The Government of the Republic of the Union of Myanmar

Ministry of Education

Year 1 Semester 2

EDU1209

Curriculum and Pedagogy Studies: Information and Communication Technology

Student Teacher Textbook

PREFACE

The Myanmar Ministry of Education developed the four-year Education College Curriculum, in line with the pre-service teacher education reform as specified in the National Education Strategic Plan (NESP) 2016–2021.

The Myanmar teacher education curriculum consists of several components: the curriculum framework, syllabi, Student Teacher Textbooks and Teacher Educator Guides. This curriculum for the four-year Education College was designed and structured to align with the Basic Education Curriculum and to equip student teachers with the competencies needed to teach effectively in Myanmar's primary and middle school classrooms. It is based on a Teacher Competency Standards Framework (TCSF) which articulates the expectations for what a teacher should know and be able to do in the classroom.

The curriculum follows a spiral curriculum approach which means that throughout the four years student teachers return to familiar concepts, each time deepening their knowledge and understanding. To achieve this, the four-year Education College programme is divided into two cycles. The first cycle (Year 1 and 2) is repeated at a deeper level in the second cycle (Year 3 and 4) to enable student teachers to return to ideas, experiment with them, and share with their peers a wider range of practices in the classroom, with the option to follow up on specific aspects of their teaching at a deeper level.

The curriculum structure provides an integrated approach where teaching of subject knowledge and understanding educational theories are learnt through a supportive learning process of relevant preparation and practical application and experience. The focus is therefore not just on subject content, but also on the skills and attitudes needed to effectively apply their knowledge, skills, and attitudes in teaching and learning situations, with specific age groups. As the focus is on all components of a 'competency' – knowledge, skills, attitudes and their effective application – it is referred to as a competency-based curriculum.

Accordingly, a competency-based curriculum is learner-centred and adaptive to the changing needs of students, teachers, and society. Where new concepts are learnt, they are then applied and reflected on:

1. Learn (plan what and how to teach);
2. Apply (practise teaching and learning behaviours); and
3. Reflect (evaluate teaching practice).

Beyond the Education College coursework, it is intended that student teacher graduates will be able to take and apply this cycle of 'learn, apply, and reflect' to their own teaching to effectively facilitate the learning and development of Myanmar's next generation.

The Myanmar Education College Curriculum was developed by a Curriculum Core Team (CCT), which is a Ministry of Education-appointed team of Myanmar Education College teacher educators supported by the Ministry of Education, resource persons from the Universities of Education, and a team of national and international experts. Overall guidance of the work was provided by the Department of Higher Education, Ministry of Education.

The curriculum development was also supported by the Strengthening Pre-Service Teacher Education in Myanmar project, with technical assistance from the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and financial contributions from Australia, Finland, and UK Governments. Substantial input to the drafting process was also provided by Japan International Cooperation Agency and the primary education curriculum development team through the Project for Curriculum Reform at Primary Level of Basic Education (CREATE) team.

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HOW TO USE THIS TEXTBOOK

Who will use this ICT Student Teacher Textbook?

This textbook has been designed to guide you, as a student teacher, through Year 1 of the ICT subject. In this textbook, you will find foundational information about ICT. The textbook also includes learning activities and additional resources to help you develop the knowledge, skills, and attitudes you need to be an effective teacher in Myanmar. You will use the textbook as a key resource in class; you can also use the textbook for independent self-study.

While the content in the textbook is addressed to you, as a student teacher, it is also a resource for your teacher educators, who will serve as your facilitators and mentors as you develop key competencies in ICT. Throughout this course, you and your teacher educator will work together, using this textbook as a tool for learning.

When and where does ICT take place?

The ICT subject has been allotted 24 periods of teaching for Year 1 of the four-year Education College degree programme. Classes will be held on your Education College campus.

What is included in the Year 1 ICT textbook?

The textbook organisation and content align with the syllabus of the four-year Education College Curriculum on ICT.

This textbook contains the following topics for Year 1 ICT:

- Introduction
- Basic ICT Concepts
- Computer Application
- Media and Information Literacy and Digital Citizenship
- Internet and Communication
- Media and Information Literacy and Digital Citizenship (Part II)

- Computer Application
- ICT in Education

For each unit, you will be working through learning activities, both individually and with your peers as well as teacher educator, to deepen your knowledge, skills, and attitudes on the topic. The content map below highlights the expected learning outcomes and time allocations for each unit in this textbook.

Content map

Table A. Year 1, Semester 2, ICT Content map

Units	Sub-units	Lessons	Learning Outcomes	TCSF	Periods
4. Media and Information Literacy and Digital Citizenship	4.1. Media and Information Literacy (MIL)	4.1.3. The roles and functions of news media	• Understand how information is transformed and processed into news • Understand what information is expected and should be demanded from news media • Understand the role of news media in a democratic society	A 2.2 A 5.2 B 1.2	1
5. Internet and Communication	5.1. Introduction to Internet	5.1.1. Understanding network, internet and data transmission	• Understand how data is transmitted over the Internet and understand the relevant concepts (such as TCP/IP, URL, DNS and HTTP) • Explain the functions of the hardware required for a network • Describe the common services available in a networked environment (such as internal messaging, resource sharing, and conferencing) • Compare common methods for Internet access in terms of speed, cost, security and availability	A 2.2 A 5.2 B 1.2	1
	5.2 Asynchronous Conferencing	5.2.1. Understanding network, internet and data transmission	• Understand the pros and cons of asynchronous conferencing • Open an email account	A 2.2 A 5.2 B 1.2	1
		5.2.2. Use an email platform	• Use an email platform (such as composing, sending, replying, forwarding, attaching a file, tagging, and filtering)	A 2.2 A 5.2 B 1.2 B 4.1	1

Units	Sub-units	Lessons	Learning Outcomes	TCSF	Periods
6. Media and Information Literacy and Digital Citizenship (Part II)	6.1. Introduction to Digital Citizenship	6.1.1. Risks and threats in the internet and online world	• Understand the threats and risks on using and engaging with the internet • Identify possible threats and risks when engaging with the internet and take preventive measures	A 2.2 A 5.2 B 1.2 C 1.4	1
		6.1.2. Protecting yourself online	• Identify potential threats and risks on using and engaging with the internet • Take preventive measures and steps to protect oneself and keep one's information safe in the internet	A 2.2 A 5.2 B 1.2 C 1.4	1
		6.1.3. Privacy in the online world	• Realise the loss of privacy that might occur when engaging with the internet • Demonstrate the use of main privacy management functions to manage personal information and protect users, especially minors	A 2.2 A 5.2 B 1.2 C 1.4	1
7. Computer Application	7.1. Presentation	7.1.1. Basic functions of presentation 1	• Describe the basic features of a presentation application • Manage layout, design and formatting of presentation slides • Do font, paragraph and text formatting	A 2.2	1
		7.1.2. Basic functions of presentation 2	• Insert and modify table, images and illustrations • Insert links, media files and manage them	A 2.2	1
		7.1.3. Basic functions of presentation 3	• Describe and perform the basic functions of Microsoft PowerPoint to create a presentation file • Print a presentation file	A 2.2	1

Units	Sub-units	Lessons	Learning Outcomes	TCSF	Periods
8. ICT in Education	8.1. ICT in Education	8.1.1. ICT in teaching preparation and collaboration, active teaching and learning, and assessments	• Understand the importance of collaboration among teachers using ICT • Understand the importance of active teaching and learning facilitated by ICT • Understand the importance of different types of assessments facilitated by ICT	A 2.2 B 2.1 B 4.1	1
		8.1.2. ICT in professional development and school management	• Understand the importance of professional development facilitated by ICT • Understand the usage of e-portfolio • Understand how ICT can facilitate school management	A 2.2 D 2.1 D 3.1	1
Total Number of Periods					12

This course prepares student teachers in Education Colleges to learn ICT under the learning area Curriculum and Pedagogical Studies, Course 2.1. Teaching the Basic Education Curriculum and Course 2.2. Mastering teaching as described in the Education College Curriculum Framework.

While there is an ICT subject in middle schools, there is no single ICT subject in the primary schools but primary schools in different regions and states in Myanmar may adopt a Local Curriculum which may include some elements of ICT, depending on the context in the relevant regions and states.

The purpose of this course is to provide student teachers with basic knowledge of ICT-related concepts and using ICT for teaching, learning and professional development and to prepare them to teach ICT in middle schools and in primary schools (the latter applies if ICT is included in the Local Curriculum). Student teachers will learn about the objectives of teaching ICT, the ICT curriculum in basic education and Education College and other strands including basic ICT concepts, media and information literacy and digital citizenship, computer applications, internet and communication, and ICT in education. The course contains learning activities that will help student teachers to remember and gain a deeper understanding of the content and apply ICT tools in their teaching and learning context.

Basic Education Curriculum Objectives

The aims of the Basic Education Curriculum are as follows:

After the completion of basic education, students will be able to:

a) Attend the school until the completion of basic education.
b) Develop 'union spirit' and appreciate, maintain, and disseminate languages and literatures, cultures, arts and traditional customs of all national groups.
c) Become good citizens with well-developed five strengths including critical thinking skills, communication skills and social skills.
d) Apply their civic and democratic in daily lives, and become good citizens who abide by laws.
e) Be competent in Myanmar language which is the official language of the Republic of the Union of Myanmar and develop their skills in respective ethnic language and English.
f) Develop foundational knowledge and skills for higher learning and technical and vocational education.
g) Develop sound body and sportsmanship through participation in Physical Education activities and school health activities, and apply health knowledge in daily lives.
h) Appreciate and maintain natural environment and materialise its sustainability.
i) Become global citizens with awareness and appreciation of human diversity and abilities to practice basic knowledge of peace in their daily lives.
j) Take pride in being a citizen of the Union of Myanmar.

Note: According to the Basic Education Law, the aims of basic education will be mentioned.

Teacher competencies in focus

The content of this textbook is based on the Myanmar Teacher Competency Standards Framework (TCSF), which articulates the expectations for what you should know and be able to do in the classroom. The teacher competencies in focus for ICT include:

Table B. ICT Teacher competencies in focus

Competency standard	Minimum requirement	Indicator(s)
A2 Know appropriate use of educational technologies	A2.2 Demonstrate understanding of appropriate use of Information and Communication Technology (ICT) in teaching and learning	A2.2.1 Describe the function and purpose of online and offline educational tools and resources to support the teaching and learning process A2.2.2 Evaluate and match available online and offline ICT tools and materials to curriculum content and pedagogical strategies, including online and offline ICTs A2.2.3 Describe and demonstrate the understanding of basic concepts and principles of media and information literacy
A5 Know the subject content	A5.2 Demonstrate understanding of how to vary delivery of subject content to meet students' learning needs and the learning context.	A5.2.1 Describe ways to contextualise learning activities for the age, language, ability and culture of students to develop understanding of subject related principles, ideas and concepts.
B1 Teach curriculum content using various teaching strategies	B1.2 Demonstrate capacity to apply educational technologies and different strategies for teaching and learning	B1.2.1 Use teaching methods and learning strategies appropriate for the class – culture, size and type
B2 Assess, monitor, and report on students' learning	B2.1 Demonstrate capacity to monitor and assess student learning	B2.1.2 Use assessment information to plan lessons
B4 Work together with other teachers, parents, and community	B4.1 Demonstrate strategies for working together with other teachers, parents, and the local community to improve the learning environment for students	B4.1.1 Speak positively to others about school culture and the primary curriculum to promote understanding among parents B4.1.2 Describe strategies to promote parents' involvement in their child's learning at school, at home and in the community
C1 Service to Profession	C1.4 Demonstrate responsibility and accountability for the use of education resources	C1.4.1 Use school supplies and resources appropriately
D2 Engage with colleagues in improving teaching practice	D2.1 Improve own teaching practice through learning from other teachers and professional development opportunities	D2.1.3 Establish goals for own professional development as a teacher
D3 Participate in professional learning to improve teaching practice	D3.1 Demonstrate understanding of the importance of inquiry and research-based learning to improve teaching practice	D3.1.2 Search and analyse online or offline information on current trends and research-based practices in primary education and for specific subjects taught to improve one's own content knowledge and teaching practice

Source: Myanmar Teacher Competency Standards Framework (TCSF), Beginning Teachers, Draft Version 3.2. (May 2019) (pp 30 – 36)

How do I use this textbook?

You can use this textbook both for your own self-study and as an in-class resource for learning activities facilitated by your teacher educator. Each unit in the textbook includes:

Expected learning outcomes: These are listed at the beginning of each unit and at the beginning of each lesson. The expected learning outcomes indicate what you should know and be able to do by the end of the lesson or unit.

Learning content: The learning content for each unit is broken down into units and lessons that cover subject content knowledge that is important for you to know.

Learning activities: The learning activities included in the textbook are individual activities that you can do to help reinforce and deepen your knowledge and understanding of a topic. Your teacher educator will also facilitate learning activities during class. These may be individual, partner, small group, or whole class activities designed to help you achieve the learning outcomes for each lesson.

Unit Summary: At the end of the unit, there is a brief summary of the main points of the unit to help you review and remember the most important information.

Review questions: You can use the unit review questions to test your own understanding of the unit content, or to help you study for an exam.

Further reading: Each unit lists suggestions of additional resources on the topic. You can look these up in the library, on the internet, or in your Education College's online learning portal to learn more about the topic.

Unit reflection: Taking the time to deliberately think about, or reflect, on what you have learned will help you remember and apply that learning, and make connections with other subject areas and real-life. Each unit ends with some suggestions on how you can reflect and follow-up on what you have learnt in the unit.

At the end of this textbook, you will find a **Glossary** with the definitions of words found throughout the textbook that might be new to you. These words are listed in alphabetical order. You will also find a list of all the **Bibliography,** which are the original sources of information used throughout the textbook.

Remember, your teacher educator is there to help facilitate your learning in this course. If there is material you do not understand in the textbook, be sure to ask your teacher educator, or your classmates, for help. As a student teacher, you are part of a community of collaborative learning within your Education College as you work – together with your peers and guided by your teacher educators – to earn your teaching qualification.

Unit 4

Media and Information Literacy and Digital Citizenship[1]

In this unit you will be introduced to the principles and basic concepts of Media and Information Literacy. You will learn the competencies that a **media** and information literate person should have and why it is important that teachers and students are media and information literate. The unit will take you through the different media and information providers and the functions and roles that they play in a democratic society.

Expected learning outcomes

By the end of this unit, you will be able to:

- Explain what Media and Information Literacy is and why it is important for a teacher (including but not limited to teaching) in primary school;
- Understand the difference between types of information providers and types of media;
- Understand the functions of the different media and information providers and the role they play in a democracy;
- Understand how information is transformed and processed into news;
- Understand what information is expected and should be demanded from news media; and
- Understand the role of news media in a democratic society.

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[1] This is the continuous lesson under *Unit 4. Media and Information Literacy and Digital Citizenship*. During Semester 1, *4.1.1. Understanding the principles of Media and Information Literacy* and *4.1.2. The roles and functions of Media and Information providers* have been covered.

4.1. Media and Information Literacy (MIL)

This sub unit is divided into three different lessons. 4.1.1. provides a general overview of what Media and Information Literacy is, and its importance when teaching and learning about ICTS and through ICTs. Lesson 4.1.2. aims at explaining the different roles that the media and the information providers play in our society. Lesson 4.1.3. is devoted to one specific type of media, news media, and its importance in democratic societies.

4.1.3.
The roles and functions of news media

Expected learning outcomes

By the end of the lesson, you will be able to:
- Understand how information is transformed and processed into news;
- Understand what information is expected and should be demanded from news media; and
- Understand the role of news media in a democratic society.

What is news?

Nowadays, we are exposed to a large amount of information. We receive and consume information every day through TV, radio, newspapers, social media, our friends, our teachers, etc. Much of that information is channeled to us in the form of news. The main function of media, tends to be, to provide news; such as the case of newspapers and news shows in TV and Radio. One of the most important types of media are the news media.

But what exactly is the news? News provides information that is new, important to the public, and also interesting. But there are some factors that determine what information becomes news. These factors include:

Location: The location where an event happens will determine its value as news. An event that happens in your own hometown may be more important to you than an event that happens in a city that is 100 miles away from your hometown. For example, if there is a cyclone coming towards your state or region, it is important for you to know information surrounding the cyclone so that you can take measures to minimise the damage that will occur to yourself and your loved ones.

Impact and importance: The importance of the information based on how it impacts the life of people can be a determining factor on whether this information will be processed for news. If the price of the rice goes up in the market, it will affect the livelihoods of people who will need to allocate more money to buy the same amount of rice. Therefore, this information also is likely to become news in several mediums so as to inform the public.

Timeliness: Some information can be time sensitive. It can be imperative that the information becomes available to the public in a timely manner, so that they can make decisions accordingly. For example, if there is heavy rain forecast that can cause flooding, it is important that this information is provided in the news, so that people living in the areas that might be affected can prepare accordingly.

Unusual/human interest: This refers to an event that rarely happens in a given context, and therefore, it becomes of interest to the public. This can refer to a mother who gives birth to octuplets. This situation is not common and rarely happens, therefore, it will become news.

These are just some of the criteria that define factors which can lead to certain information pieces becoming news, but there can be a myriad of other factors that determine whether certain information is worthy of becoming news. The most important element of the news is its truthfulness. News must be, above all, truthful. To ensure its truthfulness, news media outlets have to consider all the facts, the voices of the different people involved and ensure that this information is presented in a coherent and clear manner. In other words, news outlets must extract the facts from the reality and present the information in a way that can be easily understood by the public.

When information is presented as news, it must answer the 5 Ws and 1 H:

- WHO? Who was involved?
- WHAT? What happened?
- WHERE? Where did it happen?
- WHEN? When did it happen?
- WHY? Why did it happen?
- HOW? How did it happen?

When a news piece manages to answer all 6 of these questions it enables us to have a clear understanding of what is happening in our communities and in the world beyond our direct experience.

And how is the news produced?

As we already learnt, information can not only be accessed through our direct experience, but also from a variety of different exterior information sources in the form of news. This can be provided in different formats: written text, audio, video, photographs, etc. Journalists, a key term in news related content, are professionals that process information and present it in the format of news. Journalists are individuals behind the scenes that are tasked with researching and presenting news to the public. There are key factors that journalists have to respect when they produce news, and citizens expect that journalists do follow those factors.

Organise information and knowledge: Journalists need to organise information in a way that it is easy to understand for the public. They need to be able to process multiple different voices and sources of information in order to produce a truthful narrative that can be easily digested by the public.

Truthfulness: In order to capture the truth in the most accurate manner, journalists must be able produce a narrative based on facts and be able to capture the voices of all relevant stakeholders involved. For this reason, journalists should clearly state where the information they are providing comes from, which sources they are utilising, and who exactly said what. This allows the public to judge the credibility of the information provided from their own perspective; including its relevance and possible biases.

Public interest: When producing any story, the objective of journalists should be to present and provide the information that people will be interested in or will need in order to take decisions, participate in public affairs, or better understand their reality or certain situations.

Independence: Journalists must avoid biases, external pressures and personal opinions when processing information when wanting to achieve factual based news. They must analyse and present all sides of the story they are telling.

Forum for public criticism: media should, when possible, offer channels and ways for the public to interact with them and respond to news presented. For example, TVs and radios can provide airtime for their audiences to ask questions and provide feedback, while newspapers can publish letters from the public. This allows the public and the audience a channel to provide their views in a certain topic or news.

Accountability: one of the most important roles of journalists and the media is keeping themselves and other accountable. Journalists wield the responsibility and opportunity to monitor, observe and ensure that parties and individuals are held accountable for their actions. These parties and individuals can include government, government officials, big corporations and business people. Journalists should point out any wrong-doing or abuse of power by any actors who would disrupt communities, nations, and the world.

Balancing between privacy and the right to know: Journalists need to consider boundaries surrounding presenting all information. On one hand, there will be situations in which journalists needs to exercise caution and respect parties and individual's privacy over presenting information to the wider public. On the other hand, there will be situations in which journalists will need to consider the importance of providing the truth to the public for the good of the community.

It is important to note that nowadays there are also individual citizens that write and produce news that can be shared through outlets such as personal blogs and social media, but these news pieces, do not constitute professional news. The difference is that journalists have to adhere to a strict code of ethics that is often enforced by official organisations, which makes sure that the factors listed above are followed in the process of producing the news. Only if those factors are met, can news media fulfill the roles and functions that is expected from them, which are:

- Act as channels of information and knowledge through which citizens communicate with each other and make informed decisions;
- Facilitate informed debate between diverse social actors;
- Provide what we learn about the world beyond our immediate experience;
- Provide means by which a society learns about itself and builds a sense of community;
- Function as a form of accountability to those in positions of power in all its forms, promoting transparency and public scrutiny of those with power through exposing corruption, maladministration and corporate wrong-doing;
- Are essential facilitators of democratic processes and guarantors of free and fair elections;
- Are a vehicle for cultural expression and cultural cohesion within and between nations; and
- Function as an advocate and social actor in its own right while respecting pluralistic values.

