as name, class level, combination and a visually appealing design, image or photo.</li> <li><b>Table of contents:</b> Show a list of contents you have included in the portfolio.</li> <li><b>Introduction or Personal Statement:</b> Include a brief introduction or personal statement that explains the purpose of the portfolio, highlights the interests, goals and aspirations and sets the summary that will display the tone of the whole portfolio.</li> </ol>

- (d) Writing works such as learning plans and objectives, essays, journals, project work papers, creative writing pieces, project work samples, finished assignments and tests, case studies and self-reflection summaries: Include all academic reports.
- (e) Extracurricular activities: Showcase the involvement in extracurricular activities such as clubs, sports teams, or community service projects. Include photographs, certificates, or descriptions of their roles and contributions.
- (f) Creative work: Showcase your talent in art, music, writing, or any other creative field. Include work samples, such as drawings, paintings, poems, short stories, or recordings of musical performances.
- (g) Awards and recognitions: Highlight awards, honours, or scholarships received throughout your academic journey.
- (h) Reflective writing: Include reflective writing pieces that discuss their learning experiences, challenges and lessons learned at every stage of learning. This will demonstrate the ability to think critically and reflect on one's learning growth.
- (i) Letters of recommendation: If available, include letters of recommendation from teachers, mentors, or supervisors who can speak about your character, work ethic and achievements.
- (j) Future goals and action plans: End your portfolio with a section where you outline your future goals, aspirations and action plans. This shows the ability to set goals and think strategically about their academic and personal development.

Academic writing and learning materials that can be kept in a portfolio are artwork and designs such as drawings, paintings, graphic designs, 3D renderings, photography and videos, music and audio recordings of interest. The portfolio should also include applications and design artefacts such as coding assignments and designed case studies.

## 1.2.2 Creating a portfolio for project work

	<p>Use various search engines to learn the steps used to develop a project work portfolio. Then, discuss in groups the important steps that may be used to create a personal portfolio. Share your results with peers to improve your group findings.</p>
	<ol style="list-style-type: none"><li>1. What are the important steps in developing a project portfolio?</li><li>2. Why is it important to create a portfolio for project work?</li></ol>
	<p>What actions will help you to continue developing and improving skills in performing project work?</p>
	<p>To create a good portfolio (digital or physical), keep in mind the following key tips.</p> <ol style="list-style-type: none"><li>(a) Start with basic personal details: These involve names, class level, contact information and designed images or photos that reflect the project work.</li><li>(b) Organise your work into sections: Create different sections for different stages of project work. These include identifying a project problem, stating it, reviewing the literature, formulating hypotheses or project questions, designing the methodology, collecting data, analysing them, interpreting the data, discussing the findings and drawing conclusions. You may also include sections on the findings and report work. Organise the documents in file sections arranged alphabetically, as illustrated in Figure 1.1.</li></ol> <div data-bbox="548 1283 1024 1646" data-label="Image">A yellow folder with eight colored tabs labeled A through H, arranged alphabetically and by color. The tabs are: A (red), B (yellow), C (green), D (blue), E (purple), F (orange), G (pink), and H (grey).</div> <p><b>Figure 1.1:</b> File sections arranged alphabetically and by colour</p>

- (c) Include all project work activities and place them in a specified section. Insert a mixture of different types of work, such as individual and group project work, written work and visual work.
- (d) Reflect on your work. For each piece or stage of a project, include a brief reflection that discusses what you did well and what you could improve upon.
- (e) Get feedback from others. Ask your teacher, parent or guardian to review your project portfolio and use the given feedback to improve your project in each stage.
- (f) Build a culture of documentation: Making documentation a regular part of the learning process will ensure it feels authentic. Therefore, you can see growth in your project work.
- (g) Use various multimedia materials: To make a portfolio diverse and well-rounded, include materials such as videos, photos, PDFs and other multimedia items that capture the learning process and growth of the project work.

Therefore, in developing a portfolio for school project work, use steps such as determining the purpose of the project, creating an evaluation plan, organising the portfolio, selecting what content to include in the portfolio and determining the format of the portfolio, reviewing the portfolio and editing the documents in the portfolio. Figure 1.2 shows a cyclic process of creating and maintaining a digital portfolio.







**Figure 1.2:** Creating a digital portfolio

### 1.3 Managing the portfolio




Managing a portfolio involves all activities that ensure the proper administration and quality control of the work. The aim of managing a portfolio is to guide the implementation of improvement initiatives and maintain the quality of work for effective learning. In this subunit, you will develop competences that will enable you to describe the concept of portfolio management, identify the components and properly manage the portfolio.

#### 1.3.1 Describing portfolio management

	<p>(a) Brainstorm ideas on the meaning of portfolio management</p> <p>(b) Search for information on the internet and in books. Then, do the following in a group:</p> <ul style="list-style-type: none"><li>(i) Explain the meaning of portfolio management</li><li>(ii) Discuss the importance of portfolio management</li><li>(iii) Identify your roles in portfolio management</li></ul>
	<ol style="list-style-type: none"><li>1. What does portfolio management involve?</li><li>2. Why is it important to manage a portfolio?</li></ol>
	<p>What will motivate you to take the portfolio requirement seriously?</p>
	<p>Portfolio management is a strategy for administering learning activities in a more practicable way, depending on the purpose of learning.</p> <p>Importance of portfolio management</p> <ul style="list-style-type: none"><li>(a) To establish ownership of the learning process</li><li>(b) To guide self-assessment and reflection</li><li>(c) It controls the quality of work throughout the process</li><li>(d) It guides the identification of portfolio requirements, needed materials, assessment mode and the format used.</li></ul> <p>The following are your roles and responsibilities when managing a portfolio:</p> <ul style="list-style-type: none"><li>(a) To identify portfolio requirements such as project work samples, tests, certificates and awards, photos and video clips, depending on the nature of the portfolio</li></ul>

	<p>(b) To write a work plan which will help you control your work</p> <p>(c) To collect and organise the materials in the portfolio as per the agreed format</p> <p>(d) To label each piece of evidence according to the learning outcome being demonstrated</p> <p>(e) To write a reflective summary demonstrating the achievements of the learning process.</p> <p>(f) To adhere to the portfolio's format. For a physical folio, adhere to the type of binder and writing formats. For a digital portfolio, adhere to the mode of submission. Depending on the available resources, the mode can be either Google Docs or Word space.</p> <p>(g) To adhere to submission dates as agreed.</p>
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### 1.3.2 Identifying the components of portfolio management

	<p>Respond to the following questions and share your responses with other groups.</p> <p>(a) Identify the portfolio requirements, including the materials needed to be collected or produced.</p> <p>(b) Decide which materials you will include in your portfolio.</p>
	<p>What are the components of portfolio management?</p>
	<p>Who has access to the portfolio, and for what purposes?</p>



In managing the portfolio, bear in mind the following important questions:

- (a) What is the purpose of the portfolio? For example, is the portfolio for showcasing or developmental activities? Is it for project work or all learning activities? This will guide you in keeping records for the intended purpose.
- (b) What learning outcomes will the portfolio address? What is expected during and after study or work should be noted. Identify knowledge, skills and attitudes to be developed during learning. This will help you focus on how to achieve the intended journey properly.
- (c) What will be included in the portfolio? For the identified purpose and learning outcomes, include in the portfolio the materials that will show your progress in learning.
- (d) What assessment tools or scoring criteria (e.g., a rubric) will be used to judge the quality of the portfolio? Be familiar with the assessment criteria so that you will control the quality of your work.

Portfolio management components are categorised into four main areas: planning, implementing, reporting quality control, and assessment and evaluation.

### **Planning**

Under this area, the objectives or purpose of the portfolio must be developed to enhance learning. For example, the portfolio is a showcase for summative or developmental assessment that encourages formative assessment. The modes of submission and assessment criteria need to be identified to monitor and control quality.

### **Reporting**




Include all activities by keeping records of all work samples and giving and receiving feedback. Each learning task will require you to write a reflection summary showing the achievement level. The reflection summary will be shared for other viewers' opinions. This will enhance the learning process for better outcomes.

	<p><b>Quality control</b></p> <p>The quality of a portfolio should be managed in a way that ensures quality. Quality assurance will depend on the purpose, requirements, assessment criteria, submission modes and expected learning outcomes.</p> <p><b>Assessment and evaluation</b></p> <p>The portfolio will be assessed based on the assessment and evaluation criteria.</p>
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## 1.4 Assessing and evaluating a portfolio

A portfolio is created for several purposes, including project work assessment and evaluation. The process of assessing and evaluating a portfolio encourages self-reflection in learning. Learners may come to understand what they have or have not achieved in their learning process. However, this will only be possible if they use their respective portfolios effectively. In this subunit, you will develop competences that will enable you to identify portfolio assessment criteria and conduct a portfolio evaluation.