Learning activity 1

Read the 'Elephant and the Six Blind Brahman'. In groups, discuss what conclusions you can draw from the parable in the context of media and news production. Use the guiding questions to help facilitate your group discussion. A group of blind Brahman heard that a strange animal, called an elephant, had been brought to a neighboring town. Everyone was talking about this new creature, but none of the blind men were aware of the elephant's shape and form. Out of curiosity, they decided to go to the neighboring town and experience by themselves what this new creature looked like. Once they were in front of the animal, they started touching it. The first Brahman extended his hands and reached out to the elephant's trunk, 'this animal is like a thick snake' he said. The second man extended his arms around

the animal's leg and told his friends that 'the elephant is like a big tree trunk'. The hands of the third Brahman landed on the elephant's ears and commented that 'this being is like a kind of fan'. For another man, who touched the tail, 'the elephant is like a rope', as he said. The fifth Brahman touched the tusk, and said, 'this animal is hard, smooth and sharp like a spear'. The sixth Brahman touched the body, and said, 'this animal is like a wall'.

Guiding questions:

- What assumptions are the six Brahman making?
- Are these assumptions based on fact? Why or why not?
- Which Brahman is saying the truth?

Learning activity 2

Have a look at the cover pages of today's newspapers. In groups, compare the news pieces that are covered in each newspaper and discuss the following questions:

1. Do all newspapers feature the same news stories in their cover?
   a. If yes: Is the information presented in the same way, or do they highlight different information? If so, why do you think these newspapers have highlighted different information? If not, why do you think these newspapers have highlighted the same information in the same way?
   b. If not: why do you think they do not feature the same news on their cover page?
2. What conclusions do you draw from this?

Learning activity 3

Individually, imagine that you were a journalist working at your town's newspaper. With the information that your teacher will provide you, write a headline for a news article. Remember that the headline must answer (as much as possible) to the 5 Ws and H.

Learning activity 4

Compare two news articles from different newspapers that cover the same story. Compare both and point out which are the strengths and weak points of each article, and which one is the best one based on the criteria that should be followed for good, ethical and responsible news reporting. Write your thoughts in this textbook or on a separate piece of paper. Be ready to share to the rest of the class.

Review questions

1. Reflect on what you have learnt in the lessons under this unit, and assess your understanding of the subject.

	Yes	No	Not sure
Lesson 4.1.1.			
I can explain what Media and Information Literacy is and why it is important for a teacher (including but not limited to teaching) in primary school.			
Lesson 4.1.2. and 4.1.3.			
I understand the difference between types of information providers and types of media.			
I understand the functions of the different media and information providers and the role they play in a democracy.			

2. What are the three processes of Media and Information Literacy?
3. What are the roles and functions of news media in a democratic society?
4. Based on what criteria do events or stories become news?

Unit Summary

Key messages

- We constantly interact with and use media and information providers in our daily life, and the way we consume and use media content and information has an impact on the decisions we make, what we learn about the world and how we participate in society.

- Media and Information Literacy (MIL) empowers citizens with a set of skills, attitudes and knowledge to critically access, evaluate, produce and share information and media content.

- MIL enables teachers to use information and media content in the classroom in a responsible and ethical way, and facilitates the transfer of MIL skills and knowledge to the students; preparing them to perform their role in knowledge and information societies.

- Information can be sourced from a wide array of media content and other information providers that are not necessarily media.

- To be able to access and use the information and media content that is needed for a specific task or purpose, it is important to understand the different roles of media and information providers.

- The quality of the information that is available in the media and information providers can vary greatly in accuracy, reliability and value.

- News are important because it enables us to know what is happening in our communities and in the world beyond our direct experience. News provide information that is new, important to the public and also interesting; and

- Journalists and news media are essential in a democracy, as they act as watchdogs of the powerful by keeping them accountable to the public, enable transparency,

provide people with information that will enable them to make informed decisions and facilitate public debate.

Unit reflection

1. How do you think Media and Information Literacy will help you as a teacher?
2. Now that you are a more media and information literate person, how differently will you engage with the media in your personal and professional life?

📖 **Further reading**

(Including names of printed materials and links to online materials)

Title	Link	QR Code	Source
MIL Curriculum For Teachers (English)	http://unesdoc.unesco.org/images/0019/001929/192971e.pdf		**UNESCO**
MIL Curriculum For Teachers (Myanmar Language)	http://unesdoc.unesco.org/images/0019/001929/192971MYA.pdf		**UNESCO**
Media and Information Literacy: Policy and Strategy Guidelines (English)	http://unesdoc.unesco.org/images/0022/002256/225606e.pd		**UNESCO**
Internet Bawdar	https://www.internetbawdar.com/		**Phandeeyar**

Unit 5

Internet and Communication

In this unit, you will learn how data is transmitted over the internet, services available in a networked environment. And also, about a synchronous conferencing such as email.

Expected learning outcomes

By the end of this unit, you will be able to:
- Understand how data is transmitted over the Internet and understand the relevant concepts (such as IP, URL, DNS and HTTP);
- Explain the functions of the hardware required for a network;
- Describe the common services available in a networked environment (such as internal messaging, resource sharing, and conferencing);
- Compare common methods for Internet access in terms of speed, cost, security and availability;
- Understand the pros and cons of asynchronous conferencing;
- Open an email account; and
- Use an email platform (such as composing, sending, replying, forwarding, attaching a file, tagging, and filtering).

5.1. Introduction to Internet

The internet is the most well-known and the largest network, linking hundreds of thousands of individual smaller networks all over the world. The internet has a range of capabilities that organisations are using to exchange information internally or to communicate externally with other organisations. The internet began as a U.S. Department of Defense network to link scientists and university professors around the world.

An Internet Service Provider (ISP) is a commercial organisation with a permanent connection to the internet that sells temporary connections to subscribers. To join the internet, an existing network only needs to pay a small registration fee and agree to certain standards based on the Transmission Control Protocol/Internet Protocol (TCP/IP), which will be explained below.

5.1.1.
Understanding network, internet and data transmission

Expected learning outcomes

By the end of the lesson, you will be able to:
- Understand how data is transmitted over the internet and understand the relevant concepts (such as TCP/IP, URL, DNS and HTTP);
- Explain the functions of the hardware required for a network;
- Describe the common services available in a network environment (such as internal messaging, resource sharing, and conferencing); and
- Compare common methods for Internet access in terms of speed, cost, security and availability.

Computer Networks

A computer network is composed of multiple computers connected together using a telecommunication system for the purpose of sharing data, resources and communication. The open network connectivity has progressed in a great deal together with the spread of the Internet and Intranet. Constructing open network systems that allow communications with other organisations is not simply a matter of connecting different hardware from different manufacturers via transmission media.

> **Do you know?**
>
> Fiber internet connection is installed in all Education Colleges, so that you can access the internet in the classroom, and also be able to access internet outside of the school hours.

When building network systems, it is imperative that an agreement be reached about the communication protocols that will be employed on which communications will be based. The communication protocols vary with the computer systems and communication lines, and many different protocols have been adopted, ranging from vendor-specific types to types standardised by public organisations. Together with the increase in systems connected with other network systems, such as the internet, network architecture is becoming even more important.

Understanding LAN, MAN and WAN

a) Local Area Network (LAN)
LAN (Local Area Network) is network of computers that interconnect within a limited area.

> **Do you know?**
>
> Wi-Fi is the short form of Wireless Fidelity.
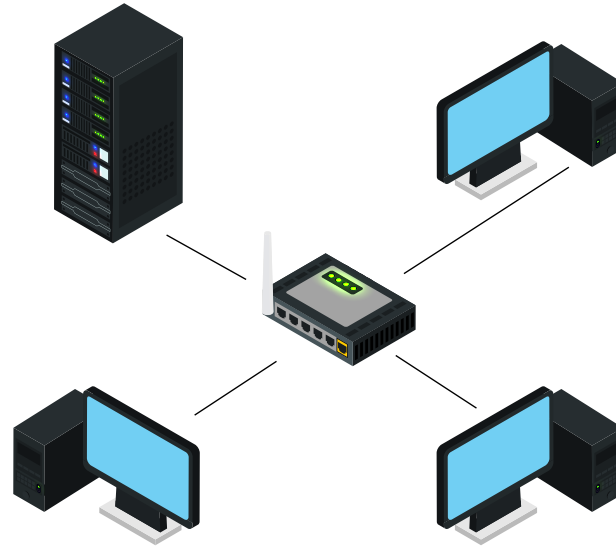
Figure 5.1. Local area network

For example, computer network within office, home, school, Education College campus. Two most common technologies in use for LAN are Ethernet (wired) and Wi-Fi (wireless).

b) Metropolitan Area Network (MAN)

MAN (Metropolitan Area Network) is a network that interconnects computer resources in a geographic area or region larger than that covered by LAN. The term is mostly used for the interconnection of networks from a city to another through the use of point-to-point connections between them.
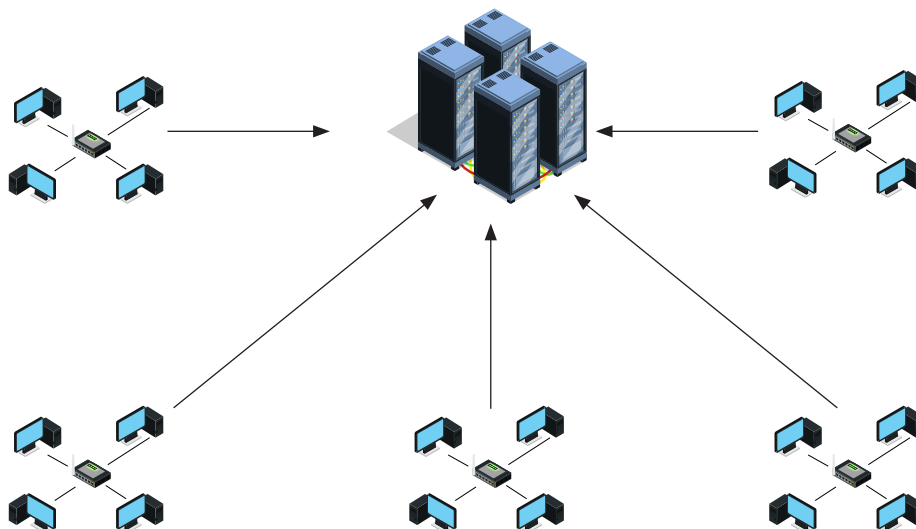
Figure 5.2. Metropolitan area network (MAN)

c) Wide Area Network (WAN)

WAN (Wide Area Network) is the computer network which is also called telecommunications network. Conventionally, the most common WAN has been one in which a host computer is connected to terminals in remote locations. Recently, however, there has been an increase in systems in which a number of LANs connected to WAN to form a large network. And the Internet may be considered a WAN.
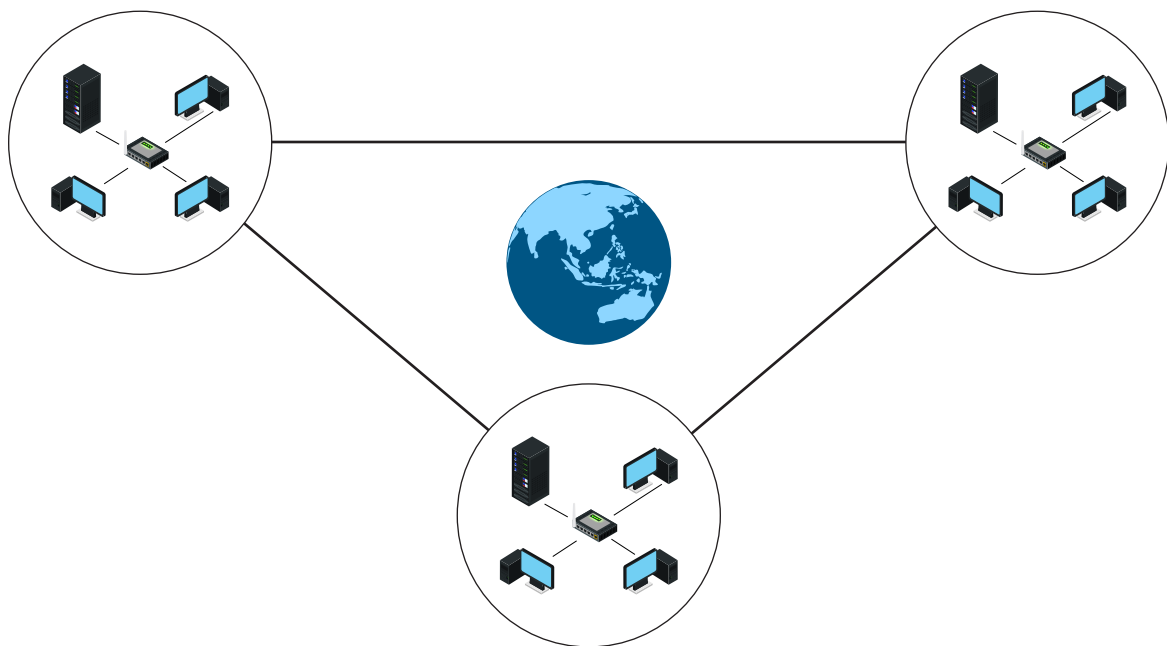
Figure 5.3. Wide area network (WAN)

Accessing the internet

World Wide Web (WWW)

The most important reason for the explosive growth in internet users was the development of the WWW. The WWW interlinks all the WWW servers all over the world to allow search for information by surfing through the links. This is referred to as 'net surfing'. The World Wide Web was developed at the European Laboratory for Particle Physics (CERN) in 1989. The number of WWW users increased rapidly after the National Center for Super-Computing Applications (NCSA) at the University of Illinois developed and released the first popular WWW browser, called Mosaic, which could handle not only text but also images and audio.

Web browser

A Web browser is a software application that enables a user to display and interact with text, images, and other information typically located on a web page at a website on the World Wide Web or a local area network. Text and images on a web page can obtain hyperlinks to other web pages at the same or different website. Web browsers allow a user to quickly and easily access information provided on several web pages by traversing these links.

Search engine

There is countless data (homepages) registered in countless WWW servers on the internet. In principle, users can freely get their hands on all these data. However, finding the data you are searching for among all this data is very cumbersome. Therefore, search engines are used for this purpose. A search engine is an information retrieval tool (system) found on the Internet. It can be thought of as site specialised for information search. For example, Google.

Data Transmission

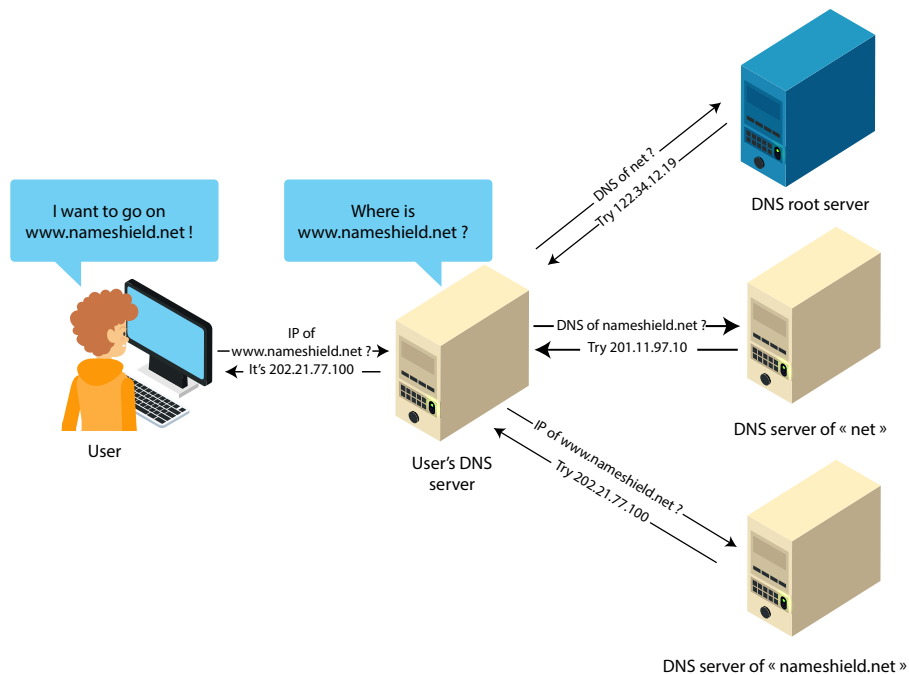a) **TCP/IP (Transmission Control Protocol/Internet Protocol)**

Transmission Control Protocol/Internet Protocol (TCP/IP) has become the standard protocol for the Internet. TCP and IP are both important protocols, each having the following functions;
- TCP (transport protocol; connection-oriented mode) = ensures high reliability; and
- IP (Internet protocol; connection mode) = ensures high-speed data transmission.

On the Internet, each computer connected to the network is given and managed by an IP address. IP addresses are unique addresses that are used all over the world. IP routing is the technique that determines the transmission route from the sender to the destination. An IP address is used to identify the host that communicates under TCP/IP.

In version 4 or IPv4, an IP address is fixed in length at 32 bits. And the addresses are in the form of 'nnn.nnn.nnn.nnn' where 'nnn' must be a number from 0 – 255. The picture below illustrates two computers connected to the internet; your computer with IP address 1.2.3.4 and another computer with IP address 5.6.7.8.

There is also version 6 where an IP address is in length of 128 bits. The IP addresses are represented as eight groups of four hexadecimal digits with the groups being separated by colons. For example, an IPv6 address has the following format; 'hhhh:hhhh:hhhh:hhhh:hhhh:hhhh:hhhh:hhhh', where 'h' can be any hexadecimal value between - 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F.
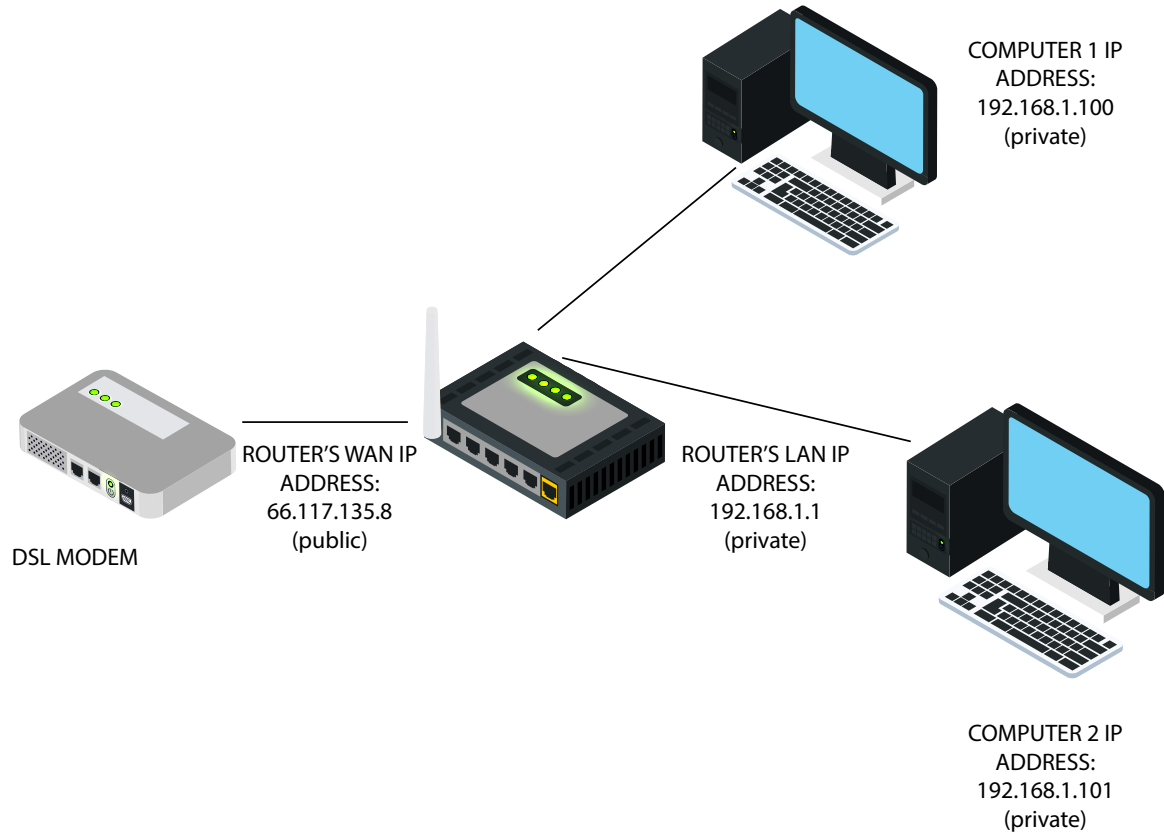

Figure 5.4. Transmission control protocol/Internet protocol

b) **DNS (Domain Name System)**

Each computer connected to the Internet is given an IP address, but the format of this address can be difficult to understand for humans. The 'domain name' was therefore invented as a name to classify this IP address so that it could be readily understandable. There is a one-to-one coordination between a domain name and the IP address, and the DNS (Domain Name System) manage this coordination. In practice, name servers (DNS server) all over the world are working in unison to carry out the DNS function.

COMPUTER 1 IP ADDRESS: 192.168.1.100 (private)

ROUTER'S WAN IP ADDRESS: 66.117.135.8 (public)

DSL MODEM

ROUTER'S LAN IP ADDRESS: 192.168.1.1 (private)

COMPUTER 2 IP ADDRESS: 192.168.1.101 (private)

Figure 5.5. Domain name system

c) URL (Uniform Resource Locator or Web Address)

A Uniform Resource Locator (URL) is casually term for a web address. It is a reference to a web resource. And commonly appear on web pages (http) at reference, but also used for many other applications, such as file transfer (ftp), database access (JDBC), email (mailto), etc.

d) HTTP and HTTPS

Hypertext Transfer Protocol (HTTP) is an application protocol that was developed to facilitate hypertext and is the foundation of data communication for the World Wide Web (WWW), where hypertext documents include hyperlinks to other resources that the user can easily access.

HTTPS stands for Hypertext Transfer Protocol Secure, and is the secure version of HTTP. It is used to protect the confidential online transactions by encrypting all the communications between the browser of your computer and the website from the server.

Network equipment / Inter-LAN connection equipment

i) Network Interface Controller (NIC)

A network interface controller (NIC, also known as a network interface card, network adapter or LAN adapter), which connects a computer to a computer network, is a computer hardware commonly implemented on expansion cards that are plugged into a computer bus. Most recent computers have a network interface built into the motherboard.

Figure 5.6. Network interface controller (NIC)

ii) Router

A router is a networking device that performs relay functions on the network layer which means that it forwards data packets between computer networks. Data packets are the forms of data, which are sent through the Internet, such as a web page or email. Routers perform the traffic directing functions on the Internet.

Figure 5.7. Router

iii) Switch (Network Switch)

A network switch is a networking device that connects devices together on a computer network by using packet switching, which is a method of grouping data which is transmitted over a digital network into packets.
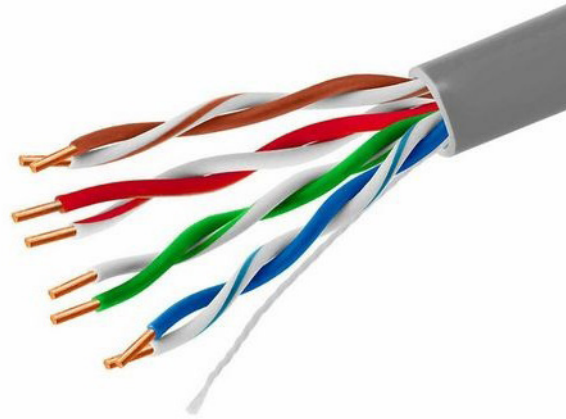

Figure 5.8. Network switch

Transmission Media

a) **Twisted pair cables**

Twisted pair cabling is a form of writing in which two conductors are wound together for the purposes of cancelingcancelling out electromagnetic interference (EMI) from external sources and crosstalk from neighbouring wires. Twisted pair is a cable widely used for telephone lines.

**Figure 5. 9. Twisted pair cables**

b) **Coaxial cable**

Coaxial cable is an electrical cable consisting of a round conducting wire, surrounded by an insulating spacer, surrounded by a cylindrical conducting sheath, usually surrounded by a final insulating layer (jacket).

Figure 5.10. Coaxial cable

c) Optical fiber cable

Optical fibers are cables constructed from materials of which quartz glass is the principal constituent that allow high-speed and long-range transmission. The transmission media will most likely become more and more used in the coming multimedia era as this type of cable enables transmission of large amounts of data. So, this type of cable is used as the medium of the internet backbone.
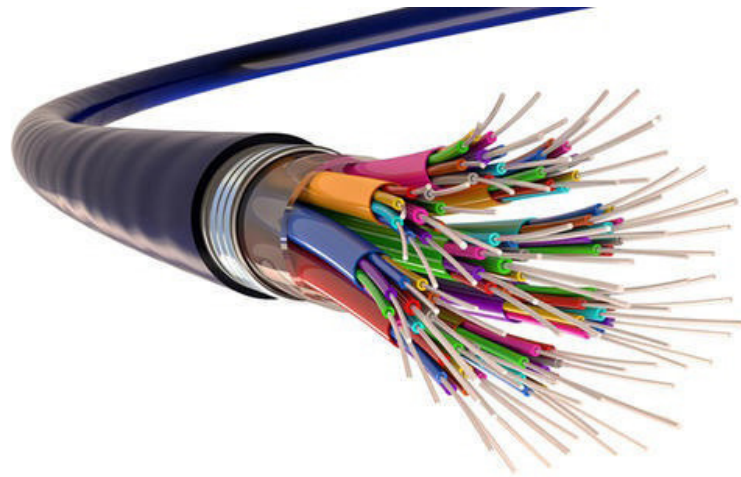
Figure 5.11. Optical fiber cable

d) Wireless

Wireless systems have the advantage that wiring is not necessary as they use radio waves or infrared rays. This makes it easy to move the equipment and LAN systems can be designed more freely.

Figure 5.12. Wireless system

Concept of networking

There are different types of networks we come across in our daily life. Some examples that are easily seen are roads, railway lines, canals, etc. Telecommunication system enables us to talk to anyone, anywhere, anytime. There are common services available in a networked environment, such as internal messaging, resource sharing and conferencing, etc.

Learn Networking Concepts

https://www.youtube.com/watch?v=Dnq7YHIOOfM

Internal Messaging - Sending messages from one user to another user within the team, office, education college, organisation, etc. through the same messaging system. Unlike email, which is a kind of communication method that can deal with both external and internal communications, internal messaging is a class only system. Instant messaging is a form of internal messaging through Internet.

Resource Sharing - Multiple computers connected together for the purpose of sending data files to one another. Using a printer which is physical connected to another computer. Using Internet, teaching and learning materials which can be shared among schools.

Conferencing - When two or more people have simultaneous conversation using Internet, it is called conferencing. When this process is adding video streaming technology, it is called video conferencing.

Common methods for internet access

Table 5.1. Common methods for Internet access

Methods	Speed	Cost	Security	Availability
Dial Up	Up to 56 Kbps	N/A	Low/Medium (depends on ISP)	N/A
ADSL	Up to 3 Mbps (according to local ISP)	Low/Medium cost	Low/Medium (depends on ISP)	Available by local ISP
Coax Cables	Up to 1 Gbps download/ 50 Mbps upload	N/A	Low/Medium	N/A
Wireless Broadband	Up to 75 Mbps (according to local ISP)	Low/Medium cost	Low	Widely available by local ISP
Fiber Optic	More than 100 Mbps (according to local ISP)	Medium/High	High	Available by local ISP
Mobile Internet (3G/4G)	Up to 70 Mbps or more (according to local ISP)	Medium/High	Medium/High	Widely available by local Telecom/ISP

Learning activity 1

Prior to the lesson, please read the reading text and discuss the given questions together with a classmate:

1. How many telecommunication service providers in Myanmar?
2. How do you describe an ISP? Name one ISP you know of?
3. Which telecommunication service provider do you use?
4. Do you know how much it will cost for 1GB of internet data using your mobile phone?
5. Can Facebook Messenger be used to make a conference call?
6. Can a printer be shared within a network of computers?

Learning activity 2

Based on the reading text, choose the relevant feature/s for the given words and exclude the feature/s which is not related. You may discuss with your classmates on the answers.

1. Router
   - Speed is up to 100 Mbps;
   - Is an optical device;
   - Performs traffic direction function in the internet; and
   - Forwards data packets between computer networks.

2. Local Area Network (LAN)
   - Is a network of computers within limited area;
   - In which two or more computers are connected using wired and wireless technology;
   - Is the interconnection of networks through the use of point-to-point connection between two cities; and
   - Is the computer network which is also called telecommunications network.

3. Wide Area Network (WAN)
   - Is a computer network which connects large numbers of LANs;
   - Can be considered as Internet;
   - Can only be connected by wired network; and
   - Speed is limited to 1 Gbps.

4. TCP/IP
   - Is the standard protocol for the internet;
   - In which IP ensures high reliability;
   - In which an IP address is not necessary for a computer to connect to the network; and
   - In which 192.168.2.300 is not a correct IP address.

Learning activity 3

There is a lot of confusion in computer networking. Misunderstandings may occur when people are unsure about Internet, Wi-Fi, etc. Identify which statements are true and which are false below.

1. You can browse Google, whenever your computer connects to Wi-Fi network.
   True / False

2. HTTP is the application protocol which uses the encryption method for communication between a computer browser and web server securely?
   True / False

3. Network Interface Controller (NIC) is a computer hardware which is used to connect a computer to a network.
   True / False

4. Dial-up is the fastest internet connection method available in the country.
   True / False

5. A network switch uses the method called Packet Switching, when transmitting the data over the computer network.
   True / False

5.2. Asynchronous Conferencing

In the previous lesson, you have learnt what conferencing is. When two or more people have simultaneous conversation using internet in real-time, it is called synchronous conferencing. Asynchronous conferencing is used in contrast to synchronous conferencing, when describing technologies where there is a delay in interaction between participants. When you are using internet messaging application, if the person you are sending the messages is not online yet, but you can still send the messages. This is called asynchronous conferencing.

5.2.1. Understanding network, internet and data transmission

Expected learning outcomes

By the end of the lesson, you will be able to:
- Understand the pros and cons of asynchronous conferencing; and
- Open an email account.

Pros and Cons of Asynchronous Conferencing

Various forms of communications have been practiced for many years in the means of asynchronous conferencing. For example: email, blog, social networking sites, shared calendars.

Pros:

- Allows the participants to have flexibility and control over the time they spend on the topic;
- Allows the participants to communicate simultaneously on different topics; and
- Allows the participants to share high quality video and audio files with limited bandwidth.

Cons:

- Due to the time constraints, there is a delay between the message exchange;
- The delay can lead to loss of interest and affects the coherence of the discussion; and
- The outcome of the discussion may be difficult to conclude because of accessing time difference between the participants.

Learning activity 1

Discuss in groups, search examples of different types of asynchronous conferencing online, and discuss the following questions:

1. Is chatting asynchronous conferencing and why?
2. What possible pros and cons of asynchronous conferencing which are not included in the previous learning activity can you think of?
3. Do you think offline messages on Facebook can be classified as asynchronous conferencing? Why?

Learning activity 2

Follow the instruction and do the self-practice using a computer. You are recommended to watch the screencasts in the provided link next to each topic. Please discuss with a classmate and do the exercise together. Take note of questions or any difficulties found during the exercise to discuss with the rest of the class.
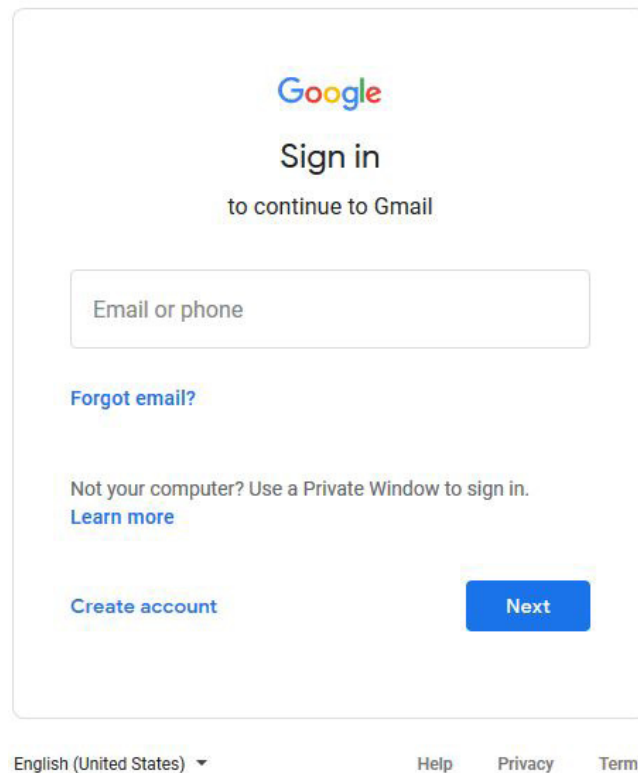
Creating a Gmail account

Step 1: Open browser (such as Internet Explorer, Mozilla Firefox, Google Chrome, Opera, etc.).

Place the cursor in address box and type www.gmail.com or click the Gmail tab from google homepage.
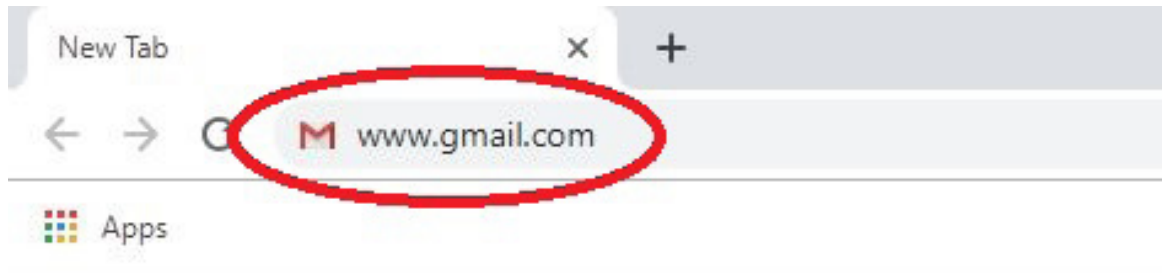
Figure 5.13. Gmail URL from browser

Step 2: Click CREATE AN ACCOUNT.

Figure 5.14. Sign in page

**Step 3:** The following website will appear. Create a registration using the form below.

Figure 5.15. Gmail sign up page

1. First name and last ame: Type your desired name (For example, Min Min)
   (It accepts Space)
2. Desire logo name: Type your account name (For example, minmin2013)
   (It does not accept space and special character)
3. Choose a password: Type your password **(Minimum 8 characters)**
   (Accept any alphabet and number)
4. Re-enter password: Retype your password
5. Choose your birthday: Choose your **month** and type your **day**, **year**.
6. Choose your gender: Open the down arrow and choose your **gender**.
7. Word verification: Type the characters you see.
8. Click: **I agree to the Google**.
9. Click: **Next step.**

When you complete your account creation, a web page showing that you have successfully created an account will appear. If not, you will see the message that is in the color red informing you of the reasons why this information was not accepted. Take into account the errors that were highlighted and please try to register again.

After you have successfully created a Gmail (Google email) account, please see the following steps on how to log in to your Gmail account.

Step 1: Open browser (such as, Internet Explorer, Mozilla Firefox, Google Chrome, etc….), Place the cursor in address box and type '**www.gmail.com**' or click to **Gmail tab** from google homepage.
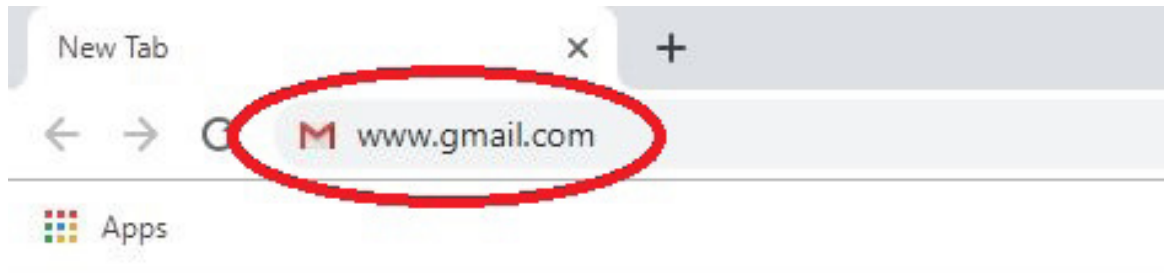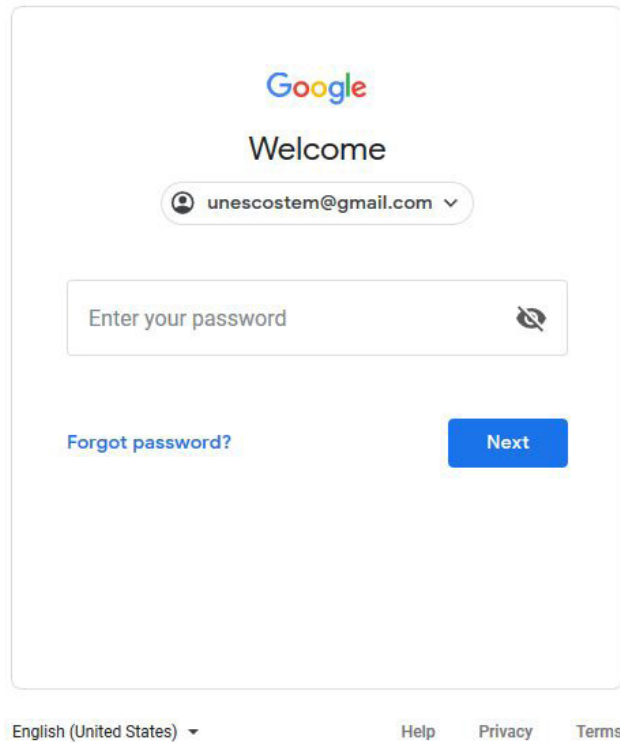

Figure 5.16. Gmail URL from browser

Step 2: Use the user name and '**Email Account'** or use the enter '**Phone Number'**, and click to **Next**.
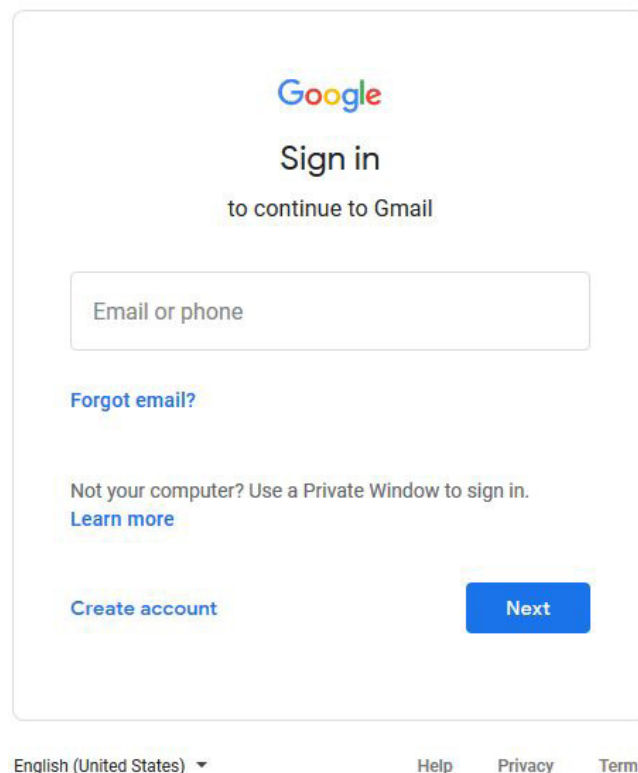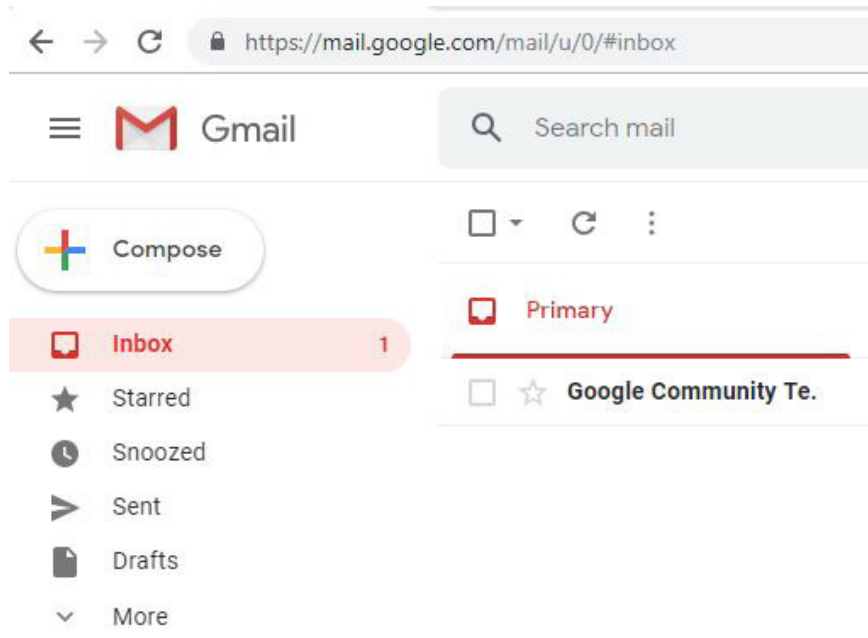

Figure 5.17. Sign in page

Step 3: Type the '**Password'** and Click to **Next**.