### 1.4.1 Identifying portfolio assessment criteria

	<p>Observe various samples of portfolios. Then, do the following:</p> <ol style="list-style-type: none"> <li>(a) Identify the materials included.</li> <li>(b) Write down common features found in the observed portfolios.</li> <li>(c) Discuss and suggest essential tips to follow when assessing portfolios.</li> </ol>
	<ol style="list-style-type: none"> <li>1. What criteria can be used to evaluate portfolios?</li> <li>2. How is the assessment of portfolios important in improving the learning process?</li> </ol>
	<ol style="list-style-type: none"> <li>(a) What are your roles in assessing portfolios?</li> <li>(b) Why is it essential to assess and evaluate your portfolio?</li> </ol>



Portfolios are essential tools for assessing and evaluating the learner's achievements in learning and improvement over time. They also provide a guide or direction to reflect on progress. Therefore, it is important to assess and evaluate the developed portfolios. A portfolio assessment is a process that is geared to conduct self-reflection and evaluation by checking the evidence that enables modifications of the learning goals for future improvement. It is a process of judging the quality of work that shows the learning process, improvement and outcome. The quality of a portfolio will be based on the agreed criteria or standards of developing a good portfolio. Some common criteria for portfolio evaluation are

(a) Content

How to collect materials in a portfolio, for example, digital or physical portfolios: The instructed learning materials are to be collected. For example, a project portfolio will contain samples of all work related to project activities.

(b) Evidence




How to select materials for a portfolio: Portfolio materials should demonstrate mastery and outcome of learning. The judgments will be based on the focus of material selection that clearly shows evidence of the learning process and achievement.

(c) Reflection

How to write a reflective summary: The summary should show the reasons for selecting learning materials and work for a portfolio and how the materials demonstrate the learning process and progress. The ability to point out strengths and weaknesses in learning and the way forward.

	<p>(d) Format</p> <p>How to format a portfolio: Adhere to the agreed format requirements, such as type of binder for physical folios, font size and styles for digital folios.</p> <p>(e) Submission.</p> <p>How to submit a portfolio: Adhere to the submission plan. It could be weekly, monthly or quarterly. Therefore, note dates and instructions for submission.</p> <p>Assessment and evaluation of portfolios are important because they direct self-reflection, bring ownership of learning goals and purposes and guide corrections of learning mistakes. Assessment and evaluation also ensure clarity of thought, intellectual development and personal growth. Therefore, it demonstrates focus and guides learning from practice. This allows learners to focus more on the learning process than on learning outcomes.</p>
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### 1.4.2 Conducting portfolio evaluation

	<p>(a) Think and write down the qualities of a portfolio for project work.</p> <p>(b) In pairs, share your thoughts about the qualities of a portfolio for project work.</p>
	<ol style="list-style-type: none"> <li>1. What are the qualities of a good project work portfolio?</li> <li>2. How can the evaluation of a project work portfolio be conducted?</li> </ol>
	<ol style="list-style-type: none"> <li>(a) What skills will you develop in evaluating a project work portfolio?</li> <li>(b) How can you effectively apply the acquired skills in a real-world context?</li> <li>(c) How do you engage in reflection and self-assessment?</li> </ol>



During portfolio evaluation, several activities are used to analyse and interpret data and other information from the learner's portfolio to judge the quality of the learner's work. Some of the features to observe are:

- (a) **Patterns of work:** Work patterns are useful in identifying the areas that show strengths and weaknesses with a particular assignment or project work. This could indicate that there's a problem with the instruction.
- (b) **Learning work samples:** Learning work samples are included in a folio. This serves as the guide for identifying the changes or trends in the learning process. Upon analysing learning work samples, one will notice improvements in a particular subject/area of study/project work. This could be an indication that learning outcomes are developed and achieved.
- (c) **Record keeping:** All records should be kept in documents, pictures or video clips that provide quick evidence of what is working and what is not, based on findings from the portfolio assessment.
- (d) **Reflection:** There should be a summary outlining how the learning process took place, pointing out reflection after each stage of the learning process.

Table 1 shows an example of a portfolio assessment rubric using very good, good and poor as the indicators of the quality of the portfolio.

**Table 1:** Portfolio evaluation rubric

Quality indicator	Excellent (10-8)	Very good (7-6)	Good (5-4)	Poor (3-1)	Score /10
Pattern of work	The portfolio shows a clear learning realisation trend. It shows the actual design of learning and how learning was achieved.	The portfolio shows the trend of learning. It does not show the clear design of learning. It shows how learning was achieved.	The portfolio shows a description of the learning trend. There is a brief description of learning design and achievement.	The portfolio does not show a learning trend. There are many ambiguities and no clear structure for learning and achievement.	
Learning work samples (materials)	Learning materials show creative and innovative works. They show clear evidence of the learning process and outcome.	Learning material does not show creativity. They show evidence of the learning process and outcome.	Learning materials show evidence of learning outcomes. They do not show how outcomes have been reached.	Learning materials are not organised. They do not show evidence of the learning process or learning outcome.	
Record keeping	There is proper record keeping of learning activities, designs and innovations. There is a clear and smart organisation of work into sections.	There is proper record keeping of learning activities and designs. Work is organised into sections.	There is record keeping of learning activities only. Learning works are not well organised.	There is poor record keeping of learning activities. There is no organisation of work into sections.	

Reflection	Clear reflective summaries are shown in almost all stages of the learning process. The reflection outlined the strengths and weaknesses of the process and showed plans/ suggestions for improvement of future learning.	Reflective summaries are shown in some stages of the learning process. The reflection outlines the strengths and weaknesses and sometimes shows plans/suggestions for improvement of learning.	R e f l e c t i v e summaries are shown in a few stages of the learning process. The reflection does not clearly outline the strengths and weaknesses, and no plans/ suggestions for improvement.	No reflective summary is shown at any stage of the learning process.	
<b>Total score out of 10</b>					



A learner's portfolio is a work collection demonstrating the learner's skills and learning progress. The portfolio can be either digital or physical. Work samples from all curricular areas can be selected and included in the portfolio. These can include project work sheets, stories, tests and reflections about work samples.

The portfolio has been identified as an important tool for learners' self-assessment and supervisors' assessment of the growth of their learners. The portfolio is important to motivate learners to do the best work. It provides valuable feedback that shows the strengths and weaknesses of learning, thus helping learners keep the learning process on track. The portfolio is also an important tool for managing project work. All project work activities should be organised in a portfolio for easy tracking and assessment.

Portfolio management is a strategy for appropriately administering learning activities based on the learning purpose. Managing a portfolio aims to guide the implementation of improvement initiatives and the maintenance of quality of work for effective learning.

Portfolio assessment and evaluation will be based on work patterns, learning work samples, recording keeping and reflection. The evaluation will be guided using an evaluation rubric.






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## UNIT TWO

### Conducting project work





Project work involves planning, implementing and completing a specific task or objective within a defined timeframe and budget. Such processes are unique undertakings that aim to achieve specific goals. These goals include developing a new product, implementing a system, organizing an event, conducting research, or initiating organisational change.

	The competences developed in this unit will enable you to: (a) Describe project work (b) Conduct project work by following the key steps
	<ol style="list-style-type: none"><li>1. What important concepts do I need to know to conduct a project successfully?</li><li>2. What kind of activities can be useful in learning how to conduct a project work?</li><li>3. How will I learn and use new concepts and activities when conducting project work?</li></ol>
	Syllabus, textbooks, ICT facilities, writing materials, other reference documents





### 2.1 Describing the concept of project work

A project is a temporary endeavour to achieve specific objectives within a defined timeframe using the allocated resources. It involves a unique set of activities, tasks and deliverables that are carefully planned and executed to produce the desired outcomes. In the learning environment, project work is a learning method whereby the learner gets a chance to put into practice the knowledge and skills learnt. In this case, a project is an extended practical work where a learner uses the experiences learnt in the lessons to perform organised activities to solve a problem. In this unit, you will learn about the concept of project work. The competences developed will enable you to explain the meaning of project work and describe the importance of conducting project work.