Figure 5.18. Gmail sign in page

Gmail preview will appear.

Figure 5.19. Homepage of Gmail

5.2.2.
Use an email platform

Expected learning outcome

By the end of the lesson you will be able to:
- Use an email platform (such as composing, sending, replying, forwarding, attaching a file, tagging, and filtering).

Electronic mail (Email)

Email is one of the many communication methods over the Internet or other networks (personal computer communications, LAN, etc.). It has become a widely used communication means in place of telephones and fax.

The features of email are as follows:

- It allows different types of data to be sent in large amounts and at high speed.
- Due to improvements in compression technologies and bandwidth expansion, large amounts of data can be transmitted at high speed. In addition to text (characters), video and audio can also be transmitted.
- Regardless of whether or not the recipient is at home, the mail arrives in the mailbox inside the mail server.
- Running costs are low regardless of the location where you send the emails to.

The mail server exchanges and transfers mail using the Simple Mail Transfer Protocol (SMTP) with software programs called Mail Transfer Agents (MTAs). The users can retrieve the messages from server using standard protocols such as Post Office Protocol (POP) or Internet Message Access Protocol (IMAP). Sometimes, email users do not need the software programs such as Mail Transfer Agents to access the emails. They use a web-based email platform, such as Gmail (which is provided by Google), that performs the same tasks as MTA. Webmail interfaces allow users to access their emails with any standard web browser from any computers or smartphones, rather than using an email client.

Components of an email account

Composing is the drafting stage of an email. Before sending out an email letter, you have to prepare the message, subject title, and sometime, even include the attachments (such as documents files, multimedia files, etc.) if needed to. Message should be clear and clearly mention who is sending the message. Subject title should be short and clear topic of the message, so that the recipient will understand the importance of the email right away right away.

Sending is the next step of composing email. After composing the email, you will select the recipient of the email - who you are going to send the email to. You have to enter the email address who you are going to send the email to. There are some useful terms of sending emails. '**To**' is the person you want to send the message. '**Cc**' is the Carbon Copy, the recipient who is not directly related to the message but you want to include/inform regarding the message. Everyone in the email including all the recipients can see who is in '**Cc**'. '**Bcc**' is the Blind Carbon Copy, and the same feature as '**Cc**' but none recipient can see who is in '**Bcc**'. Sometimes, '**Bcc**' can be useful, when you do not want the recipient to know who else is receiving the message.

Attaching a file is an action you perform when you want to include a document file such as a word document, excel spreadsheet, pdf file, or multimedia file such as video and audio files in the email. It is very useful because you can share the data with other people easily. When you cannot send a program file due to the security risks, you can still zip the desired files and send the zip file.

Replying is the function when you want to reply an email you have received. You can reply only to the sender by choosing 'Reply' button. Or you can reply to all the people included in the email (such as other recipients) by clicking 'Reply All'.

Forwarding is the function you perform when you want to forward the message to the recipient who is not included in the email. The person you forwarded the email can see the previous emails including the attachments, but you can add/modify your own email message that is attached to the forwarded message. You cannot modify the forwarded email.

Tagging is a useful tool for you, which allows you to add more information about a person or an email address in your contact. It makes it easier for you to find, filter and keep track of the emails between you and the recipient.

Filtering is a function which enables you to manage your incoming mail to send email to a label, or archive, delete, star, or automatically forward your mail.

Learning activity 1

In previous lesson (lesson 5.2.1, Learning activity 2), you were shown how to log in to your Gmail account. Work on the following steps on the computer to achieve the functions.

Checking Email Message

Step 1: To check your mail, click on the inbox and click on the subject of the email message you wish to read.
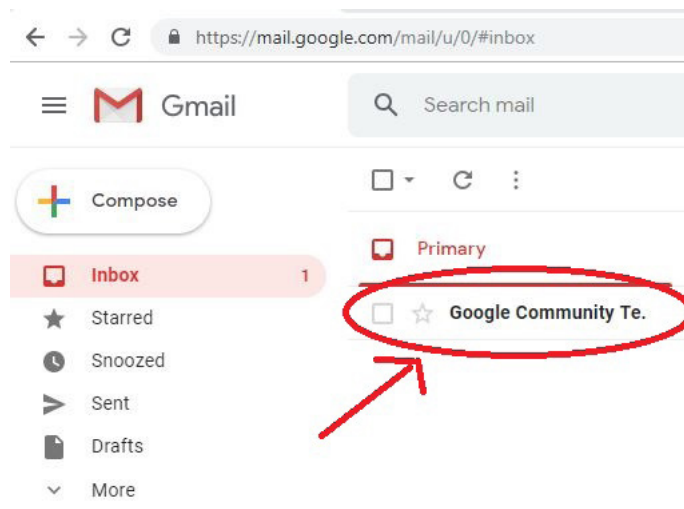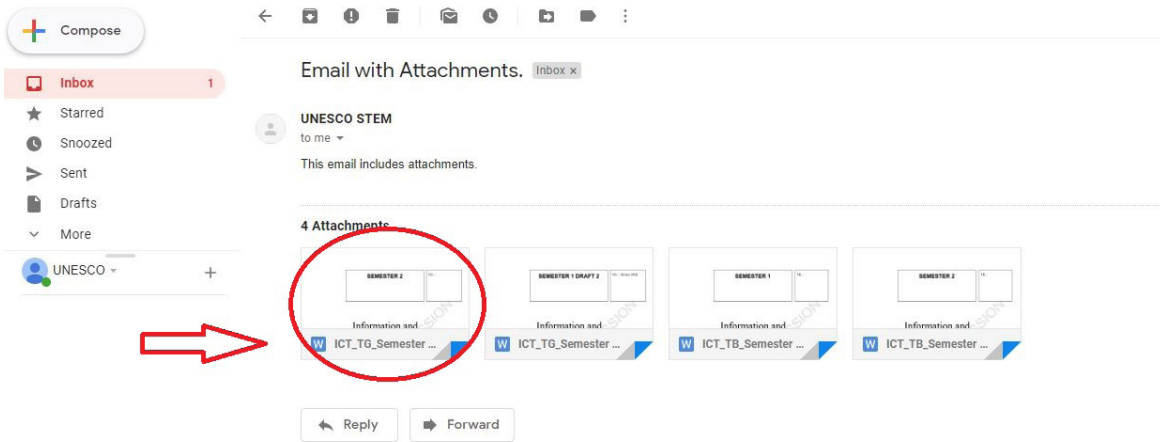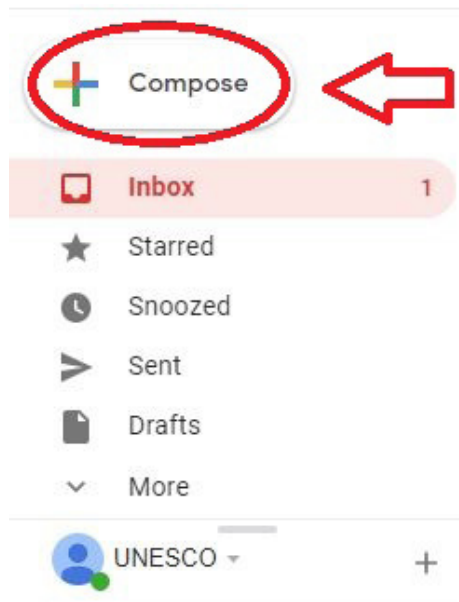
Figure 5.20. Homepage of Gmail

Step 2: To see the screen as follows. Click on the **Attach file** to read.

Figure 5.21. Showing where to locate the attachments

Sending a Message

As shown in the image below, in order to send an email message click on the **COMPOSE** button. The following web page will appear.

Figure 5.22. Sending email 1

Step 1: In the 'To:' field, type recipient email account. For more than one person, email ID should be separated by commas. At least one Email ID must be included.

Step 2: In the '**Carbon Copy (Cc)**' field, type recipient email account. The email account of those to whom you would like to send a '**Cc**' of your message. All recipients of the message will be able to see that the person you designated as a '**Cc**' has received a copy of the message.

Step 3: In the '**Blind Carbon Copy (Bcc)**' field, type recipient address '**Bcc**'. Enter the email account of those to whom you would like to send a '**Blind Carbon Copy**' of your message. This is nearly identical to the '**Cc**' feature, except that the other recipients cannot see the recipients in '**Bcc**'.

Step 4: In the '**Subject**' field, type message Title. Type subject of your message.

Step 5: Use the large text box to enter the contents of your message.

Step 6: Edit and click on the '**Send'** button to send the Email message.

Figure 5.23. Sending email 2

Sending Email Message Attachment File

Step 1: Prepare as shown below in order to send an email message. If you want to send a file attachment, click the '**Attach file'**.
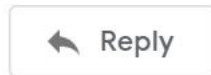

Figure 5.24. Sending email 3

Step 2: If you want to attach file from your computer, click Open and then click '**send**'.

Replying the Messages

Step 1: Click on Inbox to reply a message, it follows the screen.

Figure 5.25. Reply button

Step 2: Click "Reply" to send a response or reply to all contacts by choosing "Reply to all".

Step 3: The following web page will appear. Type "Reply" or "Reply to all" messages and click **Send** button.

Figure 5.26. Send button

Forward Email Message

Forward message to the relevant email message by clicking the forward button, you can also send a message through.

Step 1: Type recipient address.

Step 2: Type recipient address '**Cc**'.

Step 3: Type recipient address '**Bcc**'.

Step 4: Type forwarded message.

Step 5: Click **send** button.

Report Spam Mail

Spam emails, also referred to as junk emails, are considered as emails that are unsolicitedly sent in bulk. If you have received any messages that seem to be spam, use the **Report spam** button to report this to Google. While Gmail's spam filters work very well, they're not perfect and errant messages do get through every now and then. This feature helps them get better at filtering out annoying, unwanted messages. To report a message as spam, select the check box next to the message in your inbox or open the message, then click the **Report spam** button on the toolbar.

Figure 5.27. Report spam mail

Review questions

	Yes	No	Not sure
Lesson 5.1.1.			
I understand how data is transmitted over the internet and understand the relevant concepts (such as IP, URL, DNS and HTTP).			
I can explain the functions of the hardware required for a network.			
I can describe the common services available in a networked environment (such as internal messaging, resource sharing, conferencing).			
I can compare common methods for internet access in terms of speed, cost, security and availability.			
Lesson 5.2.1			
I understand the pros and cons of asynchronous conferencing.			
Lesson 5.2.2.			
I can open an email account and use an email platform (including actions such as composing, sending, replying, forwarding, attaching a file, tagging, and filtering).			

Unit Summary

Key messages

- A computer network is composed of multiple computers connected together using a telecommunication system for the purpose of sharing data, resources and communication.

- The internet is the most well-known and the largest network linking hundreds of thousands of individual smaller networks all over the world.

- When two or more peoples have simultaneous conversation using internet, it is called conferencing;

- Asynchronous conferencing is used in contrast to synchronous conferencing, when describing communications where there is a delay in interaction between participants.

- Email is one of the communication methods over the internet or other networks (personal computer communications, LAN, etc.).

Unit reflection

1. What is the common software application to view the websites when you are using Internet?
2. What are the pros of the asynchronous conferencing?
3. What are the features of email?

Further reading

(Including names of printed materials and links to online materials)

Title	Link	QR Code	Source
Get started with Gmail	https://gsuite.google.com/learning-center/products/gmail/get-started/#!/		Google
Basic ICT Literacy Training Manual	https://edc.moe.edu.mm/en/resource/unesco-basic-ict-literacy-training-manual-myanmar		UNESCO

Unit 6

Media and Information Literacy and Digital Citizenship (Part II)

As you have learnt in Unit 4, nowadays we access and share huge amounts of information and media content through social media and other online platforms. Therefore, it is important that citizens are not only media and information literate, but that they also have a good understanding of the opportunities and risks of the online world. Noting this, in Unit 6, you will be able to learn how to prepare your future students to stay safe when they go online, to navigate the internet smartly, and most of all, to become digital citizens.

Expected learning outcomes

By the end of this unit, you will be able to:

- Understand the threats and risks on using and engaging with the internet;
- Identify possible threats and risks when engaging with the internet and take preventive measures;
- Identify potential threats and risks on using and engaging with the internet;
- Take preventive measures and steps to protect oneself and keep one's information safe in the internet;
- Realise the loss of privacy that might occur when engaging with the internet; and
- Demonstrate the use of main privacy management functions to manage personal information and protect users, especially minors.

6.1. Introduction to Digital Citizenship

In this unit, in Lesson 6.1.1, you will first learn about the potential risks that you might encounter when engaging with online media and the internet. Lesson 6.1.2. provides a closer look into the safety issues that digital citizens need to consider and be aware of, in order to protect themselves from the threats and risks of the internet. Lesson 6.1.3 puts the focus on the loss of privacy that might occur when social media and internet users do not take the necessary preventive measures.

6.1.1.
Risks and threats in the internet and online world

Expected learning outcomes

By the end of the lesson, you will be able to:
- Understand the threats and risks on using and engaging with the internet; and
- Identify possible threats and risks when engaging with the internet and take preventive measures.

Opportunities and challenges of the internet

People and nations are more interconnected to each other than ever before. The internet has made it easier to communicate with each other, to access information and new knowledge, to learn about our community and the world. It provides new opportunities to express ourselves, to help taking decisions and to participate in society. The internet also has a positive impact in the working world and contributes to economic growth, offering new opportunities for business and entrepreneurship.

Youth that are growing up in this digitalised and interconnected world are proficient in the use of new technologies and online platforms, and they benefit greatly from the easy access to the internet and interacting with it. Unfortunately, in parallel with this unprecedented technological and communication development, there are a number of risks and threats to check that make youth/them especially vulnerable. Thus, it is important to understand what those risks are, and take preventive and mitigation measures to protect ourselves in the online world. In particular, it is important to help guide our youth who can be particularly vulnerable to these risks.

Learning activity 1

Think about how often and for which purpose you use internet and engage with online platforms such as social media, news media, instant messaging applications, games, websites, etc.

Table 6.1. Habits of Internet use

Interaction with internet	Yes/No	Frequency (such as every day, two-three times a week, two-three times a month)
Instant messaging apps (Viber, Whatsapp, WeChat, Line, etc.)		
Downloading music or movies		
Watch videos and listen to music online through livestream platforms (YouTube, Vevo, Spotify, etc.)		
Check the news and other people's profiles in social media (Facebook, Instagram, Twitter, etc.)		
Share and upload personal photos and videos on social media		
Participate and give personal opinion in forums, chat-rooms, review websites (i.e. Tripadvisor, Imdb, newspaper forums, etc.)		
Blog, write articles on social media, etc.		
Search and access information for school assignments		
Create videos with photos, music, about your day-to-day life and share them on social media or video streaming platforms (such as YouTube)		
Read the news of the day in online newspapers		

Send and read emails		
Playing games online		
Online shopping		
Others_____		
Others_____		
Others_____		
Others_____		

Learning activity 2

Match the concepts in the box below with their definitions:

Age-inappropriate content; illegal content; misinformation; incitement to harm; hate speech; defamation; copyright infringement; harmful advice; identity theft; phishing; commercial fraud; grooming; cyberbullying; disclosing private information; profiling; plagiarism.

Definition	Threat
a. Some websites, blogs or messages on social media incite users to harm themselves, and might even provide instructions on how to do it.	
b. Content that is classified as illegal by Myanmar laws. Content related to child pornography or child abuse, etc. This content is illegal in most countries around the world.	
c. The internet provides great amount of information, but some of that information might not be verified by independent sources, or be based on actual evidence. It can be user-generated content or also be presented in the form of news or reports. Users need to stay vigilant and consume content and information accessed in the internet with a critical mind.	
d. There are people that make use of other individual's electronic identity (i.e. email user and password, social media profile, etc.) with the intention of harming that person's reputation or committing commercial fraud (such as buying products online with other person's bank account details).	

e.	It refers to content and information that can be found online, which should not be accessible to young people and children. This content is not necessarily illegal but can be harmful for young people and children. This includes pornography, audiovisuals that depict violence, alcoholic drinks or tobacco advertisements, online betting or lotteries, text or audiovisual pieces with defamatory content, etc.	
f.	After sharing personal information or content (such as photos, videos, telephone numbers, information about our home address, work, family, etc.) on the internet, users have very little control over it. The information and content that has been shared can spread rapidly across websites and social media around the world. If the user tries to delete the content uploaded to the internet, it might not be able to delete all traces of it, and it will remain on the internet indefinitely. That personal and private information can be accessed by anyone from everywhere through their smartphones or computers.	
g.	This refers to the process of getting someone's bank account details (receiving the pin number or passwords used by banks for online transactions or shopping) in order to steal money from their bank accounts. This might be done with fake email messages that pretend to come from the user's bank or sophisticated websites that in appearance look safe for online commercial transactions or present the same features as the ones of a legitimate bank.	
h.	Messages or content spread through the internet (social media, news, blogs, etc.) to incite hatred against a specific group of people because of their collective characteristics, such as their ethnicity, sexual orientation, gender, religion, etc.	
i.	When free-downloading a movie or music for our personal consumption, or when making a video with photos to be shared online, users might be violating the intellectual property, or the authorial rights of that content (the singer, the movie director, etc.). That puts the user that has downloaded, used and shared that content at risk of being penalised by the existing laws.	
j.	With more and more online services, and communication channels available, users can open several profiles in different platforms. The personal data provided for the creation of a profile in one platform, can be matched with the information provided in another platform. The information can be gathered by third parties (companies, scammers, etc.) and used to send the person unwanted content. Some companies also sell and buy the data of users for commercial or marketing purposes.	
k.	This is taking someone else's ideas (for example: text, music, etc.) and reproduce them as one's own, without making any reference to the original author.	
l.	This refers to pedophiles that use fake profiles in social media, instant messaging apps, or other contact websites in order to contact children and young people. Once the pedophiles have gained trust of the victim, they might request them to share photos or videos with sexual content or try to meet with them in person.	
m.	This happens when sellers sell a product or a service online, that after receiving the payment, it is not delivered to the buyer. It might also happen, that although the product or service is delivered, it does not have the characteristics of what was expected or promised.	
n.	Messages or content against one individual, aiming at incite hatred against that person or damage his/her reputation.	

o.	Some websites, blogs and forums serve as platforms to share information and advice between users. For example, some online forums provide answers or advice to users that have questions related to their health, or that are looking for a diagnosis on certain symptoms they are experiencing. The advice and information provided in these type of platforms does not necessarily come from experts or professionals, are not necessarily based on research and evidence, and it therefore can be more harmful than useful.	
p.	Systematic attacks and defamatory behaviour against one individual through social media or other online platform. Although this can also happen in real life, the internet gives anonymity to the perpetrator (by using fake social media profiles, for example), making these attacks easier on the internet.	

Learning activity 3

Divide in groups, choose one of the threats of the internet from the previous exercise and prepare a presentation of that threat to be presented to the rest of the class. To prepare the presentation, you can search for further information or examples online. You might have experienced one of those threats yourself, or you might know of someone who has experienced it. You can also explain that experience to the class.

Learning activity 4

Below you are provided with five scenarios or situations that you might face when interacting with the internet. Indicate which threat you might be exposed to in each scenario. Please keep in mind that in some cases there might be more than one possible answer.

Scenario	Potential threat(s)
I just received a new friend request in my social media account. I do not exactly remember if I know this person, but I accept her request anyway. She is a beautiful girl of around my age. I check in her profile to find out more information about her, but she only has a few photos that seem to be taken on the same day. There are no other photos with her friends or family, and it shows that her profile was created only four months ago. Two days after I accept her friend request, the girl starts chatting with me. She seems very nice, very friendly and also funny.	
I receive a Viber message from my school friend telling me that a migrant person from another State has bitten one of our neighbours and injured him badly. He also sends me a photo of the victim covered in blood, there is so much blood that I cannot recognise if that is my neighbour. My friend did not take the photo, his aunty sent it to him. He is telling me that migrants from that State that have come to my town, cannot find jobs, and they are now, stealing money from people. They do not care if they have to beat them up in order to get what they want. I need to share this information with my friends, so that they also know about it and will be able to take necessary action.	

I am getting so fat, the clothes I bought last month do not fit me anymore. I think I will try diet to lose a few pounds. Let's check what I can find in the internet…….Oh! This diet looks very effective, there is a comment from a girl who lost 20 pounds in one month. There is also a comment from a doctor that says that is the best way to lose weight and start a healthier lifestyle. It also looks very easy, I just need to eat one portion of rice a day at lunch time. Only rice, no meat, fish or vegetables. It sounds a bit challenging, because I cannot eat anything else during the day. For breakfast and dinner I would only be allowed to drink tea. But I really want to lose weight, so I will do it! I know I can do it!	
Two weeks ago I received a Viber message from my mom, who lives in our village very far from where I am. She needs some money to make a renovation in our family home, so I asked her to give me her bank account information so that I can send her the money as she requested. Today, she called me again to ask me how is school. She is so ungrateful, she did not mention the money I gave her or even thank me. I am sure she spent the money to buy some fancy clothes instead of renovating the house.	
My brother is very active on social media. Whenever he goes out with his friends, he writes posts like: 'I'm having dinner at Super Burger, they have the best burgers in town'. Since he moved out from our family home to live by himself, he keeps bragging about how great it was to live alone in social media with messages like: 'So peaceful and quiet in my own apartment. I feel so free living by myself!'. When he is travelling he also brags about it: 'Going to Vietnam for the New Year! See you Yangon next Monday!'. The last time he came back from his vacation, someone had broken into his apartment and stole his computer and some money.	

6.1.2.
Protecting yourself online

Expected learning outcomes

By the end of the lesson, you will be able to:

- Identify potential threats and risks on using and engaging with the internet; and

- Take preventive measures and steps to protect yourself and keep your information safe in the internet.

Learning activity 1

Prior to the lesson, please respond to the following questions:

Question	Yes	No
Do you use the same password for different online accounts and profiles?		
Do your passwords include numbers, capital and lower case letters and symbols?		
Do you accept friend requests from people you have not met in person or that you do not know?		
Do you download music, movies and series from the internet?		
Do you chat in Viber, WhatsApp, messenger or other messaging apps with people you have not met in person?		
Do you sometimes open emails from senders that you do not know?		

Keeping yourself safe in the online world

Since we are kids, teachers, parents, family and friends teach us how to keep ourselves safe. They give us advice on how to behave in certain situations, when we travel, when we walk alone in the streets, when we go out with our friends. We are taught to identify threats so that we can take measures to keep ourselves safe from any potential dangers and risks. The same thing applies to the online world. Internet users need to be alert and be able to spot any potential threats that can put them in a dangerous situation. There are a number of basic steps and rules that we can follow to protect ourselves and also children and young people; who are most vulnerable to the risks of interacting with internet:

- **<u>Keep your passwords safe.</u>** First it is important to create a password that is strong enough and hacker proof. For that purpose, it is recommendable to use both capital and lower case letters, include numbers and even symbols (%, #, @, etc.). You should avoid simple passwords which include your name, your birthdate or sequential numbers (123456).

- Secondly, <u>do not share your password</u> with anyone, not even with your friends or partner. In the case of minors, the password should be kept within the close family members. If you have your password written in a piece of paper or notebook, do not keep it near your laptop, smartphone or communication device.

- **<u>Only provide the information that is mandatory</u>**. When you create your online profile or sign up for a new mobile app or site online, keep in mind that the information you do share should only be mandatory. The information that is mandatory to complete is usually marked with an asterisk and highlighted in a different color. Commercial websites (such as online shopping or hotel booking sites), 'free' email providers (such as Gmail) and social media networks want to have as much data from the users as they can. They will insist that you provide additional information, by saying that your profile is not complete. The data you provide will be used by companies to show you advertisements of their products and services.

- **<u>Age requirement</u>.** Most social networks, online platforms, forums, have age restrictions for users (i.e. Minimum 13 years old or minimum 18 years old). If a minor or a kid signs in for an online platform or mobile application that is inappropriate for their age, they might be exposed to content that is not appropriate. Youth are still learning about life, and figuring out who they are. The exposure to certain content that can be found in some of these platforms and communication apps can negatively affect their personal development, including relationships, perception of their body image or their gender identity. They can also be easily manipulated by adults to do things and act in ways that are not appropriate for them, or harmful.

- **<u>Log out from your accounts after you are done and delete the history in the browser.</u>** This is important when using a device (computer, laptop or tablet) from a public space or that is shared with others, such as the ones you can find in libraries, internet cafes, school, hotels or airports. If you do not log out and delete the history, the person coming after you can use your profile and start contacting your friends and family using your identity and have direct access to your personal information.

- **<u>Keep all your software and systems up-to-date.</u>** Mobile app and operating system developers (like Android, iOS, Windows, etc.) regularly update their software and systems. These updates are not only cosmetic make overs, they are very often necessary to fix bugs, security breaches or incorporate stronger defense systems to counter new viruses that might have spread through the internet. Therefore, it is important that you keep updating your operating systems, antivirus software and mobile apps.

- **<u>Download only from trusted sources.</u>** This rule applies not only to the new mobile apps and software that you download from your computer and mobile phone. Music and video files that are downloaded from the internet might also contain viruses or malicious software that can steal your private information, or erase important documents and files that you have stored in your devices. It is recommended that you only download mobile applications from the official App Stores. For computer software, use the official website of the developer.

- **<u>Do not open emails from people/senders that you do not know.</u>** Email is widely used by scammers and other cybercriminals to spread viruses that will damage your software, steal your data, or ask for private information that they will later use to blackmail you. If you receive an email of this kind, delete it right away and do not open any attachment that comes with it.

These are some basic rules that any internet user should follow in order to keep themselves safe when engaging with the internet. But users should also be vigilant of other possible signs that might alert them from possible threats in different situations.

Learning activity 2

Review the potentially risky scenarios from the previous lesson. Divide in groups - each group will analyse one scenario from the scenarios provided below and respond to the following questions:

a) What signals make you think or realise that this situation might put your safety and privacy at risk?
b) What actions/steps would you take to make sure that there is no risk or that the threat is mitigated?

Table 6.2. Potentially risky scenarios

Scenario 1.

I just received a new friend request in my social media account. I do not exactly remember if I know this person, but I accept her request anyway. She is a beautiful girl of around my age. I check in her profile to find out more information about her, but she only has a few photos that seem to be taken on the same day. There are no other photos with her friends or family, and it shows that her profile was created only four months ago. Two days after I accept her friend request, the girl starts chatting with me. She seems very nice, very friendly and also funny.

Scenario 2.

I receive a Viber message from my school friend telling me that a migrant person from another State has bitten one of our neighbours and injured him badly. He also sends me a photo of the victim covered in blood, there is so much blood that I cannot recognise if that is my neighbour. My friend did not take the photo, his aunty sent it to him. He is telling me that migrants from that State that have come to my town, cannot find jobs, and they are, now, stealing money from people. They do not care if they have to beat them up in order to get what they want. I need to share this information with my friends, so that they also know about it and will be able to take necessary action.

Scenario 3.

I am getting so fat, the clothes I bought last month do not fit me anymore. I think I will try diet to lose a few pounds. Let's check what I can find in the internet.......Oh! This diet looks very effective, there is a comment from a girl who lost 20 pounds in one month. There is also a comment from a doctor that says that is the best way to lose weight and start a healthier lifestyle. It also looks very easy, I just need to eat one portion of rice a day at lunch time. Only rice, no meat, fish or vegetables. It sounds a bit challenging, because I cannot eat anything else during the day. For breakfast and dinner I would only be allowed to drink tea But I really want to lose weight, so I will do it! I know I can do it!

Scenario 4.

Two weeks ago I received a Viber message from my mom, who lives in our village very far from where I am. She needs some money to make a renovation in our family home, so I asked her to give me her bank account information so that I can send her the money as she requested. Today, she called me again to ask me how is school. She is so ungrateful, she did not mention the money I gave her or even thank me. I am sure she spent the money to buy some fancy clothes instead of renovating the house.

Scenario 5.

My brother is very active on social media. Whenever he goes out with his friends, he writes posts like: 'I'm having dinner at Super Burger, they have the best burgers in town'. Since he moved out from our family home to live by himself, he keeps bragging about how great it was to live alone in social media with messages like: 'So peaceful and quiet in my own apartment. I feel so free living by myself!'. When he is travelling he also brags about it: 'Going to Vietnam for the New Year! See you Yangon next Monday!'.
The last time he came back from his vacation, someone had broken into his apartment and stole his computer and some money.

Learning activity 3

Imagine that you were a teacher working at the ICT room at the school. You notice that your students are not very good in keeping themselves safe when they are online, so you have decided to create a poster to remind them the most important things they have to keep in mind when using the internet in a safe way.

Divide in groups, create a poster with what you think are the 'Golden Rules for Internet Safety'. Discuss with your classmates and write down the three most important rules that students need to know about online safety.

Learning activity 4

Choose the most appropriate answer for the following questions.

1. From these passwords, which one is the most secure one?
   a) Dy_834mS@
   b) Password123456
   c) P@sword
   d) Yangon00$

2. If you receive an email from someone that you do not know. What should you do?
   a) Open the email and read it. If it contains attachments, I should open them to understand better what the sender is trying to tell me. They might contain very important information.
   b) Never open the email and delete it right away.
   c) Even if I do not know the sender, it might be important. If after opening the email and reading it, I get the sense that it might be a scam, I should not open the attachments and delete the email.

3. If I get a friend request in my social media account from a person that I do not know, I should:
   a) Accept the friend request. If he or she found me online, it means that the person genuinely wants to be my friend. Or probably he or she is a friend of someone that I know, so it is always good to connect with new people.

b) Do not accept the friend request.

c) Check if the requester has common friends with me. If he or she has common friends, then it is safe to accept the request.

d) Check the profile of the requester. If he or she has recently taken photos, the timeline shows regular activity online, or if he or she is from my same town, then it is safe to accept the request.

4. You have joined a new social media network. You have been using it for more than three months, but you are not getting many followers and friend requests. The social media suggests you to include some more information in the profile, and add new photos, so that your friends can find your profile and follow you. What will you do?

a) Add as much information as I can until my profile is complete at 100%.

b) Send friends requests and follow requests to all the profiles that the social media suggests me. After I follow or friend them, they will follow and friend me back.

c) Provide some additional fake information in the profile. Just enough information to get additional followers and friend requests.

d) Ignore the suggestion of the social media, and continue operating with the basic information I provided when I signed in.

5. A friend of mine just shared in his Facebook the post of a girl from our town who claims that the owner of one restaurant served her dog meat instead of beef. She provides the name of the shop and is asking for a boycott.

a) The owner of that restaurant is playing with people's health. I will also share the post of the girl so that everyone knows what happened and they do not go to that restaurant anymore.

b) I will check first who this girl is, maybe she does not get along with the owner of the restaurant, or they had some personal issue and now she is mad at him and wants to defame him.

c) The owner of the restaurant is playing with people's health. I will share the information using instant messaging apps like Viber or WhatsApp. That is the safest way to share this kind of sensitive information, as it is more private.

d) I will not share the information, as I am not sure if it is true or false, but I will write a comment supporting the boycott. That is the right thing to do as a responsible citizen.

6.1.3.
Privacy in the online world

Expected learning outcomes

By the end of the lesson, you will be able to:
- Realise the loss of privacy that might occur when engaging with the internet; and
- Demonstrate the use of main privacy management functions to manage personal information and protect users, especially minors.

The importance of keeping your privacy private

When we go to a restaurant with our friends, at home or when we walk in the streets, we try to keep our belongings and valuables safe, so that thieves or burglars do not steal our things from us. When we go online, those valuables are our privacy. Although there is some personal information about ourselves that we are happy to share with our friends and family, such as our favorite food or the movies and music that we like, there is also private information that we would not like strangers to know.

Imagine that you are walking to school in the morning, and a stranger, a person that you have never met before, approaches you and tells you things like:

- 'How was the chicken curry that you had yesterday for dinner at the restaurant? It looked delicious'.
- 'I hope you are feeling better after the break up with your partner, you seemed very sad. Hope you are coping well'
- 'You were looking beautiful with the dress that you were wearing last Saturday at your sister's wedding'.

How would you feel in this kind of situation?

When using internet, especially social media, we might be putting ourselves out there on the internet and releasing information which in the real world we would never share with strangers. Let us explore what we need to know, before sharing any private information on the internet.

- **Think before you share**. Whenever you are about to post a photo or a video on Facebook, write a post about how you feel, or share content produced by others, take a moment to think about the consequences. A lot of people will have access to the information you shared, do you really want them to know that information about you?

- **Be aware that written communication is different from face-to-face communication.** When talking with your friends face to face, the voice tone, the context, body language etc. also provides meaning to what is being said. Those elements are lost when we write a text. Therefore, the message might be misinterpreted or not well understood by the reader.

- **Keep in mind that once you share a photo or a video online**, through social media or messaging app, even if it is only shared within a small group of friends, you lose control over the material that you shared. The photo or video might be shared again and again and again or used by other people, and you will not have any control over how far that goes. Most importantly, be aware that the information you shared will stay on the internet indefinitely. Even if you try to delete your personal information from the internet, it will be almost impossible to erase all trace of it. This is what is called the digital print.

- **Sexting.** With the rapid use of smartphones, it has become more and more common, especially among young people, to share photos and videos of nudity or sexual content with partners and lovers. If you send a photo or video of this sort, be aware that you cannot control where it will end up, or to whom will it reach. Someone can use that photo or video to bully you, harass you or blackmail you. And again, remember, it will stay on the internet forever.

- **<u>Privacy Settings.</u>** Before you create a new profile online, learn about the privacy settings of the website, email provider, mobile app or social media that you are signing up on. The privacy settings determine who can see and access the content that you provide and share, it also allows the website or app to know your exact location and to keep record of it. It is recommended that you select the most restrictive privacy settings in your social media accounts, and that you deactivate the location trackers. Many social media networks change their privacy settings regularly, so make sure that you visit the privacy settings from time to time so that you are in control of who has access to your profile and the information you share. Keep in mind, that the default privacy settings of some social media networks are very public from the beginning. For example, when you sign up in Twitter or Instagram, your profile is public by default. That means anyone can see what you write and share. In the case of Facebook, when you sign up some information is by default public while other information can only be seen by your friends.

- **<u>When someone else violates your privacy.</u>** It might happen that a friend tags you in a photo or video that you would not like to share or be made public. In those cases, some social networks allow you to untag yourself. But if you still feel that you would like that photo to be removed from the internet, you can ask your friend to remove it. If that doesn't work, some social networks allow you to report some content. After analysing your request, the administrator of the social media might decide to remove the content.

- **<u>Do not overshare.</u>** Do not share publicly your telephone number or home address or provide any information that might allow people that are not your friends to know where you live, work or hang out. Turn off location services when posting a photo.

- **<u>Respect other people's privacy.</u>** Before sharing content such as photos or videos, be aware of the privacy of other people. Ask permission from the person in the photo or the video before you post. If you do not know the person in the photo, think about if by sharing the photo you might be damaging that person's reputation or violating their right to privacy.

 Learning activity 1

For this exercise you will work in pairs. Your pair will be a classmate with whom you are not friends on Facebook or with whom you are not connected in another social media that you usually use (Twitter, Instagram, etc.). Do the following:

- Try to find your pair's profile on social media. What information can you find about him? How much information is public in his profile? Write your answers down.
- Use a search engine such as Google, and search for their name. Explore the entries provided by the search engine, and write down the information that you can find about your classmate.

If you cannot find much information about your partner, try to include additional key words for the search, such as the hometown where they are from, the school where they studied, email address, date of birth, etc.

 Learning activity 2

Divide in groups, choose one social media network and explore its privacy settings and terms and conditions. The following questions will help you explore and guide your analysis.

- How easy or difficult is it to find the privacy settings?
- Are the settings available in Myanmar language, or only in English? Does that affect the capacity of Myanmar people to protect their privacy?
- Is it clear how much are you sharing or how public/private your account is?
- Is it easy to report content?
- Are the safety measures or mechanisms clearly stated?
- Are the privacy settings clearly explained?
- Even if you set up the privacy settings in the most restrictive way, do you think there is still too much information available to the public?

Learning activity 3

Youth are especially vulnerable to the threats and risks of the online world. For this activity, imagine that you are a school teacher. Parents of your students might not be fully aware of the risks that their kids are exposed to when they use internet, or their smartphone devices, so you have decided to give them an orientation to walk them through understanding the risks of the online world.

Your objective is to give parents some advice on steps they can take to make sure that their kids stay safe and protect their privacy when they go online.

Divide in groups, prepare a short presentation (5 minutes maximum) keeping in mind that the intended audience is your hypothetical students' parents. Provide a few tips or advice on how parents can protect their children who are going online, and how they can manage their privacy.

Review questions

1. What are the risks of interacting with the internet?
2. What can users do to avoid being affected by the risks and threats of interacting with the internet and online communication platforms?
3. Why is it important to understand the loss of privacy that might occur when using and engaging with the internet?

Unit Summary

Key messages

- Although the internet provides many opportunities to access information, self-expression, acquire new knowledge and communicate, it also exposes users to risks related to their health, privacy, safety and overall well-being.

- Citizens have to understand the threats and risks that they are exposed to when engaging with the internet.

- Citizens must stay vigilant when interacting and engaging with the internet to avoid being affected by the risks and threats of the online world.

- Citizens have to understand the loss of privacy that might occur as a result of engaging with certain online platforms; especially social media.

- It is important to understand and know how to manage personal information through the privacy management functions of social media networks and other communication platforms on the internet.

- Children and young people are especially vulnerable to the risks in the online world.

Unit reflection

1. Why is it important to understand the risks that users are exposed to when interacting and engaging with the internet?
2. What steps can be taken to protect the privacy of minors in the online world?

Further reading

(Including names of printed materials and links to online materials)

Title	Link	QR Code	Source
MIL Curriculum For Teachers (English)	http://unesdoc.unesco.org/images/0019/001929/192971e.pdf		**UNESCO**
MIL Curriculum For Teachers (Myanmar Language)	http://unesdoc.unesco.org/images/0019/001929/192971MYA.pdf		**UNESCO**
Digital Citizenship Videos	https://www.commonsense.org/education/video/digital-citizenship		**Common Sense Education**
The State of the World's Children 2017: Children in a Digital World	https://www.unicef.org/publications/index_101992.html		**UNICEF**
Media Smarts	https://mediasmarts.ca/digital-media-literacy		**Canada's Centre for Media and Digital Literacy**
Internet Bawdar	https://www.internetbawdar.com/		**Phandeeyar**

Unit 7

Computer Application

You are going to navigate the basic functions of presentation tools in this unit. In Semester one of first year, you have learnt and become familiar with basic Word processing which most of its basic functions are similar to Presentation that you are going to learn in this unit. If you know how to modify text, paragraph, tables, illustrations, pictures in Word processing, you should be able to do the same in Presentation without any difficulty. The new functions you are going to learn Presentation are slide layout and formatting, inserting hyperlinks/images/charts/audio/video clips which are divided into three lessons under one unit: Basic functions of presentation 1, 2, and 3.

Expected learning outcomes

By the end of this unit, you will be able to:
- Describe and perform the basic functions of presentation tools such as Microsoft Powerpoint (slide layout and formatting, inserting hyperlinks/images/charts/audio/video clips); and
- Print a presentation file.

7.1. Presentation

What is presentation program?

A presentation program is an application software which allows you to organise your ideas by using text, images, videos, diagrams with animations and transitions in slideshows format in order to share with other people. There are many types of presentation software, such as: Libre Office Impress; FlowVella; Powtoon and many more. People in different industries are using presentation applications in their daily work life. For example, medical presentations are used to give awareness about health to the public, financial presentations are used to present financial analysis using graph or chart, marketing presentations are used to present marketing plans or attract new clients.

In education, teacher can create a presentation file to teach lessons. Presentation is an important skill for you to present the lessons effectively for any other subjects using a computer. You need to be familiar with the basic features of presentation. A creative presentation can engage students to the lesson and help the students to deepen the understanding of the topic by images, videos, graphics, motion pictures. The presentation file is easy to share and if teacher have recorded the explanation of the lecture in the presentation, students can review it by themselves for the part they didn't able to catch during the lesson. Students can present their assignments, school project by using the presentation application. Administration staffs, especially school principal can use presentation applications to share their management plan or administration information in the meeting with parents, school committee, teachers and other education officials. In this unit, you will be learning Microsoft PowerPoint to get familiar with the basic features of a presentation application. If you know how to use Microsoft PowerPoint, you will be able to easily adapt the features of other presentation software.

7.1.1.
Basic functions of presentation 1

Expected learning outcomes

By the end of the lesson, you will be able to:
- Describe the basic features of a presentation application;
- Manage layout, design and formatting of presentation slides; and
- Do font, paragraph and text formatting.

Start the Microsoft PowerPoint [https://edc.moe.edu.mm/en/resource/start-microsoft-powerpoint**]**

Step 1: Click **Start** button on the windows taskbar. Start Menu will display.