### 2.1.1 Explaining the meaning of project work

	<p>Use internet resources and other materials to study project work. Then,</p> <p>(a) Describe the concept of project work.</p> <p>(b) Explain the different types of project work.</p>
	<ol style="list-style-type: none"> <li>1. How can you explain the concept of project work?</li> <li>2. What are the essential types of project work?</li> </ol>
	<p>How can you apply the knowledge gained in this section to describe the project work?</p>
	<p>Project work is a physical activity the learner conducts to solve problems experienced in the society. The activity involves planning, implementing and completing a specific task or objective within a defined timeframe and budget. Such processes are unique undertakings that aim to achieve specific goals. These goals include developing a new product, implementing a system, organising an event, conducting research, or initiating societal change. Various types of project work depend on the field, discipline, or context in which the project is undertaken. Some types of project work include research, construction and business projects.</p>

### 2.1.2 Describing the importance of project work



	<p>With your peers, discuss the importance of project work in learning.</p>
	<p>What is the role of project work in solving daily life challenges?</p>
	<p>Why is it essential to conduct project work?</p>
	<p>Conducting project work is essential because it helps students and teachers develop multiple skills, such as time management, organisation and goal setting, and work towards achieving them. Through planning</p>



and conducting project work, students will learn how to prioritise issues or tasks, meet deadlines and set achievable and measurable goals, putting into practice classroom experiences. This will orient the learner to conducting studies that will help solve community challenges. The learner will also link theory and practice, promoting critical thinking. Project work is focused on identifying and solving actual challenges in society. Thus, through project work, the challenges will be reduced.

## 2.2 Conducting project work





To achieve the intentions of project work, you need a systematic way of performing the project work efficiently and effectively. In this subunit, you will learn how to conduct project work. The competences developed will enable you to identify and state a project problem, review the literature, formulate the project work's hypotheses or questions, develop a project plan, collect project data, analyse and interpret the collected data, summarise the project findings as well as drawing conclusions and making recommendations.

### 2.2.1 Identifying and stating the problem





	<ul style="list-style-type: none"> <li>(a) Using TIPS, list down the challenges or problems faced by society in your surroundings.             <ul style="list-style-type: none"> <li>(i) Clearly explain the challenges.</li> <li>(ii) Discuss how the challenges can be addressed.</li> </ul> </li> <li>(b) Using ICT tools, download various project reports and read the statements of problems. Then;             <ul style="list-style-type: none"> <li>(i) Identify the common features in the problem statements observed</li> <li>(ii) Discuss the attributes of a comprehensive statement of the problem</li> </ul> </li> <li>(c) Suppose you are conducting a project to address one of the problems listed in step (b)i. Write the corresponding statement of the problem.</li> </ul>
	<ol style="list-style-type: none"> <li>1. What approaches can be used to identify problems facing society?</li> <li>2. Which of the identified problems interests you, and how can it be solved?</li> <li>3. What are the elements to be considered when identifying a project problem?</li> </ol>

	<p>4. What are the indicators of a good problem statement?</p> <p>5. Why is it necessary to clearly state the problem?</p>
	<p>(a) How has this activity enhanced your problem-identification skills?</p> <p>(b) Have you developed skills in writing a problem statement?</p>
	<p>The research problem may come from different sources in the environment. These include social needs such as economic, political, security, diseases and physical phenomena such as hazards.</p> <p>The identified problem should be clearly defined or narrated to allow the entire community to understand the rationale for dealing with the problem. The researchable problem should be viable for investigation and solution.</p>


### 2.2.2 Reviewing the literature




	<p>(a) Use ICT resources to study and conduct a literature review.</p> <p>(b) Conduct a literature review pertinent to the project work problem outlined in Section 2.2.1</p>
	<p>1. What do you need to find out when reviewing literature?</p> <p>2. Why is it important to review the literature?</p> <p>3. Besides ICT, what other sources can be used to review the literature?</p>
	<p>(a) What have you learnt in terms of reviewing the literature?</p> <p>(b) How has this activity enhanced your ability to review the literature?</p> <p>(c) What challenges did you face when performing this activity? How can you solve the challenges?</p>
	<p>A literature review is based on the theme corresponding to the project work problem. Various texts, references or other sources of information, such as websites, are consulted to clarify the problem in place. The literature review also helps to find out what other people have said in similar projects as per the problem identified. Apart from ICT, other sources include hard copies of textual materials such as journal articles, conference proceedings, review articles, data notes and registered reports.</p> <p>Note that the citation statements from the sources must be recorded to keep track of the problem clarity.</p>

### 2.2.3 Formulating hypotheses/questions

	<p>Use ICT tools and other resources to study hypotheses. Then, do the following:</p> <ol style="list-style-type: none"><li>Explain the concept of hypotheses/questions.</li><li>Discuss important characteristics of a good hypothesis/question.</li><li>Describe how to formulate hypotheses.</li><li>Formulate hypotheses/questions for the problem stated in Section 2.2.1.</li></ol>
	<p>Why is it important to formulate hypotheses/questions?</p>
	<ol style="list-style-type: none"><li>What have you learnt about activity-based learning of hypotheses?</li><li>How can the activities developed in this section help to improve your skills and abilities in formulating hypotheses and questions?</li><li>How challenging is this activity, and what can be done to improve its suitability for learning about hypotheses and questions?</li></ol>
	<p>The occurrence of a problem may arise for various reasons. Speculating the possible causes of the problem or conflicting situation is important. These speculations are called hypotheses or research questions, which will be tested or answered during data analysis. The hypotheses are short statements which constitute dependent and independent variables. The variables are subject to verification during data analysis. Research questions about the study problem are asked and answered from the analysed data. The characteristics of the hypothesis include being testable, specific and precise. While hypotheses are formed by considering existing evidence and using reasons for making inferences, questions are formulated by considering the information gaps that need to be filled from the data.</p>





### 2.2.4 Developing a plan

	<p>Read sources about designing a project work plan. Then, do the following activities:</p> <ol style="list-style-type: none"><li>Describe various techniques for collecting data to test hypotheses or answer project work questions.</li></ol>
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	<ul style="list-style-type: none"> <li>(b) Discuss the sampling techniques, sampling area and size relevant to a given project.</li> <li>(c) Discuss different methods to test project work hypotheses or answer project questions.</li> <li>(d) Discuss ethical considerations and their importance for project work.</li> <li>(e) Using the topic of your choice, develop a plan for conducting project work.</li> </ul>
	<ol style="list-style-type: none"> <li>1. Why is it important to designate a particular method for project work?</li> <li>2. How can the choice of sample area and sample size affect the results of project work?</li> <li>3. What are the criteria for choosing a data collection technique?</li> <li>4. Why is it important to consider ethical issues when conducting project work?</li> </ol>
	<ul style="list-style-type: none"> <li>(a) What have you learnt related to developing a project work plan?</li> <li>(b) How can the activities performed in this section help improve your skills and abilities to plan your project?</li> <li>(c) How can you develop a plan for carrying out a project work based on your topic of choice?</li> </ul>
	<p>Project work design is an initial stage of the project work lifecycle where ideas, processes, resources and outputs or deliverables are written down. Project design is a blueprint of a scientific study. It includes methodologies, tools and techniques for conducting project work. In conducting project work, consider the problem, its context and the methodology used.</p> <p>The methodology involves sampling, which is the selection of a subset of a population required in the project work. The sample represents the population involved in the project work, which was selected due to the limited resources required to conduct the project work. Sampling techniques include random selection, systematic, convenience, or purposive selection. The size of the sample affects the quality of collected data and the results of the project work. When conducting project work, there are ethical considerations to be taken care of to ensure that project work activities do not harm the people involved and that the project work results are of the expected quality.</p>

### 2.2.5 Collecting data

As a continuation of project work, it is necessary to find, collect and analyse data or information that can be used to test hypotheses or answer project questions.





	<p>(a) By using ICT, learn about the following:</p> <ul style="list-style-type: none"> <li>(i) Data for project work</li> <li>(ii) Useful methods and tools for collecting data</li> <li>(iii) Data storage</li> </ul> <p>(b) Collect data for addressing the problem identified in Section 2.2.1</p>
	<ol style="list-style-type: none"> <li>1. What are the types of data?</li> <li>2. How are collected data stored?</li> <li>3. What are the ways of collecting data?</li> </ol>
	<ol style="list-style-type: none"> <li>(a) Why is it important to use appropriate tools in data collection and storage?</li> <li>(b) Considering the project problem you identified, what data types can be collected?</li> <li>(c) What methods can you use to collect data in your project?</li> </ol>
	<p>The project work data are all appropriate information collected during conducting the project work. Data is the information needed to test the hypotheses or answer the project questions. Various methods and tools are involved in collecting data. Project work data can involve quantities (quantitative data) or feelings, ideas or experiences given through discourse (qualitative data). Usually, quantitative data are used to test project hypotheses, while qualitative data are used to answer research questions. You should use appropriate collection methods and tools to collect appropriate and enough data. Table 2.1 shows some methods and their tools.</p>

**Table 2.1:** Examples of methods and tools

Method	Tools
Interview	Interview guide
Questionnaire	Questionnaire
Observation	Checklist /schedule





The collected data for project work is stored in hard copy files or digitised formats on ICT devices. The data should be stored safely and protected through password-enabled files or secure cloud storage. If the storage device becomes corrupted, backups are crucial for data recovery.