Step 2: Click the **PowerPoint application** (for example: **Power Point 2016**) or in the search box, you need to enter the name of application (for example **Power Point 2016**) and click on it.
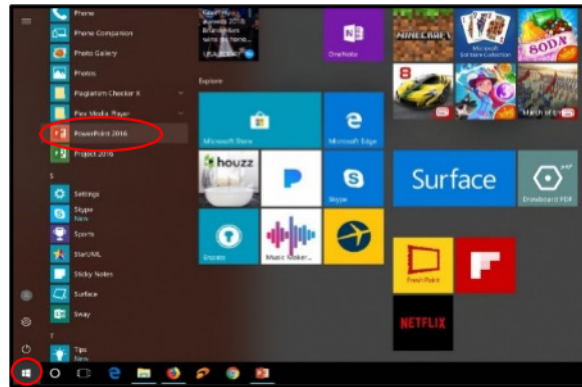
Figure 7.1. Basic function of presentation 1

Step 3: Click on **Blank Presentation** to create a new presentation file.
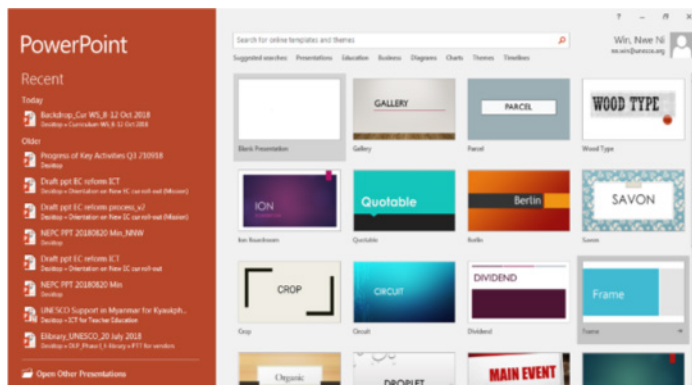
Figure 7.2. Basic function of presentation 1

The following screen will appear as soon as a Microsoft PowerPoint window is opened. You may explore how each feature work. You may also see the screencasts of detail explanation of some important features.
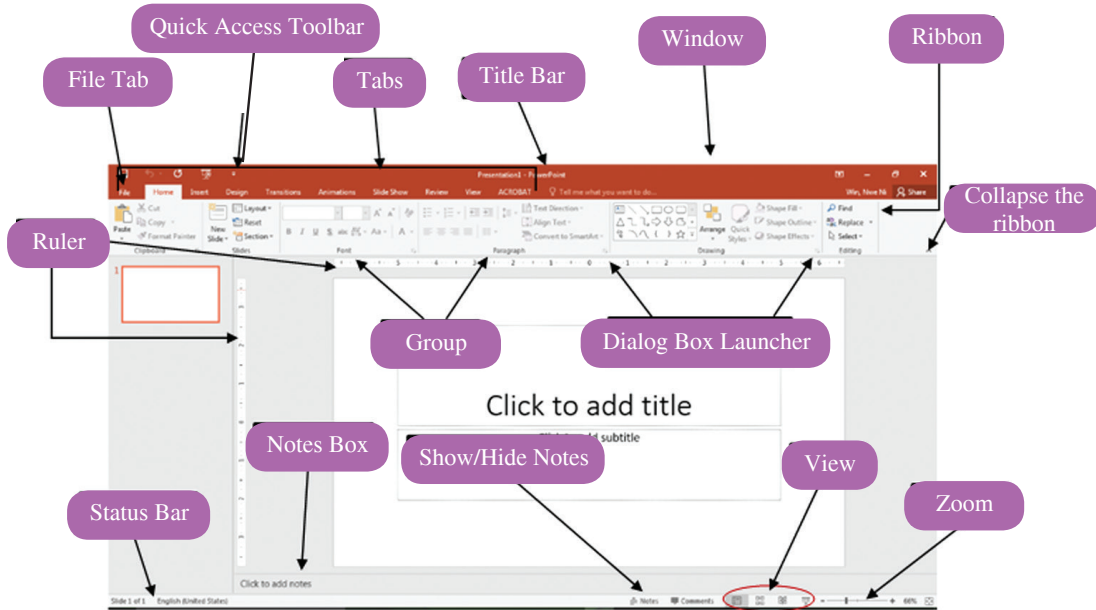
Figure 7.3. Saving a presentation file

Generally, the steps to follow in order to save a file are the same no matter what kind of application you are using. Saving a presentation file is the same as saving a word document. However, you might need to choose the file type base on the application you use. Some sample file formats that are supported in PowerPoint are .pptx which can reduce file size and the slides are saved into pictures format, .pptm which can include Visual Basic for Application code, .wmv which allows us to save the presentation file in video format, .ppt which is the default format of PowerPoint 97–2003. You can further learn about PowePoint supported file formats in the recourse list at the end of this chapter.

Step 1: Click **Save** or **Save as** in **File** tab.

Step 2: Click **Browse** to find the location to save.

Step 3: Choose the location where you want to save the presentation. For example, click **Desktop**.

Step 4: Type your name in the file name box.

Step 5: Choose the file type (for example: PowerPoint Presentation) in the **save as type**.

Step 6: Click **Save.** You will see the Microsoft PowerPoint file with your name on desktop screen.

Layout, design, and formatting of presentation slides

You are to be working under Home tab to insert and manage slide.
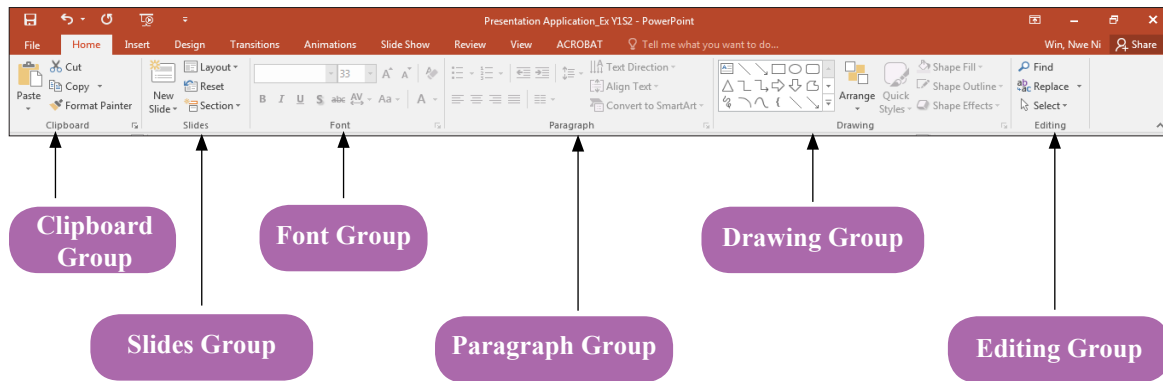
Figure 7.4. Basic function of presentation 1

i) **Inserting slides** [https://edc.moe.edu.mm/en/resource/layout-design-and-formatting-of-presentation-slide]

Slides in presentations are similar to pages in word processing. In PowerPoint, content is added in the slide. Please follow the steps below to insert more slides in PowerPoint.

Step 1: Open a new PowerPoint presentation. (it is the same as opening a new word document)

Step 2: In slides group, click **New Slides** to insert a new slide without choosing its layout. or click on the dropdown arrow of **New Slides** to choose the specific layout of the new slide which is to be inserted.

ii) **Changing slide layout**[https://edc.moe.edu.mm/en/resource/layout-design-and-formatting-of-presentation-slide]

The presentation slides can include text, images, illustrations and videos. Different layouts can be selected for each slide based on what content you want to include and how you want to present.

Step 1: Click on the existing slide that you want to change the layout.

Step 2: Click on the dropdown arrow of **Layout** and choose the layout style you prefer.

iii) **Organising slides into sections** [https://edc.moe.edu.mm/en/resource/layout-design-and-formatting-of-presentation-slide]

Slides in the PowerPoint can be separated into sections. In other word, you can organise the slides into groups. It is useful when you do group presentations. For example, you can separate the slides into four sections if you have four team members in the group and rename the section as team members' names.

Step 1: Click on the slide where you want to add a section.
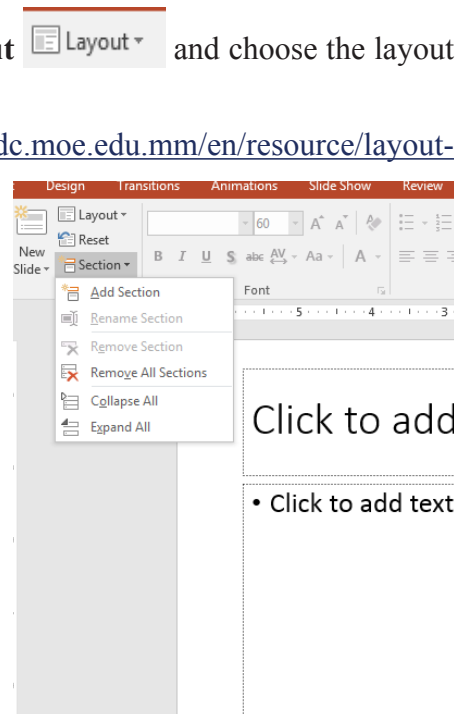
Step 2: Click on the dropdown arrow of **Section** and click on **add section** to add new section. You can also modify the slide sections, such as: **rename section**, **remove section, remove all sections, Collapse all** or **expand all**.

You are to be working under Design tab to add and modify the slides.
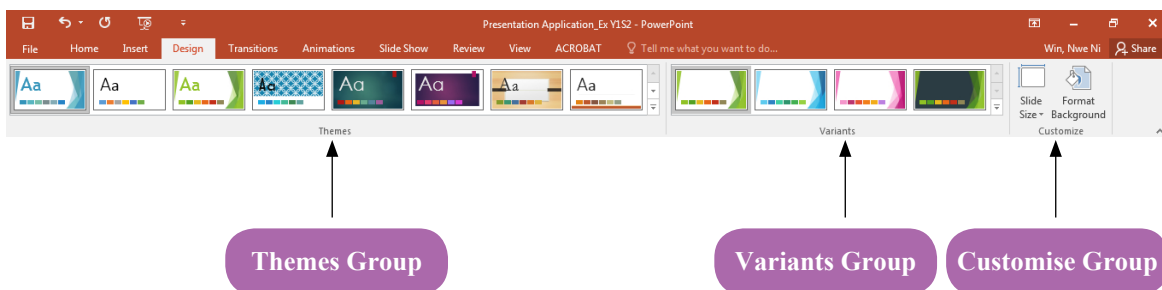
Figure 7.5. Basic function of presentation 1

i) **Adding   theme**   [https://edc.moe.edu.mm/en/resource/layout-design-and-formatting-of-presentation-slide]

Theme is the design or the look of a presentation; including colors, fonts, effects and slide background. In PowerPoint, you can easily choose the default office theme which already exists or you can customise manually to create a professional-looking presentation.

Step 1: Click on the dropdown arrow of **Theme** group and select the theme you prefer.

ii) **Modifying   theme**   [https://edc.moe.edu.mm/en/resource/layout-design-and-formatting-of-presentation-slide]

Step 1: Click on the dropdown arrow of **Variants** group.

Step 2: You can choose theme color, font, effects, and background style.
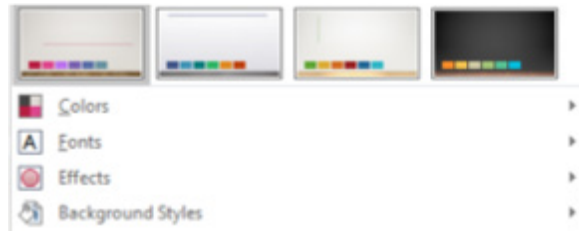
Figure 7.6. Basic function of presentation 1

iii) **Modifying slide background** [https://edc.moe.edu.mm/en/resource/layout-design-and-formatting-of-presentation-slide]

Step 1: Click on the slide you would like to modify.

Step 2: Click **Format Background** in customise group.
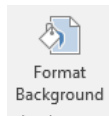
Step 3: You can choose different options such as: Solid Fill, Gradient Fill, Picture or Texture Fill, Pattern Fill and explore to get the background you want.

Note: You can click the checkbox of **Hide background graphic** if you do not want the graphic of pre-selected theme. Click **Apply to All** if you want all the slides to be the same format as the selected slide. Click **Reset Background** if you want to get the original background back.

iv) **Changing slide size** [https://edc.moe.edu.mm/en/resource/layout-design-and-formatting-of-presentation-slide]

Step 1: Click on the dropdown arrow of **Slide Size** in customise group.

Step 2: Choose and click on **Standard** Standard (4:3) or **Widescreen**. Widescreen (16:9) You can click on **Customise Slide Size** for more options.

You are to be working under Transitions tab to add and modify transitions to the slides.
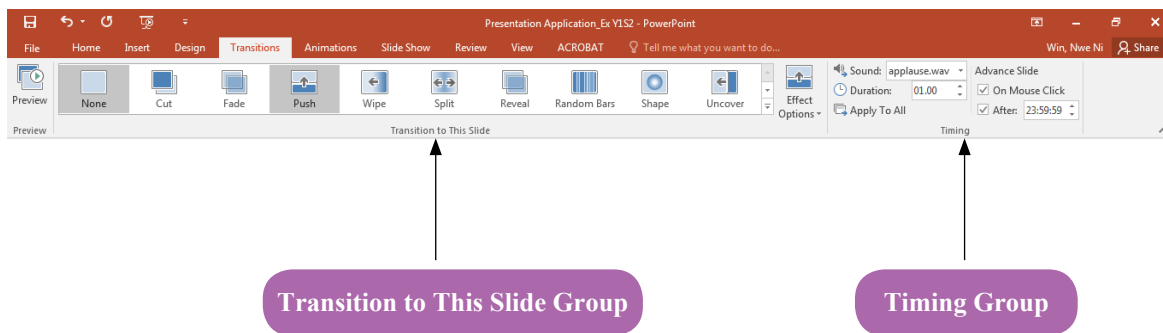
Figure 7.7. Basic function of presentation 1

i) **Adding transitions** [https://edc.moe.edu.mm/en/resource/transition-and-animation]

Transitions are effects that can be inserted for advancing slides from one after another. Base on the style of presentation, you can choose different transition for each slide.

Step 1: Select the slide you want to insert transition and click on dropdown arrow in **Transitions** to this slide group.

Step 2: Click on an effect which is suitable with the slide content.

ii) **Modifying transitions** [https://edc.moe.edu.mm/en/resource/transition-and-animation]

Step 1: Select the slide which have transition that you want to modify and click on dropdown arrow of **Effect Options** , then choose an option from the provided list.

**Step 2:** In Timing group, click on dropdown arrow of **Sound** to add transition sound, click on dropdown arrow of **Duration** to set the length of transition, click on **Apply to All** to use the same setting of transition in selected slid to all the rest of the slides in a presentation.
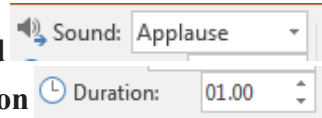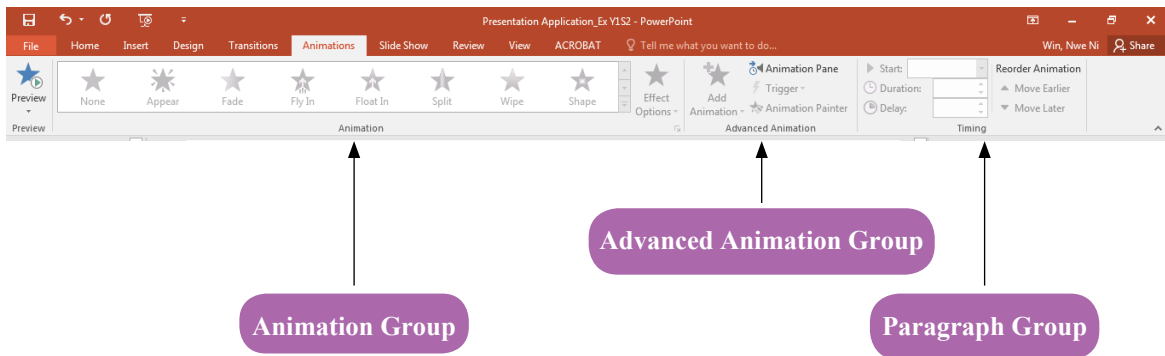
Step 3: Under Advance Slide of Timing group, click on the checkbox of **On Mouse Click** to move the slides by clicking the mouse or set the time in **After** to automatically move the slides.
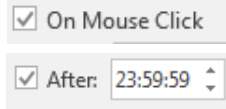
You are to be working under Animations tab to add and modify animations to the slides.

Figure 7.8. Basic function of presentation 1

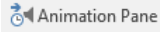i)   **Adding   Animations**   [https://edc.moe.edu.mm/en/resource/transition-and-animation]

Animations are effects that can be inserted for each object (text, images, illustrations, etc.) in a slide.
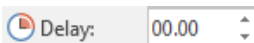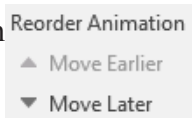
Step 1: Select an object and click on dropdown arrow in Animations group.

Step 2: Click on an effect which is suitable with the selected object.

ii) **Modifying Animations** [https://edc.moe.edu.mm/en/resource/transition-and-animation]

Step 1: Select the animation inserted object that you want to modify and click on dropdown arrow of **Effect Options** , then choose an option from the provided list.

Step 2: In Advanced Animation group, click on dropdown arrow of **Add Animation** to add additional animation which is applied after the existed animation in a selected object, click **Animation Pane** to open the Animation Pane where timeline of animation can be viewed and edited. view and edit the timeline of animation, click on **Trigger** if you want to set a start condition of an animation, Click **Animation Painter** to apply an animation of an object into another object or double click **Animation Painter** if you want to apply the selected animation into more than one object.

Step 3: In Timing group, click on dropdown arrow of **Start** to choose when the animation start which can be **On Click** or w**ith previous animation** or **After previous animation** , set the length of animation by clicking up and down arrow of **Duration** , click the up and down arrow of **Delay** if you want to play the animation after a few second, rearrange the sequence of animations by clicking **Move Earlie**r or **Move Later** in Reorder Animation .

Font, paragraph, and text formatting

You will be working under Home and Inserts tab to do font and paragraph formatting. Modifying font and paragraph in presentation slide is very much similar in word processing. In this section, you will learn about font, paragraph and text formatting which is commonly used in PowerPoint. You are recommended to review about font and text formatting in word processing at page xxxxxx.

Text can be formatted in Text group, Insert tab.
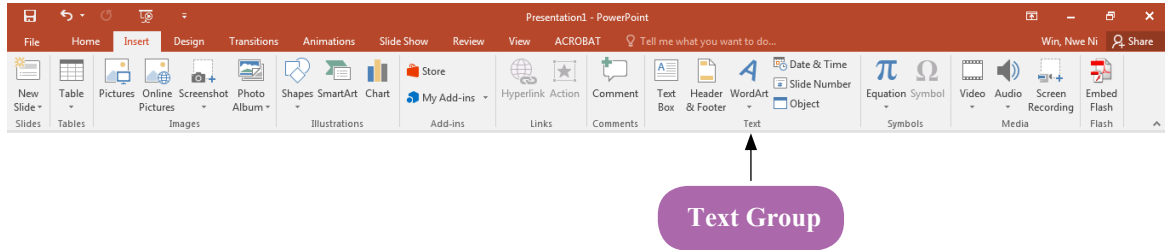
Figure 7.9. Basic function of presentation 1

i) **Inserting text in slide** [https://edc.moe.edu.mm/en/elibrary?search=presentation]

Step 1: Click **Text Box** in text group.

Step 2: Click on the slide where you want to type or draw the text box in diagonal to set the text area.

ii) **Inserting Object** [https://edc.moe.edu.mm/en/elibrary?search=presentation]

Object button allows you to add other documents or file into the slide which will display in image format.

Step 1: Select a slide where you want to add a file and click Object .

Step 2: Click **Create new** if you want to create new content in a selected application (for example, word processor) or click **Create** from file if you want to embed other file in the slide.

Step 3: Click **Browse** and search the file you want to add or click **Create New** if you want to create new content.

Step 4: Click **OK**.

iii) **Inserting Header and Footer**

[https://edc.moe.edu.mm/en/elibrary?search=presentation]

Header and Footer in presentation is a little different from word processing. Please follow the below steps to insert header, footer, date and time, slide number.

Step 1: Select a slide randomly and click **Header & Footer**.

Step 2: Click on checkbox of **Date and time**, **Slide number** to add page number, **Footer** to add text.