### 2.2.6 Analysing and interpreting the data

	<p>The collected data should be organised for interpretation.</p> <p>(a) In groups, discuss how to analyse qualitative and quantitative data.</p> <p>(Hint: Use ICT to determine how to analyse data qualitatively and quantitatively.)</p> <p>(a) Discuss the procedures for analysing and interpreting data.</p> <p>(b) Describe the importance of data interpretation.</p> <p>(c) Analyse and interpret the data collected in Section 2.2.6.</p>
	<ol style="list-style-type: none"> <li>1. How is qualitative data analysed?</li> <li>2. How is quantitative data analysed?</li> <li>3. What is the role of data interpretation in conducting project work?</li> </ol>
	<ol style="list-style-type: none"> <li>(a) How can data from your project work be organised?</li> <li>(b) What is the importance of analysing data?</li> <li>(c) How can you analyse data collected in your project work?</li> </ol>
	<p>Data analysis is a process of looking for relationships in the data collected. Procedures for analysing data include organizing and processing information to test hypotheses or answer project questions. Data analysis depends on the methods and tools used. For example, questionnaires and checklists produce quantitative data, are processed using mathematical methods, and are organised into tables, graphs and charts. On the other hand, qualitative data are collected through interviews and analysed into themes that relate to the project questions.</p> <p>The analysed data is interpreted to verify the hypotheses or answer project questions. Data interpretation helps in making a proper decision to solve identified challenges. The interpreted data also helps identify patterns, relationships and trends in the data, providing valuable insights.</p>


### 2.2.7 Summarising findings





The findings of the project work have to be summarised to suit the answers to the project hypotheses or questions.

	<p>(a) Study about summarising project findings. Then, do the following:</p> <ul style="list-style-type: none"><li>(i) Discuss the concept of project work findings summary.</li><li>(ii) Describe the basis for writing a summary of project work findings</li><li>(iii) Study various projects and their summaries of findings.</li></ul> <p>(b) Develop the summary of findings from your own project work.</p>
	<ol style="list-style-type: none"><li>1. What is the basis for writing a summary of the findings of a project?</li><li>2. How useful is the summary of the project work's findings?</li></ol>
	<p>Why is it necessary to summarise project work findings?</p>
	<p>The findings of the project work should be summarised from the data analysed. A summary of findings is a concise and clear list of the main project work findings or results. Normally, the summary is presented at the end of the project work report. It aims to give readers a brief overview of the project's findings. The summary of project work findings is used to draw project conclusions and write recommendations for improvement.</p>

### 2.2.8 Making conclusions and recommendations

The project work findings should be concluded, and recommendations should be made for improvement.

	<ul style="list-style-type: none"><li>(a) Various resources describe how to make a conclusion and recommendations for a project work.</li><li>(b) Explain the role of conclusions and recommendations in conducting project work.</li><li>(c) Make conclusions and recommendations from your project work.</li></ul>
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	<ol style="list-style-type: none"> <li>1. How is the project work conclusion drawn?</li> <li>2. What is the basis for making recommendations?</li> </ol>
	<ol style="list-style-type: none"> <li>(a) What are the challenges of drawing project work conclusions?</li> <li>(b) Why is it essential to come up with project work recommendations?</li> </ol>
	<p>A conclusion is a final statement reached through reasoning from an activity, procedure or information. The project conclusion is reached after analysing and summarising project work findings. A conclusion is made on project work results based on the problem identified, data collected, analysed and summarised findings. After making conclusions, researchers offer recommendations for action or improvement.</p>
	<p>The problem may come from different sources from the environment. These include social needs such as economic, political, security, diseases and physical phenomena. The physical phenomena may include hazards due to environmental changes.</p> <p><b>Stating the problem</b> The identified problem should be clearly stated to give room for the entire community to understand it and the rationale for dealing with it.</p> <p><b>Formulating hypotheses or research questions</b> The occurrence of a problem may arise for various reasons. It is important to speculate the possible causes of the conflicting situation. The speculations are short-listed accordingly to produce hypotheses and research questions. These hypotheses or questions will be tested during data analysis and making inferences.</p> <p><b>Reviewing literature</b> Various texts, references or other sources of information, such as websites, are consulted to clarify the problem in place. A literature review also helps to find out what other people have done and how they have done similar projects. The citation statements from the sources are important to be noted for record keeping.</p> <p><b>Methodology</b> In conducting a project, you should consider the following aspects: research design, study area and sampling.</p>

**Collecting data**

Data is the information needed to test hypotheses or answer questions in project work. Various methods and tools are used to collect data.

**Analysing data**

Data analysis depends on the methods and tools used. For example, the use of questionnaires requires quantitative methods of analysing data. For qualitative data, recorded data is transcribed into writings, and analysis is done by reading information several times and organising it into themes.

**Interpreting data**

To make meaning out of the collected and analysed data, relate such data to the hypotheses or project questions.

**Conclusion and recommendations**

The conclusion is made on project results based on the problem identified, and recommendations are put forward for improvement.






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## UNIT THREE

### Managing and evaluating projects

On the one hand, project work management encompasses planning, executing and completing a specific task or objective within a defined timeframe and budget. Such processes are unique and aim to achieve specific goals. These goals include conducting research to solve a societal problem or developing a prototype for some specific functions. On the other hand, evaluation is inevitable at any stage of project work. This task systematically and objectively assesses the project's performance, effectiveness and outcomes. Project evaluation aims to determine the extent to which each stage of the project has achieved its goals. It also helps identify strengths and weaknesses and provides insights for future improvements. This unit introduces you to the concept of project management and evaluation.




	The competencies developed in this unit will enable you to: (a) Manage project work effectively (b) Assess project work (c) Evaluate project work
	1. What do I need to know to manage a project effectively? 2. What kind of activities can be useful in learning how to assess and evaluate project work?
	Textbooks, reference books, syllabus, ICT facilities, writing materials

#### 3.1 Managing project work

Effective management of project work is a crucial skill for making the project successful. It involves careful planning, organisation and coordination to ensure successful project outcomes. Whether managing a team, creating project timelines, tracking budgets, reporting or disseminating findings, navigating these aspects is crucial for successfully conducting any project work. This subunit offers insights into project management by delving into key areas of project management. When formulating a project idea, it is important to identify its practicability. This will allow the investigator to set project objectives and align the project to the intended societal needs and expectations. Another important aspect of project management is building a project team whereby a team with diverse

knowledge and skills is important for achieving the project outcomes. In this subunit, we discuss the strategies for identifying project team members, effective team management, fostering collaboration and addressing potential conflicts. This subunit also aims to equip learners with a roadmap to effectively navigate the project work management process, which involves planning project work activities and budget management.

### 3.1.1 Identifying project work practicability

	<ul style="list-style-type: none"> <li>(a) Using internet resources and other references, learn about project work practicability and perform the following tasks:               <ul style="list-style-type: none"> <li>(i) Describe the concepts of project work feasibility and viability.</li> <li>(ii) Discuss the key factors that influence the practicability of project work.</li> </ul> </li> <li>(b) Identify and discuss the necessary criteria for assessing project work practicability.</li> <li>(c) Consider any project scenario and assess its practicability. Share your assessment with your peers and discuss the conclusions reached.</li> <li>(d) Develop your project work idea, assess its practicability and create a portfolio for the project.</li> </ul>
	<ol style="list-style-type: none"> <li>1. Why is it necessary to conduct a feasibility study at the initial stage of the project work?</li> <li>2. What are the important factors that can influence the practicability of the project work?</li> <li>3. What are the key criteria for assessing the project's practicability?</li> <li>4. How can you assess the practicability of the project work?</li> </ol>
	<ul style="list-style-type: none"> <li>(a) What have you learnt from this activity?</li> <li>(b) How can the activities performed in this section help to improve your skills in identifying the project's practicability?</li> <li>(c) What challenges did you face when performing this activity? Suggest ways to overcome them.</li> </ul>



Project work practicability measures the possibility of implementing the proposed project idea. It refers to the feasibility and viability of the project work. Determining the work practicability involves assessing whether a project is technically achievable, financially viable and can be implemented within the available resources and constraints.

Evaluating project practicability is crucial as it helps determine whether a project is worth pursuing and can achieve the intended objectives while being executed within the available resources and constraints. Although many factors may influence the project work practicability, the following key aspects are worth considering when assessing the project work practicability:

- (a) **Technical feasibility:** This aspect considers whether the project can be implemented technically. It involves assessing the availability of the knowledge, skills and technology required to execute the project successfully.
- (b) **Financial viability:** This aspect examines the financial ability to implement the proposed project. It includes estimating the project's costs, such as purchasing project materials, conducting project work activities and comparing them to the available financial resources.
- (c) **Resource availability:** This aspect is concerned with assessing the availability of resources, including human resources, materials and infrastructure. It involves considering whether personnel with the required skills and expertise are available. Besides, one should consider the availability and accessibility of raw materials, equipment, technology and physical infrastructure for the project work implementation. This aspect will ensure efficiency and effectiveness in executing the proposed project work.
- (d) **Timeframe and schedule:** Consideration of the project's timeframe and schedule is essential in evaluating the project work's practicability. It involves estimating the time required for project completion, including various stages and activities. Assessing the project's timeline helps determine whether the project can be accomplished within the desired timeframe and whether any critical dependencies or constraints exist. It also helps to identify potential delays that may affect the project implementation.




- (e) **Legal and regulatory compliance:** The project must comply with relevant laws, regulations, permits and standards. Before conducting a project, it is necessary to ensure that it aligns with environmental regulations, safety standards and other applicable regulations.
- (f) **Risk analysis:** This aspect involves identifying and assessing potential risks and uncertainties that may impact project implementation. Risks can include technical, financial, market, environmental, or other external factors. Analysing risks helps identify mitigation strategies and determine whether the project's potential benefits outweigh the associated risks.

These factors are considered essential criteria for assessing the practicability of the project work. A systematic assessment involving relevant stakeholders and experts ensures a realistic and informed evaluation. The investigator can make well-informed decisions regarding project initiation, activities and resource allocation by assessing project practicability.



### 3.1.2 Creating a plan



- (a) Use online materials and other references to learn about project plans and perform the following tasks;
  - (i) Discuss the concepts of project work planning and project work scope
  - (ii) Describe the meaning of project plans and the Work Breakdown Structure (WBS) as the project planning model
  - (iii) Discuss the importance of project work planning and its role in enhancing successful project execution
- (b) Discuss the key elements for developing an effective project work plan.
- (c) In groups, propose a fictional project work plan within a specified timeframe.

	<ol style="list-style-type: none"> <li>1. What is the difference between a project work plan and scope? How are they related?</li> <li>2. What is the role of project work planning?</li> <li>3. Describe the key factors that should be considered when planning project work.</li> <li>4. How can you develop an effective plan for your project work?</li> </ol>
	<ol style="list-style-type: none"> <li>(a) What have you learnt from this activity?</li> <li>(b) How can the activities performed in this section help to improve your skills in planning a project work?</li> <li>(c) What challenges did you face when planning a project? Suggest the ways to overcome the stated challenges.</li> </ol>
	<p>Effective project work planning is an important phase of the project management process. It involves defining project work objectives, determining the scope and developing a comprehensive roadmap for successful execution. Essentially, project work plans form a foundation for effective project work management as they provide a structured approach to guide all related activities, allocate resources and manage project risks.</p>

### 3.1.3 Creating a schedule

	<ol style="list-style-type: none"> <li>(a) Use online materials and other references to learn about the project work schedule. Then,       <ol style="list-style-type: none"> <li>(i) Identify the important steps for creating a meaningful project schedule.</li> <li>(ii) Discuss the importance of creating an effective project schedule when conducting a project.</li> </ol> </li> <li>(b) Find different project work time schedules, study them and identify their strengths and weaknesses.</li> <li>(c) Develop a schedule for your project.</li> </ol>
	<ol style="list-style-type: none"> <li>1. Describe the concept of a project work schedule.</li> <li>2. What is the role of the work schedule when executing the project?</li> <li>3. Describe the key steps of creating a project work schedule.</li> </ol>



- (a) What have you learnt from this activity?
- (b) After performing this activity, how have you improved your ability to create a schedule for your project work?
- (c) What can you do to strengthen your skills in creating project work schedules?







Creating a project work schedule is critical for project planning and management. It involves determining the start and end dates of project work activities. It also includes estimating their durations and organising them logically to ensure the timely completion of the project work. The following are key steps in creating a project work schedule:

- (a) **Define project activities:** This step involves identifying all the tasks or activities necessary to complete the project. This step requires breaking down the project into smaller, manageable components and creating a comprehensive list of activities. All activities must be specific, measurable, achievable, relevant and time-bound (SMART).
- (b) **Sequence activities:** In this step, determine the logical order in which project activities should be executed. It also involves identifying any dependencies or relationships between activities. For example, the activities that should be completed before others and those that should be executed in parallel or independently.
- (c) **Estimate activity durations:** This step estimates the time required to complete each activity. It considers task complexity, available resources and potential risks or uncertainties. In this step, involving team members or subject matter experts to obtain accurate and realistic estimates is helpful.
- (d) **Develop the project schedule:** In this step, one visualises the project schedule using the activity list, sequence and duration estimates. One of the most common tools for this purpose is a Gantt chart. The Gantt chart displays project activities as horizontal bars along a timeline, with their start and end dates. It helps visualise the project schedule, identify critical paths and manage dependencies.

- (e) Identify milestones: Milestones are tangible achievements within the project work that mark its progress. They represent key deliverables of the project work. In this step, an investigator should identify the project milestones in the schedule to provide reference points and facilitate tracking and communication of project progress.
- (f) Review and refine the schedule: Once the initial project schedule is created, the investigator must review it with key stakeholders, project team members and subject matter experts. Their input and feedback are vital to ensure the schedule is realistic and comprehensive while aligning with project objectives. The review should also consider recognising unexpected events or delays during the project work implementation and include additional time in the schedule to account for unforeseen circumstances. This step will allow flexibility and help to mitigate the impact of any delays that may arise.
- (g) Monitor and update the schedule: The progress of project activities should be continuously monitored throughout the project. This step aims to ensure that the progress of activities is in line with the planned schedule. Investigators should update the schedule as needed to reflect any changes, delays, or adjustments. This ensures the project remains on track and allows for proactively managing potential issues.

Generally, a project schedule must be carefully thought out, collaboratively created and continuously monitored and adjusted. It acts as a project roadmap, giving the project team and stakeholders a precise timeframe and order of tasks. Effective resource management, meeting deadlines, and successful project completion are all made possible by a well-developed project schedule.

### 3.1.4 Creating a budget





	<ul style="list-style-type: none"><li>(a) Discuss the concept of a project work budget.</li><li>(b) Identify the key steps for formulating a project work budget.</li><li>(c) Develop a budget for your own project work.</li></ul>
	<ul style="list-style-type: none"><li>1. Describe the concept of a project work budget.</li><li>2. What is the importance of a budget in executing a project work?</li><li>3. Describe the key steps to follow when creating a project work budget.</li></ul>
	<ul style="list-style-type: none"><li>(a) What have you learnt from this activity?</li><li>(b) After performing this activity, how have you improved your ability to create a project work budget?</li><li>(c) How can you enhance your skills in creating a project work budget?</li><li>(d) Why is it important to develop a project work budget?</li></ul>
	<p>Developing and overseeing a budget is one of the most critical aspects of project planning and control. A well-defined budget ensures the project stays financially feasible, tracks project spending and allocates resources efficiently. The following are the main procedures for developing and overseeing a project work budget:</p> <ul style="list-style-type: none"><li>(a) Define the project work's scope: The first step is to clearly define the scope of the project work, including its objectives, deliverables and key activities. This provides a foundation for estimating and allocating resources accurately.</li><li>(b) Identify project work costs: This step involves identifying the costs associated with the project work. These costs can be categorised into personnel, equipment and material, support services and other contingency expenses. The costs should also be indicated as direct costs (those specifically incurred by the project work) and indirect costs.</li></ul>