Step 3: Click **Apply** if you want to add the selected format in current slide or click **Apply to All** if you want to add the selected format in all slides or click **Cancel** if you want the original format.
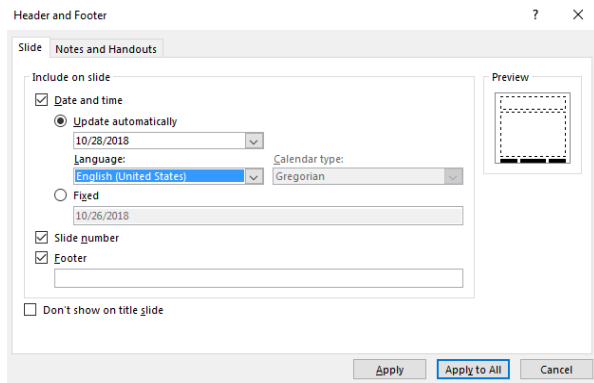
Figure 7.10. Basic function of presentation 1

Another thing that can do in Text group is WordArt which is the same as in word processing. Font and paragraph can be formatted in Home tab.
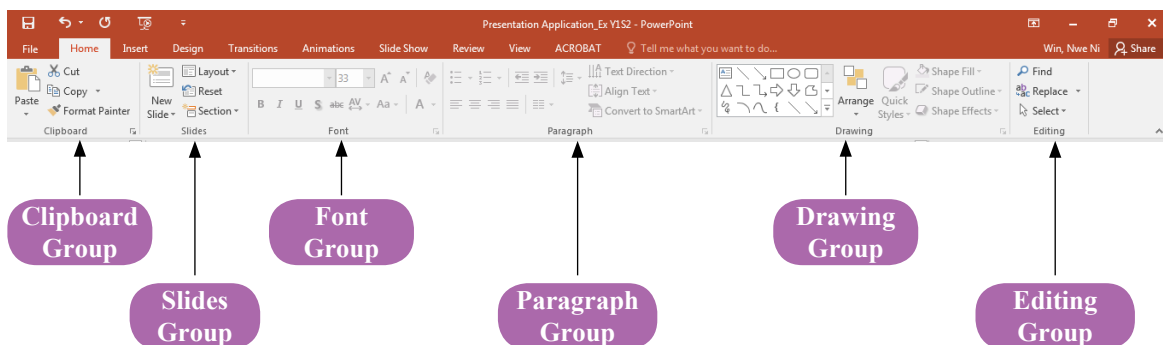
Figure 7.11. Basic function of presentation 1

iv) **Customising font** [https://edc.moe.edu.mm/en/resource/customising-paragraph-and-text-formatting]

Step 1: Select the text by clicking and drag from the beginning to the end of the text.

Step 2: Choose the font type, style, size, text shadow, character spacing in the Font group or Click **custom arrow** ⬚ in Font Group to open Font Dialog box where you can choose more options to customise your text in advanced setting.
Please formant the text as follows:

Font type = Adobe Garamond Pro Bold

Font size = 72

Font color = Blue

Bold and underline

Text shadow

Character spacing = Tight

Example answer is as below:

Figure 7.12. Example of customising font

v) **Customising paragraph** [https://edc.moe.edu.mm/en/resource/customising-paragraph-and-text-formatting]

Step 1: Type one paragraph or copy and paste the previous text into one paragraph, select the text by clicking and drag from the beginning to the end of the paragraph.

Step 2: Choose the alignment, line spacing, indent, sort, bullet, numbering, text direction, align text, convert to smartart in the Paragraph group or Click **custom arrow** ⬚ in Paragraph Group to open Paragraph Dialog box where you can choose more options to customise your paragraph in advanced setting.

Please format the paragraph as following:

> Select the text from the previous exercise of 'Customising font'.
> Text direction = 270 degree
> Align text = Center
> Type the text in below example and divide into two columns in a separate text box.
> Type 'step 1: xxxxx, step 2: xxxxx' as shown in sample below and convert to Smartart.

Figure 7.13. Example of customising paragraph

Example answer is as below:
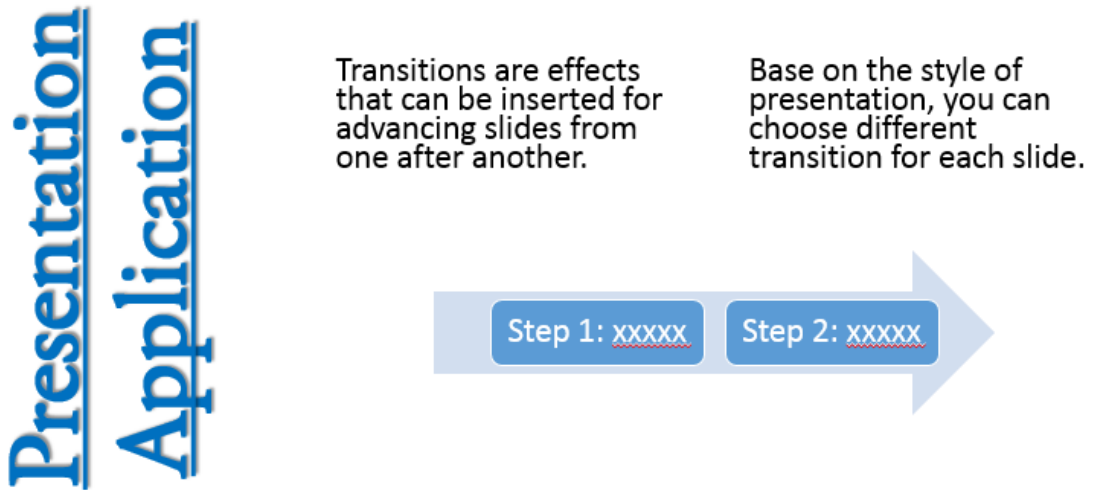
Figure 7.14. Example of customising format

Learning activity 1

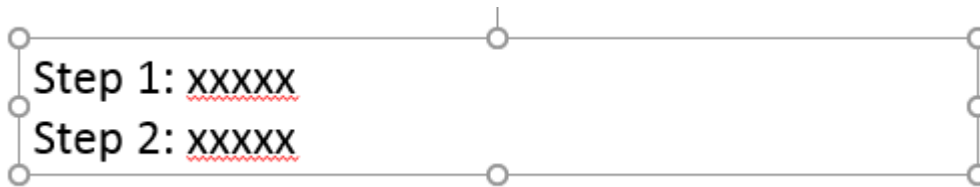In class, discuss the difficulties found during the individual practice and discuss solutions or suggestions together with the guidance of your teacher educator.

Common Problems in using Microsoft PowerPoint	Possible Solution / Suggestion

Learning activity 2

1. Open the presentation file that you saved during self-study (File name: Lesson 7.1.1._Self-Study_ [Add Your Name Here] Add 9 new slides with different layout for each slide.
2. Add one slide before the first slide with Title Only layout, and two slides with Blank layout.
3. Choose Facet theme, change the theme color in Blue Green.
4. Change the background of the third slide with picture, 85% transparency, and hide the background graphic.
5. Add slide number.
6. Add the transitions to the slides, use different transition for each slide.
7. Add the animations of the content as appropriate.
8. Save it with the file name as 'Lesson 7.1.1._Activity 2_ [Add Your Name Here]' in your computer. Please make sure to back up your file in your own USB flash drive (if any).

7.1.2.
Basic functions of presentation 2

Expected learning outcomes

By the end of the lesson, you will be able to:
- Insert and modify table, images and illustrations; and
- Insert links, media files and manage them.

In the lesson, you will learn more about basic functions of Microsoft PowerPoint and how to insert and modify table, images and illustrations, links, media files within the presentation.

Insert and modify table, images and illustrations, links, media files

You are to be working under Insert tab to insert and modify table, images and illustrations.
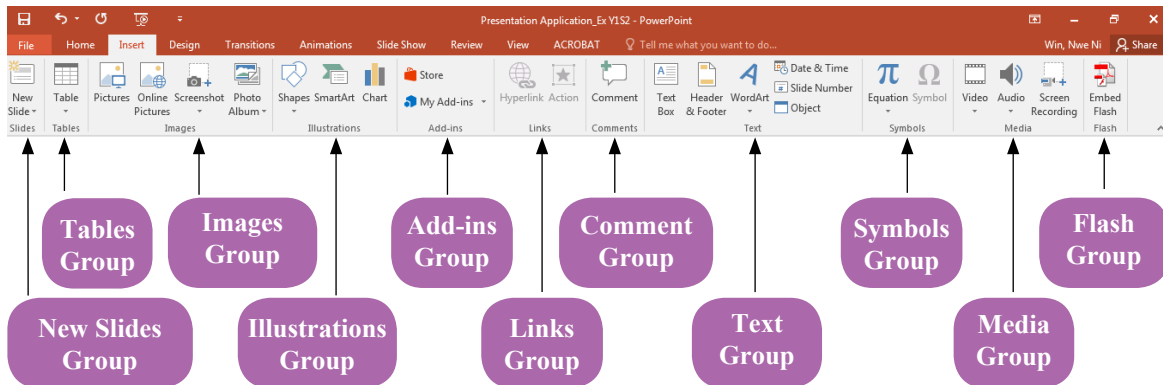
Figure 7.15. Basic function of presentation 2

i) **Inserting and modifying table**

[https://edc.moe.edu.mm/en/resource/insert-and-modifying-table-in-presentation]

Inserting modifying table in PowerPoint is basically the same as in word processing. You can review about 'Table Formatting' in word processing lesson at page xxx.

Please create a table as following:

Create a table with 4 columns and 3 rows

Table styles = Medium Style 2 – Accent 5
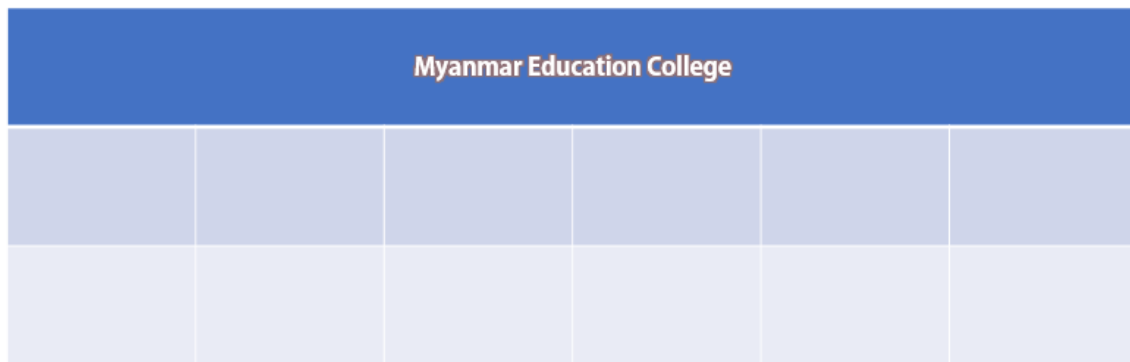
Merge all cells in first row and write a title: 'Myanmar Education College'

Font = Adobe Gothic Std B

Alignment = Center and vertically center

WordArt styles = Organge, 8 pt glow, Accent color 2

Add one column in second row.

Figure 7.16. Basic function of presentation 2

ii) **Inserting and modifying images**

[https://edc.moe.edu.mm/en/resource/inserting-and-modifying-images-illustrations-and-links]

In images group, there are pictures, online picture, screenshot, photo album that you can add in the slide. Inserting pictures and online pictures in PowerPoint is basically the same as in word processing. You can review about 'Pictures and illustrations' in word processing lesson at page xxx. In this section, you will learn how to add screenshot of other files (.doc, .pdf, .JPEG, etc.) and how to create photo album.

- To add screenshot

  Step 1: Select a slide that you want to add a screenshot.

  Step 2: Click on dropdown arrow of **Screenshot** .
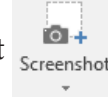
  Step 3: Click on the file under **Available Windows** or click on **Screen Clipping** and drag the cursor on the latest opened file to screenshot only the part you want. Then, the screenshot will be automatically add into the selected slide.

- To create photo album
  You can create a collection of multiple photos in one presentation.

  Step 1: Click on dropdown arrow of **Photo Album** in images group.

  Step 2: Click **New Photo Album**.

  Step 3: Click **File/Disk** and select the pictures you want to add.
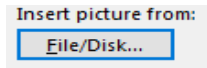
  Note: If you select more than one pictures at one time, press Ctrl and click the picture one by one or you can Select All by pressing Ctrl+A if you want to add all the pictures inside the selected folder.

  Step 4: Click **Create**.

- To edit photo album

  Step 1: In photo album presentation file, click on dropdown arrow of **Photo Album** in images group.

  Step 2: Click **Edit Photo Album**.

  Step 3: Choose picture layout by clicking dropdown arrow, click **Browse** to search for a Theme.

Step 4: Under Pictures in album box, select the picture by ticking the checkbook of selected picture, move up/down arrow to rearrange the picture or click **Remove** to delete the selected photo from the album.
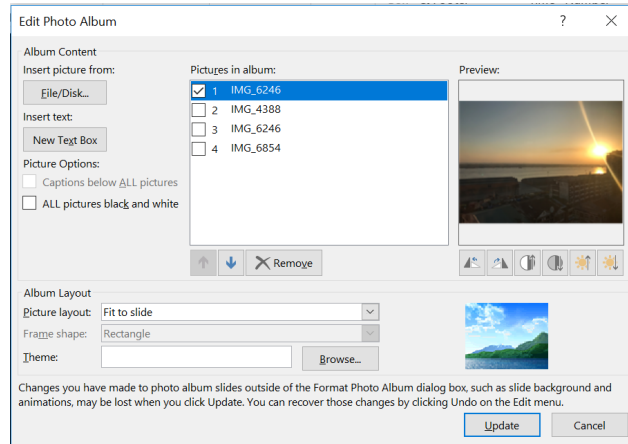
Figure 7.17. Basic function of presentation 2

iii) **Inserting and modifying illustrations** [https://edc.moe.edu.mm/en/resource/inserting-and-modifying-images-illustrations-and-links]

Illustrations include shape, smartart, and chart that you can use to present your data and information for a better visualisation.

Inserting and modifying shape, smartart, and chart in PowerPoint is the same as it is done in word processing. You can review about 'Pictures and illustrations' in word processing lesson at page xxx.

iv) **Inserting and modifying links** [https://edc.moe.edu.mm/en/resource/inserting-and-modifying-images-illustrations-and-links]

There are two tools you can use to add clickable links in the presentation slide to quickly access to the relevant information in an organised way. They are hyperlinks and action buttons. For example, you can add hyperlink in an email address in the slide to allow you to go to an email page online directly. Hyperlinks and action buttons can also be used offline, such as linking to other slides within a presentation, linking to other files which are stored in the computer.

• To insert hyperlinks

Step 1: Select text and image you want to add hyperlink

Step 2: Click **Hyperlink** in Links group.

Step 3: Click on **Existing File or Web Page.** You can search a file/website link from Current **Folder/Browsed Pages/Recent Files**. On the other hand, you can insert the website address in the Address box if you want to access the web page online.

or

Click on **Place in This Document** if you want to link to other slide with a presentation.

or

Click on **Create New Document** if you want to create new slide with link.

or

Click on **E-mail Address** if you want to link with email page to send email directly.

Step 4: Click **OK** to confirm all the changes or **Cancel** to return to original state.
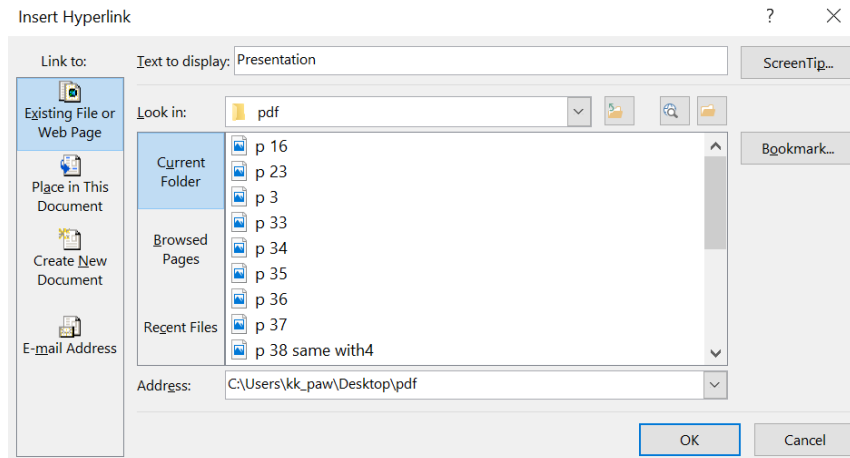
Figure 7.18. Basic function of presentation 2

- To insert action buttons

Step 1: Click on dropdown arrow of **Shapes** in Illustrations group.
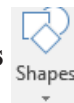
Step 2: Select a shape under **Action Buttons**
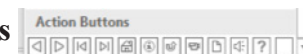
Step 3: Draw the shape by dragging the mouse in diagonal.

Step 4: Click on dropdown arrow under **Hyperlink to** box and choose an option to link to Next Slide/ Previous Slide/ First Slide/Last Slide/ Last Slide Viewed/ End Show/ Custom Show/ Slide…/ URL…/ Other PowerPoint Presentation…/ Other Files…

Step 5: You can select the checkbox of **Play sound** and choose a sound if you want to have sound when you click the action button.

Step 6: Click **OK** to confirm all the changes or **Cancel** to return to original state.
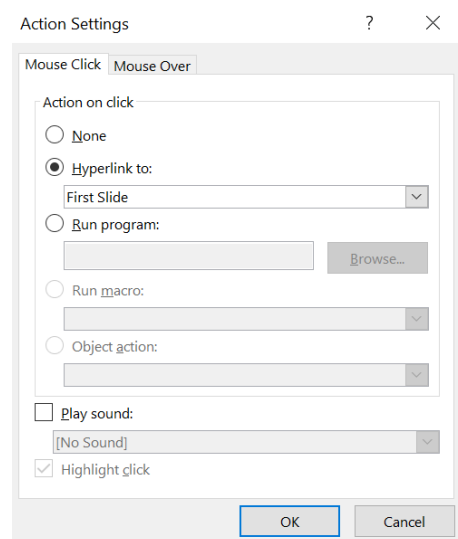
Figure 7.19. Basic function of presentation 2

v) **Inserting and modifying media files [**https://edc.moe.edu.mm/en/resource/insert-and-modifying-media-file-printing-a-presentation-file**]**
The media files, such as: video and audio files can be added in your presentation and you can customise it.

- To insert video

Step 1: Click on dropdown arrow of **Video** .

Step 2: Click **Online Video** to search and insert videos from online (e.g., YouTube), Type the keyword of the video you want in Search YouTube box and enter key, select a video you want.
or
Click **Video on My PC**, search and select the video you stored within the computer.

Step 3: Click **Insert** to confirm or **Cancel** to return to original state.

- To modify video

Step 1: Select the video which is inserted in the slide.

Step 2: You can do the modification as following:

Modifying the appearance of video and audio is very similar to modifying images under Format tab as shown in the figure below. The new functions for editing format of video are Play to preview the video, Poster Frame to add placeholder image before you play the video, Reset Design, Video shapes, Video Border, Video effects.
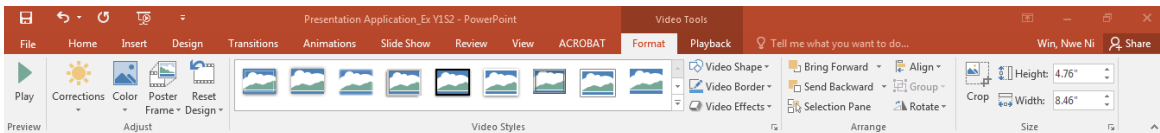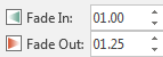
Figure 7.20. Basic function of presentation 2

In Playback tab,
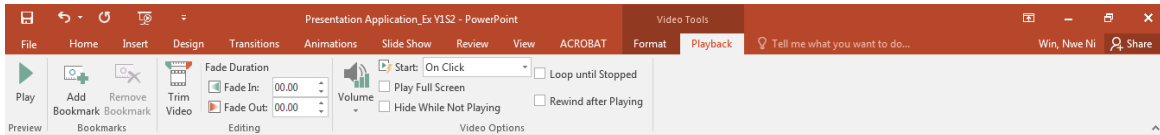
Figure 7.21. Basic function of presentation 2

Table 7.1. Symbols and their meaning

	: Preview the video
	: Add and remove bookmark
	: Specify the start and end time of video
	: Start and end the video with fade effect

Volume	: Increase/decrease the volume
Start: On Click	: Select how you want to start the video (On Click/ Automatically)
Play Full Screen	: Play the video in full screen mood
Hide While Not Playing	: Hide the video when it is not playing
Loop until Stopped	: Repeat when the video end
Rewind after Playing	: Rewind when the video end

- To insert audio

Step 1: Click on dropdown arrow of **Audio** .

Step 2: Click **Audio on My PC**, search and select the audio/sound file you stored within the computer, click **Insert** to confirm or **Cancel** to return to original state.

or

Click **Record Audio** to record the voice directly, click the red **record b**utton to start recording, click **OK** to confirm or **Cancel** to return to original state.
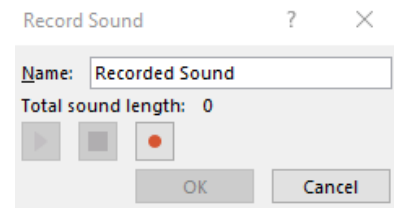
- To modify audio

Step 1: Select the audio which is inserted in the slide.