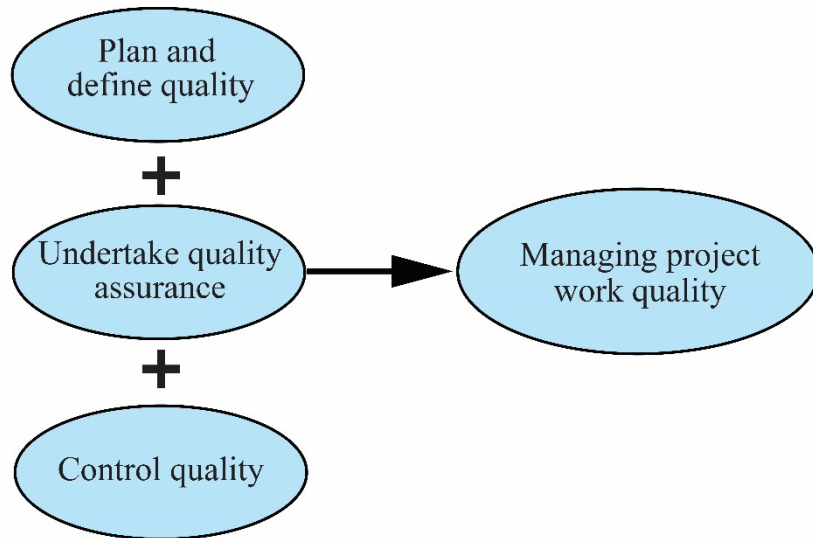
- (c) Estimate project work costs: Identify the costs for each project component. This involves breaking the project activities into smaller tasks and estimating the resources needed for each task. You must work closely with subject matter experts, team members and relevant stakeholders to obtain accurate cost estimates.
- (d) Develop the budget: After estimating the costs, create a comprehensive budget for the entire project work. Organise the budget by cost categories, including personnel, equipment and materials. Ensure that the budget aligns with the project timeline and reflects the project's scope and objectives. You should also consider potential risks and uncertainties by including contingency funds in the budget.
- (e) Obtain approvals: Present the budget to relevant stakeholders, such as other team members and project work supervisors, for review and approval. Seek their input and address any concerns or questions raised. Once approved, the budget becomes the financial baseline for your project work.
- (f) Control expenses and manage changes: During the project implementation, you must regularly monitor and track project expenses against the budget. Including detailed records of all project-related expenditures and financial transactions in the special portfolio developed for the project work is necessary. The investigator may use project management tools or financial software to facilitate expense tracking and reporting. Furthermore, you must manage any changes arising from unforeseen events and report the budget changes to the project work stakeholders.
- (g) Review and close the budget: At the end of the project, you should thoroughly review the budget to evaluate its accuracy and effectiveness. A comparison of actual expenses with the budgeted amounts must be made, including analysing the reasons for any significant variances. Lessons learned and best practices must be documented for future reference.

A project budget must be created and managed, which requires meticulous planning, teamwork and compliant financial monitoring. As the project progresses, it is crucial to periodically review and revise the budget to ensure that resources are used effectively and project funds are appropriately managed.

### 3.1.5 Conducting quality assurance

Project work should be conducted based on learning standards. This poses the need for learners to develop skills in assuring and maintaining excellent work quality.

	<p>Using online materials, search for various notes on project work quality assurance. Note down what you have learnt. Then, share the following with your fellows:</p> <ul style="list-style-type: none"><li>(a) The meaning of project work quality assurance</li><li>(b) Importance of project work quality assurance</li><li>(c) Ways to ensure the quality of the project work</li></ul>
	<ol style="list-style-type: none"><li>1. What does project work quality assurance mean?</li><li>2. How will you ensure that your project work is of good quality?</li><li>3. What are the strategies for maintaining the quality of your project work?</li></ol>
	<ul style="list-style-type: none"><li>(a) Why is it crucial to ensure and control the quality of project work?</li><li>(b) How are the skills developed from this activity useful in your learning process?</li></ul>
	<p>Project work quality assurance involves a series of activities designed to ensure the project's process meets the expected outcomes at acceptable standards. There are two important aspects in managing the quality of a project work:</p> <ul style="list-style-type: none"><li>(a) <b>Quality assurance:</b> This is carried out during the project work implementation to ensure that the project work processes are constantly improved.</li><li>(b) <b>Quality control:</b> This is carried out during monitoring and evaluation to ensure that the quality requirements of a project work are met. Figure 3.1 summarises the important aspects of managing a project's quality.</li></ul>



**Figure 3.1:** Aspects of managing the quality of project work

There must be quality planning, quality control, quality assurance and quality improvement to ensure the quality of project work. Quality assurance is vital for successful project work management. The following are the benefits of project work quality assurance management.

- (a) To ensure the project work requirements are met. This can be done using a quality control checklist, as shown in Table 3.1.

**Table 3.1:** Quality assurance checklist template

Project work requirement	YES	NO	NA	Comments





- (b) Quality control saves resources because it reduces the need for overdoing or underdoing.
- (c) It provides a framework for constant quality improvement.
- (d) Quality control ensures that challenges and errors are identified and corrected promptly.
- (e) Quality control can reduce various risks associated with the implementation of the project.
- (f) Quality control also helps in time management as it involves quality planning.

## 3.2 Assessment and evaluation of project work

Assessment and evaluation of a project work is crucial for understanding the success or failure of the project work. This section describes the assessment and evaluation of project work. The section focuses on the meaning of project assessment and evaluation and its types and importance. Important criteria for project work assessment and evaluation are also discussed.

### 3.2.1 Assessing project work

Assessment of the project work is an important undertaking since it ensures the quality of the work. Therefore, learners must develop project work assessment skills. To assess any activity, one should clearly understand the criteria for assessment.

	<ul style="list-style-type: none"><li>(a) Through TIPS, brainstorm the concept of assessment.</li><li>(b) In groups, discuss the types of assessment.</li><li>(c) In groups, list things to consider when assessing project work.</li><li>(d) Use the assessment criteria given in Table 3.2 to assess the project work.</li></ul>
	<ul style="list-style-type: none"><li>1. How can you describe a project work assessment?</li><li>2. What are the necessary criteria for conducting a project work assessment?</li><li>3. What is the procedure for carrying out a project work assessment?</li></ul>
	<ul style="list-style-type: none"><li>(a) Why is it essential to assess project work?</li><li>(b) What skills have you developed in performing this activity?</li></ul>
	<p>Assessment is an activity that measures the achievement of a programme. The assessment aims to ensure the quality of the project work. The assessment comprises formative and summative assessments. The formative assessment will enable every stage of the project work to be measured for improvement. The summative assessment will be carried out at the end of the project work. The assessment of the project work report will focus on the following criteria described in Table 3.2.</p>

**Table 3.2:** Criteria for project assessment




S/N	Part	Description	Marks (%)
1.	Title	<ul style="list-style-type: none"> <li>• Clarity</li> <li>• Precision</li> <li>• Practicability</li> <li>• Relevancy</li> <li>• Length</li> </ul> <p><b><i>5points@1Mark</i></b></p>	5
2.	Abstract/Summary	<ul style="list-style-type: none"> <li>• Brief and clear description of the project work               <ul style="list-style-type: none"> <li>- Title information</li> <li>- Objectives</li> <li>- Hypothesis/ questions</li> <li>- Methodology</li> <li>- Results,</li> <li>- Analysis,</li> <li>- Conclusion</li> <li>- Recommendation</li> </ul> </li> </ul> <p><b><i>8 points@ 1Mark</i></b></p>	8
3.	Introduction	<p>To give a brief on:</p> <ul style="list-style-type: none"> <li>• The key literature review on the unit was based on other researchers' scholarly work, bringing the unit into perspective while raising issues to be addressed in the study.</li> <li>• Statement of the problem with a clear gap</li> <li>• Clearly stated objective</li> <li>• Directional hypotheses/questions</li> <li>• Significance of the project work <b><i>5 points @3Marks</i></b></li> </ul>	15

S/N	Part	Description	Marks (%)
4.	Literature Review	<ul style="list-style-type: none"> <li>• Theoretical literature</li> <li>• Empirical literature</li> <li>• Coverage of all aspects of the project work</li> <li>• Up-to-date literature</li> <li>• Appropriate citation</li> </ul>	15
5.	Methodology	<ul style="list-style-type: none"> <li>• Clear procedures</li> <li>• Design</li> <li>• Data recording/collection procedure</li> <li>• Sampling procedure</li> <li>• Data presentation (table, graph, text)</li> </ul> <p><i>5 points @ 3Marks</i></p>	15
6.	Data analysis and results	<ul style="list-style-type: none"> <li>• Relevance of data</li> <li>• Scales</li> <li>• Accuracy of data</li> <li>• Analytical methods</li> <li>• Formulas/tools/programmes</li> </ul> <p><i>5 points @3Marks</i></p>	15
7.	Discussion	<ul style="list-style-type: none"> <li>• Comparison of findings (results) with earlier work or the existing one.</li> <li>• Incorporation of the results in the discussion</li> <li>• Implication of the data.</li> </ul> <p><i>3 Points @ 3.3 Marks</i></p>	10

S/N	Part	Description	Marks (%)
8.	Conclusion and recommendation	<ul style="list-style-type: none"> <li>• A summary of the major outcomes, students' views and the way forward</li> </ul>	5
9.	Organisation	<ul style="list-style-type: none"> <li>• Proper organisation of work</li> <li>• Neatness</li> <li>• Clear presentation of figures and tables</li> </ul>	5
10.	References	<ul style="list-style-type: none"> <li>• Well-cited references (APA style, 7<sup>th</sup> Edition)</li> </ul>	4
11.	Appendix	<ul style="list-style-type: none"> <li>• Tables of raw data, pictures, attachments and tools, if applicable</li> </ul>	3

### 3.2.2 Evaluating project work

Evaluating project work is important since it gives the status of the project work quality. The status may be at a good value or otherwise.

	<p>By using ICT tools, study and discuss the following:</p> <ul style="list-style-type: none"> <li>(i) The concept of project work evaluation</li> <li>(ii) Types of project work evaluation</li> <li>(iii) Procedure for evaluating project work</li> </ul>
	<ul style="list-style-type: none"> <li>(i) How do you describe project work evaluation?</li> <li>(ii) What is the procedure for carrying out a project work evaluation?</li> </ul>
	<p>Why is it important to evaluate project work?</p>



Evaluation is a process that helps to see the progress and performance of project work. The evaluation outcome allows one to judge the status of the project work. Such judgment can be used to maintain or improve the quality of the project work. There are two broad categories of project work evaluation: formative and summative evaluation. Formative evaluations are conducted during the implementation of the project work. This is useful since it helps to give direction on the best way of achieving the desired goals or improving the process of project work implementation. The procedure for project work evaluation comprises steps like planning, implementing, completing and reporting evaluation findings. A rubric is usually developed as a tool for conducting a fair and professional evaluation of the project work.

Table 3.3 is an example rubric that can be used to evaluate the project work.

**Table 3.3:** A rubric for evaluating a project work

Areas of assessment	Attributes	Excellent	Good	Average	Below average	Score
<b>TITLE (05 marks )</b>	<ul style="list-style-type: none"> <li>• Clarity</li> <li>• Precision</li> <li>• Practicability</li> <li>• Relevance</li> <li>• Length</li> </ul>	The title has all five attributes <b>(5-4 marks )</b>	The title has at least 4 attributes <b>(3-2 marks)</b>	The title has at least 3 attributes <b>(1 marks)</b>	The title has less than 2 attributes	
<b>ABSTRACT (08marks)</b>	<ul style="list-style-type: none"> <li>• Brief and clear description of the project work</li> <li>• Title information</li> <li>• Objectives</li> <li>• Hypothesis/ questions</li> <li>• Methodology</li> <li>• Results,</li> <li>• Analysis,</li> <li>• Conclusion</li> </ul>	The abstract has all eight attributes <b>(8-6 marks )</b>	The abstract has at least six attributes <b>(5-4 marks)</b>	The abstract has at least four attributes <b>(3-2 marks)</b>	The abstract has less than four attributes <b>(Below 2 marks )</b>	
<b>INTRODUCTION (15 marks)</b>	<ul style="list-style-type: none"> <li>• Key literature review on the unit concerned</li> <li>• Statement of the problem</li> </ul>	The introduction has all six attributes. <b>(15-13 marks)</b>	The introduction has at least four attributes <b>(12-9 marks)</b>	The introduction has at least three attributes. <b>(8-5 marks )</b>	The introduction has less than three attributes. <b>(below 4 marks)</b>	

	<p>with a clear gap</p> <ul style="list-style-type: none"> <li>Clearly stated objective</li> <li>Directional</li> <li>Hypothesis/questions</li> <li>Significance of the project work</li> </ul>					
<p><b>LITERATURE REVIEW (15 marks)</b></p>	<ul style="list-style-type: none"> <li>Theoretical literature</li> <li>Empirical literature</li> <li>Coverage of all aspects of the project work</li> <li>Up-to-date literature</li> <li>Appropriate citation.</li> </ul>	<p>The review has all five attributes. <b>(15-12 marks)</b></p>	<p>The review has all four attributes. <b>(11-9marks)</b></p>	<p>The review has all three attributes <b>(8-5 marks )</b></p>	<p>The review has less than three attributes <b>(below 4 marks)</b></p>	
<p><b>METHODOLOGY (15 marks)</b></p>	<ul style="list-style-type: none"> <li>Clear procedures</li> <li>Design</li> <li>Data recording</li> <li>Data collection procedure</li> </ul>	<p>The methodology has all six attributes <b>(15-12 marks)</b></p>	<p>The methodology has all four attributes <b>(11-9 marks)</b></p>	<p>The methodology has three attributes <b>(8-5 marks)</b></p>	<p>The methodology has less than three attribute <b>(below 4 marks)</b></p>	



<p><b>CONCLUSION and RECOMMENDATION (05 marks )</b></p>	<ul style="list-style-type: none"> <li>• A summary of major outcomes,</li> <li>• Interpretation of results</li> <li>• Remarks</li> <li>• views</li> <li>• way forward</li> </ul>	<p>Conclusion and recommendation have all five attributes <b>(5-4 marks)</b></p>	<p>Conclusion and recommendation have four attributes <b>(3-2 marks)</b></p>	<p>Conclusion and recommendation have two attributes <b>(1 marks)</b></p>	<p>Conclusion and recommendation have less than two attributes <b>(Below 1 marks )</b></p>
<p><b>ORGANISATION (05 marks)</b></p>	<ul style="list-style-type: none"> <li>• Organisation of project work in the portfolio</li> <li>• Well organised into sections / subsection</li> <li>• Logical organisation</li> <li>• Neatness</li> <li>• Clear presentation of figures and tables</li> </ul>	<p>Project organisation has all five attributes <b>(5-4 marks)</b></p>	<p>Project organisation has four attributes <b>(3-2 marks)</b></p>	<p>Project organisation has three attributes <b>(1 marks)</b></p>	<p>Project organisation has less than three attributes <b>(Below 1 marks)</b></p>
<p><b>REFERENCES (04 marks )</b></p>	<ul style="list-style-type: none"> <li>• Presence of references</li> </ul>	<p>References have all three attributes. <b>4 marks )</b></p>	<p>References have two attributes. <b>(3 marks)</b></p>	<p>References have one attribute. <b>(2 marks)</b></p>	<p>No references <b>(Below 2 marks)</b></p>

	<ul style="list-style-type: none"> <li>Follow a recognised style e.g. APA</li> <li>Aligned with what has been cited.</li> </ul>							
APPENDICES (03 marks )	<ul style="list-style-type: none"> <li>Tables of raw data</li> <li>Attachments of data collection tools</li> <li>Authorisation letter</li> <li>Budget</li> <li>Work schedule</li> </ul>	At least four attributes <b>(3 marks)</b>	At least three attributes <b>(2 marks )</b>	At least two attributes <b>(1 mark)</b>	Less than two attributes <b>(Below 1 mark)</b>			<b>100</b>
<b>TOTAL</b>								

**Project Judgment Criteria** - Excellent (100-80), Good (79-60), Average (59-40), Below average (less than 40)



On the one hand, assessment is an activity that measures the achievement of a programme. The assessment aims to ensure the quality of the project work. The assessment comprises formative and summative assessments. The formative assessment will enable every stage of the project work to be measured for improvement. The summative assessment will be carried out at the end of the project work. The assessment of the project work report is based on project work assessment criteria: the title, abstract information, introduction, methodology used to conduct a project work, data analysis tools and methods used, how data are interpreted (discussion), conclusion and recommendation. The assessment will also check the presentation of references and appendices. Lastly, general presentation and organisation of work in a portfolio.

On the other hand, evaluation is a process that helps to see the progress and performance of a project work. The evaluation outcome allows one to judge the status of the project work. Such judgment can be used to maintain or improve the quality of the project work.






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## UNIT FOUR

### Writing and disseminating project work reports

Writing and disseminating a project work report is a means of sharing the findings of a project work. Any person who conducts project work must be equipped with skills in writing and disseminating the report. Therefore, this unit introduces the learner to techniques of writing and disseminating a project work report. Through this unit, you will develop the competence in writing and disseminating project work reports.


	The competencies developed in this unit will enable you to: (i) Write a comprehensive project work report (ii) Disseminate a project work report
	<ol style="list-style-type: none"><li>1. What important concepts should I know to produce a good project work report?</li><li>2. What kind of activities can be useful in learning how to write a project work report?</li><li>3. How will I learn new concepts and activities that are useful in disseminating the project work report?</li></ol>
	Syllabus, textbooks, ICT facilities, writing materials, other reference documents




#### 4.1 Writing a report

Writing a comprehensive report is a fundamental step in conducting a project work report. Learners need to have proper skills for writing a project work report. In this section, you will learn about the different components of a good report of project work. You will also learn how to write a good project work report.

##### 4.1.1 Components of a report

The project work report comprises several components. Each component describes the specific content of the report.

	By using ICT tools, study and discuss the following: (i) The concept of a project work report
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	<p>(ii) The components of a good project work report</p> <p>(iii) Procedure for writing a good project work report</p>
	<p>(i) Describe the concept of a project work report.</p> <p>(ii) What are the key components of a good project work report?</p> <p>(iii) What steps are important to follow when writing project work?</p>
	<p>Why is it essential to write a good project work report?</p>
	<p>Project work report may be presented per the following components:</p> <p>(a) Preliminary information, which consists of</p> <ul style="list-style-type: none"> <li>(i) Cover page: This includes the title of the project report, name of the student, class and year.</li> <li>(ii) Acknowledgements: A few words of thanks to those who contributed to the success of the project work</li> <li>(iii) List of tables: This gives the numbers and titles of each table involved in the report</li> <li>(iv) List of figures: This gives the numbers and titles of all figures involved in the report</li> <li>(v) Abstract/Summary: A brief description of the project work's objectives, methodology, findings and conclusion</li> <li>(vi) Table of contents: List of units with their corresponding page numbers</li> <li>(vii) Body of the report: This consists of several chapters comprehensively describing the project work process.</li> </ul> <p>(b) The body of the project work report consists of:</p> <p><b>Chapter One: Introduction</b></p> <p>This chapter is written to introduce the project work and its objectives. It consists of various sections, including:</p> <p>1.1 Introduction, general overview of the project work, including its scope</p>

- 1.2 Background of the project work
- 1.3 Statement of the problem
- 1.4 Objectives of the project work
- 1.5 Hypothesis/Questions
- 1.6 Significance of the project work refers to the usefulness of the project output
- 1.7 Limitations of the project work and recommendations

### **Chapter Two: Literature review**

This chapter aims to explain the review work done during the project implementation. It is organised according to the specific objectives and methods employed during the implementation of the project work.

### **Chapter Three: Methodology**

This chapter aims to explain the methodology used to achieve the project objectives. It includes the following important sections;

#### 3.1. Project work design and approach

Project design: Case study design, survey design or experimental design

**Project approach:** Includes qualitative or quantitative approach

#### 3.2. Project work data sample: Sample size (coverage of the project work) and sampling procedures/techniques

#### 3.3. Instruments or tools for data collection

#### 3.4. Data analysis procedures: Methods to be used during data collection

### **Chapter Four: data analysis and interpretation**

The section presents what has been obtained from the project work

### **Chapter Five: Summary of project work findings and results**

Project work findings and results are presented with reference to the project objectives and hypotheses/questions. It involves restating the project objectives and hypothesis/questions





### **Section Six: Conclusion and Recommendation**

Include the lesson learnt from project work and suggestions to improve or solve the observed problem.

	<p>At the end of the report, other information is provided, including the references and appendices.</p> <p><b>References:</b> List of readings used in the text of the project work, such as book and online sources, in a proper citation style</p> <p><b>Appendices:</b> Consist of relevant materials used in the study, including data collection tools and ethical clearance letters.</p>
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### 4.1.2 Developing a report

A project work report is written after data presentation and analysis. This requires the following steps to develop a comprehensive project work report.





	<p>(i) Observe different samples of project reports from various sources and identify important components from the observed reports.</p> <p>(ii) Develop your project work report.</p>
	<p>(i) What steps are necessary in writing a project work report?</p> <p>(ii) What are the essential features of a project work report?</p>
	<p>(i) How do the steps of writing a project work help you to produce a good project work report?</p> <p>(ii) Why is it essential to write a project work report?</p>
	<p>The project work report is written after data presentation and analysis. In writing a project report, one should follow all the components of the project work report. The project work report is generally written in past tense. It is a description of what was done and what was found. The project report is a comprehensive document that provides detailed information about the specific project. It contains information about the project's work activities.</p>

### 4.2 Dissemination of the report


Sharing the project work's results, conclusions and suggestions with the appropriate parties requires distributing the report to all relevant parties. It entails effectively and clearly distributing the project report to the target audience. Therefore, a learner must develop skills in disseminating project work reports. Accordingly, you will learn about project work dissemination and its modalities in this subunit.


### 4.2.1 The concept of project work dissemination

Project work findings must be shared with the community members.

	<ul style="list-style-type: none"><li>(i) By using ICT tools, study the concept of project work dissemination.</li><li>(ii) Discuss the importance of project work dissemination.</li><li>(iii) Discuss the key considerations for dissemination of a project work's report.</li></ul>
	<ul style="list-style-type: none"><li>1. What is the meaning of project work findings dissemination?</li><li>2. What are the considerations to make when planning to disseminate the report of your project work report?</li></ul>
	<ul style="list-style-type: none"><li>(i) Why is it important to disseminate your project work report?</li><li>(ii) How has this activity helped you develop the skills of disseminating the project work reports?</li></ul>
	<p>The information gathered from the project may help change the society concerned. Project work report dissemination refers to communicating a report's conclusions, outcomes and suggestions to the stakeholders or intended audience. It entails making the report available to people who can profit from its insights and information and making it easily readable. Transferring knowledge, making decisions and motivating others to take action based on report findings all depend heavily on the efficient dissemination of reports. Therefore, the modality of sharing the critical information obtained from the project work needs to be developed. Such modality can be publishing the findings in journals and displaying the findings in meetings, conferences and online platforms.</p>

### 4.2.2 Modalities of dissemination

	<p>Use online materials and group discussions to learn about various methods of disseminating project reports. Then, do the following:</p> <ul style="list-style-type: none"><li>(i) Describe the common modalities that can be used to disseminate project work reports.</li><li>(ii) Suggest other modalities that can be used to disseminate project work reports.</li></ul>
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	<ol style="list-style-type: none"> <li>1. Which of the modalities listed in this activity are applicable to your environment? Why?</li> <li>2. What are the shortfalls of each project work dissemination modality listed in this activity?</li> </ol>
	<ol style="list-style-type: none"> <li>(i) What did you learn while performing this activity?</li> <li>(ii) Which dissemination modality is of your preference? Why?</li> <li>(iii) What challenges do you expect to face during the dissemination process? How would you tackle the challenges?</li> </ol>
	<p>When it comes to disseminating project work reports, several modalities or methods can be employed to share the report’s findings, outcomes and recommendations effectively. The choice of modalities depends on factors such as the target audience, the nature of the project, available resources and the desired engagement level. Common modalities of project work report dissemination include;</p> <p>Email Distribution, Project Website or Online Portal, Presentations and Workshops, Use of printed copies, Online Document Sharing Platforms, Social Media, Executive Summary or Infographics, Stakeholder Meetings or Conferences, Webinars or Webcasts and Collaborative Platforms or Intranet.</p> <p>It is necessary to consider various modalities to guarantee the thorough and efficient distribution of project work reports. Organisations can optimise the impact and outreach of their project work reports by customizing the approach to the unique requirements and preferences of the target audience.</p>
	<p>Writing and disseminating a project work report is an important phase of the project work. Upon completion of the project data analysis and interpretation, it is necessary to ensure that a report is well-written to effectively communicate the project’s outcomes and reach the intended audience. This requires following a set of steps, including defining the purpose and scope of the project work, gathering and analysing data, structuring the project work report, writing the project work report, reviewing and updating the project work report, designing and formatting the report, proofreading the project work report, deciding the audience for the project work report, decide the modality for sharing the report and finally disseminating the written report.</p>



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