Step 2: You can do the modification as follows:

Modifying the appearance of audio is the same as modifying images under Format tab as shown in the figure below.
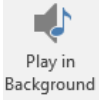
Figure 7.22. Basic function of presentation 2
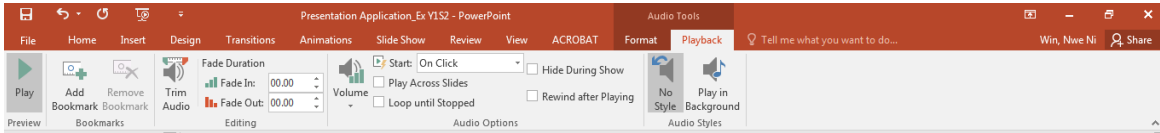
Figure 7.23. Basic function of presentation 2

Table 7.2. Symbols and their meaning

	: Play the audio from the beginning and end of presenation
	: Reset all the options made in playback
	: Automatically select Play Across Slides, Loop until Stopped, Hide During Show.

Printing a presentation file

Printing a presentation file in PowerPoint is basically the same as printing a document in word processing. The only difference thing is 'Settings'.

Step 1: Click **File Tab.**

Step 2: Choose **'Print'** or press **'Crtl+P'** in keyboard.

Step 3: Click drop down arrow under 'Printer' and choose the available printer name.

Step 4: Choose printing options under 'Settings'.

- You will see a preview of the document displayed in the right side of the window;
- Print all slides or Selection or Current slide or Custom Range to set a range of slides;
- Print one slide per page or Note Pages or Outline;
- Select the number of slides per page; and
- Print one sided or Print on Both Sides.

Step 5: Insert the number of copies to print.

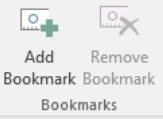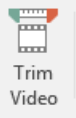**Step 6:** Click **Print** button [Print] to print the presentation file.
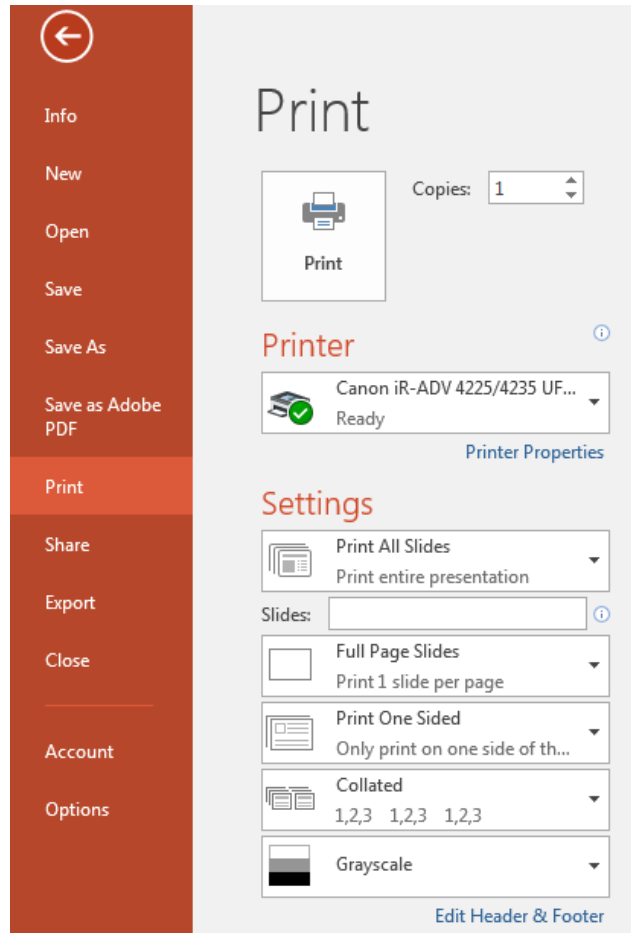
Figure 7.24. Basic function of presentation 2

Learning activity 1

In class, discuss the difficulties found during individual practice and find the solution together with the guidance of teacher educators.

Common problems in using Microsoft Power-Point	Possible solution / suggestion

Learning activity 2

1. Open the presentation file you saved during self-study (File name: Lesson 7.1.2_ Self-Study_ [Add Your Name Here]

2. Add one new slide with Title only layout after first slide. Insert 'Myanmar Education College' in the Title with center alignment.

3. Add a picture which you have in your computer, edit the picture as Soft Edge Oval style, Preset 4 effect, align middle.
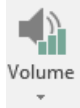
4. Add one column and one row in the existing table.

5. Add two more shapes in the existing SmartArt and type 'Step 3: xxxxx' and 'Step 4: xxxxx' in the new shapes.

6. Add a video clip in a new slide, set the volume in Medium, Start automatically, Fade in time is '03:00' and Fade out time is '01:00', set the poster frame at 02:00.00.

7. Add an audio in the first slide, play in background.

8. Save it with the file name as 'Lesson 7.1.2_Activity 2_ [Add Your Name Here]'.

7.1.3.
Basic functions of presentation 3

Expected learning outcomes

By the end of the lesson, you will be able to:
- Describe and perform the basic functions of Microsoft PowerPoint to create a presentation file; and
- Print a presentation file.

Navigating basic function of presentation

In previous lessons, you have learnt how to navigate the commonly used Microsoft PowerPoint interface and become familiar with its basic functions. In this lesson, you will revisit those features practically and apply the skills in the educational context.

Learning activity 1

Before class, do the revision and practice the tasks that you have learnt in the previous lessons on Microsoft PowerPoint. Please take note of the parts that you are still unclear or need clarification. In class, discuss the difficulties found during the revision of previous lessons in your group.

Table 7.5.

Common problems using Microsoft PowerPoint	Possible solution / suggestion

Learning activity 2

1. Choose a topic of any subject (Myanmar/ English/ Maths/ etc…) that you are going to teach for one class period.
2. Summarise the content of the topic and put them in slides. You can include the detail of the key points by adding notes.
3. Please use tables, images, illustrations, videos, audios which are relevant to your content.
4. Please add transitions and animations.
5. Print the presentation file, if a printer is available.
6. Save the file as 'Lesson 7.1.3_Activity 2_ [your name].

Review questions

	Yes	No	Not sure
Lesson 7.1.1.			
I can manage layout, design and formatting of presentation slides, do font, paragraph and text formatting.			
Lesson 7.1.2.			
I can insert and modify table, images and illustrations, links, media file.			
Lesson 7.1.3.			
I can describe and perform the basic functions of Microsoft Powerpoint to create a presentation file and print a presentation file.			

Unit Summary

Key messages

- A presentation application allows you to present information or provide lecture in an attractive way to uphold the audiences' attention with graphic, video, audio, and animation.

- Editing text, table, shape, pictures and many more basic features in presentation are the same as in Word processing.

Unit reflection

1. How will you apply presentation application utilising skills to create an active learning environment in your class?
2. Do you think using presentation file to present a lesson add value to the lecture? Why?

Further reading

(Including names of printed materials and links to online materials)

Title	Link	QR Code	Source
Basic ICT Literacy Training Manual	https://edc.moe.edu.mm/en/resource/ unesco-basic-ict-literacy-training-manual-myanmar		UNESCO
Understanding Microsoft PowerPoint and how to use it	https://www.lifewire.com/how-do-i-use-powerpoint-2767371		Wendy Russell (2019)
File format reference for word, excel, and PowerPoint	https://docs.microsoft.com/en-us/ deployoffice/compat/office-file-format-reference		Daniel H. Brown (2018)

Unit 8

ICT in Education

There is an emerging broad consensus worldwide about the benefits that can be brought to school education through the appropriate use of ICT. As you have learnt in Unit 1, ICT makes education more accessible, improves the quality of education and provides an effective and efficient management tool. The range of possible benefits covers practically all areas of activity in which knowledge and communication play a critical role: from improved teaching and learning processes to better student outcomes, from increased student engagement to seamless communication with parents, and from school networking and twinning to more efficient management and monitoring within the school. In this unit, you will be provided with more information about ICT use in various aspects of education, including but not limited to teaching, learning, assessments, professional development and management.

Expected learning outcomes

By the end of this unit, you will be able to:
- Understand the importance of collaboration among teachers using ICT;
- Understand the importance of active teaching and learning facilitated by ICT;
- Understand the importance of different types of assessments facilitated by ICT;
- Understand the importance of professional development facilitated by ICT;
- Understand the usage of e-portfolio; and
- Understand how ICT can facilitate school management.

8.1. ICT in Education

8.1.1.
ICT in teaching preparation and collaboration, active teaching and learning and assessments

Expected learning outcomes

By the end of the lesson, you will be able to:
- Understand the importance of collaboration among teachers using ICT;
- Understand the importance of active teaching and learning facilitated by ICT; and
- Understand the importance of different types of assessments facilitated by ICT.

Learning activity 1

Technology literacy, knowledge deepening and knowledge creation

The use of new technologies in education implies new teacher roles, new pedagogies and new approaches to teacher education. While you have learnt some basics about ICT use in primary classrooms earlier this year, the successful integration of ICT into the classroom will depend on the ability of teachers to structure the learning environment in new ways, to merge new technology with a new pedagogy, to develop socially active classrooms, encouraging co-operative interaction, collaborative learning and group work. This requires a different set of teaching skills. The teaching skills of the future will include the ability to develop innovative ways of using technology to enhance the learning environment, and to encourage technology literacy, knowledge deepening and knowledge creation:

- Technology literacy: increasing the extent to which new technology is used by students, citizens and the workforce by incorporating technology skills into the school curriculum;

- Knowledge deepening: increasing the ability of students, citizens, and the workforce to use knowledge to add value to society and the economy by applying it to solve complex, real-world problems; and
- Knowledge creation: increasing the ability of students, citizens, and the workforce to innovate, produce new knowledge, and benefit from this new knowledge.

Areas of work on ICT by teachers

There are five areas of work for which teachers in the 21st century will need to perform with the use of ICT:

1. ICT in teacher preparation and collaboration.
2. ICT in active teaching and learning.
3. ICT in assessments.
4. ICT in professional development.
5. ICT in education management.

In the lesson, we will focus on discussing the first three areas of work while the remaining areas of work will be discussed in the next lesson.

ICT in teacher preparation and collaboration

In unit 4 of Educational Studies, you have learnt the concepts and the practical steps to plan and prepare a lesson. While planning and preparing for lessons may take some time, imagine how teachers of the same subjects can work together, or collaborate, to prepare parts of the lessons and share the learning materials created by different teachers to help your students learn.

Teacher preparation and collaboration can be done both without ICT and with ICT. Without ICT, teachers can prepare learning materials on paper and share them with other teachers. Each teacher can be assigned to prepare a specific part of a lesson or a lesson within a strand/sub-strand. Regular meetings can be convened to allow teachers to discuss and to share the responsibilities for lesson preparation. In most cases, with a view to ensuring the effectiveness of teacher collaboration, it is important that teachers show their interest in

doing so rather than feeling that they are forced to do so. Sometimes, the school leaders may build a collaborative environment for teachers to bring in different perspectives and ideas to lesson preparation.

With ICT, teacher preparation and collaboration can be made easier because teachers may not need to have regular meetings for discussion and collaboration. Instead, they can make good use of ICT and Internet to share resources online anytime and anywhere. Some online tools also allow different teachers to work together on the same document simultaneously so that every teacher involved can see the real-time changes to the learning materials being developed collectively. Some examples of collaboration tools are Google docs, Microsoft Teams and Dropbox.

Using ICT for teaching preparation and collaboration can allow for different perspective and ideas from different teachers to be brought together more effectively using digital tools and also allow direct access to learning materials which can be ready for use within schools and across schools. For instance, you can make use of the online learning portal to access learning materials via e-library and to access online learning modules via e-learning. Collaboration can also be done using video technology, through which teachers from other schools or even other countries can have discussions on how to prepare lessons via video chat applications such as Skype and Google Handouts. This can help improve teacher morale to build supportive environment conducive to teaching.

ICT in active teaching and learning

In unit 3 of Educational Studies, you have learnt some strategies to implement active, interactive and cooperative learning in your classroom and to promote your students' motivation and engagement with their own learning. ICT can be regarded as one of the teaching and learning aids that can help bring learning more fun and interactive.

Active learning can be done both without ICT and with ICT. Without ICT, you can use various techniques, such as gallery walk, four corners and jigsaw, for engaging students in effective learning. It is important that you can use appropriate active learning techniques relevant to the characteristics and needs of the students.

Active learning can be facilitated through the appropriate use of ICT tools. Students can access online applications which are available as web or mobile versions, to contribute ideas and to provide their input in a classroom. For example, Google Forms and Kahoot, which can be an alternative to the 'four corners' active learning strategy, allow teachers to obtain responses from students real-time through tailor-made quizzes and surveys. Student responses to multiple choice questions, true/false questions, agree/disagree questions and/ or short questions will be recorded and simultaneously provided to teachers. Depending on the student responses, teachers can then determine the correct course of action to respond to the needs of the students. Padlet, which can be an alternative to the 'gallery walk' active learning strategy, is another tool which allows students to brainstorm ideas and upload them either with or without the student's name.

Using ICT for active learning can not only make the lessons more engaging and interesting but also provide real-time student response data available to the teachers who can then decide how to address the diverse needs of students.

ICT in assessments

In unit 5 of Educational Studies, you have learnt some strategies to conduct assessments before, during and after teaching and learning by both teachers and students to understand the level of knowledge and understanding. You have also learnt data and information collected during assessment can be used through summative or formative assessment.

Without ICT, the majority of data collected occurs daily through the ongoing formative assessments carried out during each lesson in many ways such as through question and answer sessions, quizzes, quick tests, and a variety of ad-hoc assessment methods such as 'show of hands' and observations. Summative data may also be collected for evaluation of achievement of learning.

With ICT, teachers can create a number of assessment tasks and use ICT to collect students' responses and provide feedback. ICT is increasingly becoming more advanced and prepared to analyse students' responses. ICT can also provide teachers with data about differentiation of student performance. One type of ICT assessments is computer-based assessment, which has been used not only to record simple true/false and multiple choice questions but also to

score more complex questions such as essay questions with verbal and/or written responses. One powerful advantage of using ICT in assessments is its ability to record large amount of data and to conduct analysis on student performance. This helps teachers understand their student learning better and also their own teaching to see if any improvement is needed. Some useful assessment tools are Survey Monkey and Quiz Star.

Learning activity 2

Based on your understanding about ICT, list as many examples as possible examples of ICT that you know below. The following categories show the possible uses of ICT, which may help your brainstorming.

Storing

Displaying

Processing

Communicating

Creating

Exchanging information

Learning activity 3

What ICT devices and/or applications do you have? Do you think the ICT devices and/or applications have the potential to be used in Myanmar primary school classrooms? Identify how the ICT devices and/or applications can be used for ICT in education as you have learnt in this lesson. Explain your answers and share your thoughts with your classmates.

ICT device/ application	Potential use in Myanmar primary school classrooms	How ICT can be used in education?
Example: Google Docs	Teachers can share learning materials and collaborate to edit materials.	ICT in teaching preparation and collaboration

8.1.2.
ICT in professional development and school management

Expected learning outcomes

By the end of the lesson, you will be able to:
- Understand the importance of professional development facilitated by ICT;
- Understand the usage of e-portfolio; and
- Understand how ICT can facilitate school management.

Learning activity 1

Prior to the lesson, please read the following text.

Further to the previous lesson, ICT can be used not only for teaching and learning in classrooms but also for teacher professional development and school management.

ICT in professional development

Learning about effective teaching practice does not end with the completion of your study at Education College. There are always new teaching practices, particularly in the field of ICT in education, for you to learn. Continuing professional development is thus essential for teachers who have completed their formal pre-service teacher training and who have started practicing the profession.

There are a number of ways to use ICT in professional development. For instance, resources such as the Internet can be used to search for professional learning resources such as documents, video, examples of lesson plans and projects, advice from experts. E-library can be accessed to download useful resources for self-learning. Commonwealth of Learning offers a free online course on Teacher ICT Integration at http://cctionline.org/.

Another common way for professional development is through massive open online courses (MOOCs). Learning modules through MOOCs are available either for free or on paid a basis to anyone who is interested in learning relevant topics. A typical course usually lasts for 10 to 16 weeks. The course participants are expected to access the structured course content every week and complete the reading tasks, usually in multimedia format, and assessment exercises. Common MOOCs include Coursea (https://www.coursera.org), edX (https://www.edx.org/) and OpenLearning (https://www.openlearning.com/).

Other examples for teacher professional development include wikis, blogs and online forums or social media groups for educators.

To document progress made for teacher professional development, teachers are usually advised to keep a portfolio to record, reflect and summarise teacher personal learning for the profession. With the portfolio, teachers are able to reflect on teaching experience and document improvement. An e-portfolio has become more popular as it allows flexibility in documentation such as the storage of images, audio and video records of teaching in a classroom. In the Reflective Practice and Essential Skills, you will learn further about how to maintain an e-portfolio for teacher professional development.

ICT in school management

To promote effectiveness and efficiency in school management, ICT can play an important role in staff and student record management, event and scheduling management, recording and analyzing school data and communication with students, teachers, parents, alumni and community members.

Staff and student records can be saved in a database file or managed by school administration tools such as Fedena (http://www.fedena.com). These records may include staff information, staff attendance, staff appraisal, staff salary, student information, student attendance and student performance. Event and scheduling management can be done through calendar tools such as Google Calendar. The national-wide Education Management Information System can be used to collect school data, which are useful for understanding teacher need at the regional level and for education planning for teacher deployment. Furthermore, it can aid communication through email, SMS (short message service) and social media applications

between schools, parents and central decision-makers.

Learning activity 2

Try to look for a MOOC module that you find interesting. Then, write down the information of the module and share it with your peers. After listening to the recommendations from your peers, add the information of one more modules you are interested in. Complete these two modules for professional development during the college break.

My selected MOOC module which I find interesting

Title	
Subject area	
Length (in weeks)	
Institution	
Descriptions of the module	

Another interesting MOOC module suggested by my peers

Title	
Subject area	
Length (in weeks)	
Institution	
Descriptions of the module	

Learning activity 3

Based on your learning from Reflective Practice and Essential Skills, list out what may be included in a good e-portfolio to document progress as a reflective practitioner. If needed, you may do an online search to get more ideas.

Elements of a good e-Portfolio

Learning activity 4

Imagine that the principal of your school is not ICT-savvy. The school does not use any ICT tools to support school management. You are good at ICT and would like to convince the principal to consider using ICT in school management. Give suggestions of at least three tools that your school may use to support school management and how the tools can be used in a primary school.

ICT tool to support school management	How the ICT tool can be used in a primary school?

Review questions

1. Reflect on what you have learnt in the lessons under this unit, and assess your understanding of the subject.

	Yes	No	Not sure
Lesson 8.1.1.			
I can explain the importance of collaboration among teachers using ICT.			
I can explain the importance of active teaching and learning facilitated by ICT			
I can explain the importance of assessments facilitated by ICT.			
Lesson 8.1.2.			
I can explain the importance of professional development facilitated by ICT.			
I can explain what e-portfolio is.			
I can explain how ICT can facilitate school management.			

Unit Summary

Key messages

- The teaching skills of the future will include the ability to develop innovative ways of using technology to enhance the learning environment, and to encourage technology literacy, knowledge deepening and knowledge creation.

- There are five areas of work for which teachers in the 21st century will need to perform with the use of ICT: ICT in teacher preparation and collaboration, ICT in active teaching and learning, ICT in assessments, ICT in professional development, and ICT in education management.

- Some online tools allow different teachers to work together on the same document simultaneously so that every teacher involved can see the real-time changes to the learning materials being developed collectively.

- Using ICT for active learning can not only make the lessons more engaging and interesting but also provide real-time student response data available to the teachers who can then decide how to address the diverse needs of students.

- Using ICT in assessments can record large amount of data and help conduct analysis on student performance, allowing teachers to understand their student learning better and also their own teaching to see if any improvement is needed.

- Massive open online courses (MOOCs) provide structured course content for teacher professional development.

- Teachers can document progress made for teacher professional development through portfolios, reflecting on teaching experience and documenting improvement.

- The national-wide Education Management Information System (EMIS) can be used to collect school data, which are useful for understanding teacher need at the regional level and for education planning for teacher deployment.

Unit reflection

1. How do you plan to use ICT in the five areas of work? Please provide at least ONE example about how you plan to use ICT in each of the areas of work mentioned in this unit.

2. Among the five areas of work, which is/are your priority/priorities of using ICT in case there are limited ICT resources in your school? Please explain your answer.

Further reading

Title	Link	QR Code	Source
UNESCO ICT Competency Framework for Teachers (English)	https://unesdoc.unesco.org/ark:/48223/pf0000213475		**UNESCO**
Free online course on Teacher ICT Integration	http://cctionline.org/		**Commonwealth of Learning**

Glossary

Terms	Elaborations
Arithmetic Logic Unit (ALU)	The part within a Central Processing Unit which carries out arithmetic operations like addition, subtraction, multiplication and division and other logical actions such as AND and OR functions and operates on data available in the main memory and send them back after processing.
Artificial Intelligence (AI)	A computer system that stimulates human intelligence process which include learning, reasoning and interacting.
Asynchronous	Something not occurring at the same time or delay between two or more points. For example, in asynchronous conferencing, there is a delay in interaction between participants.
CD-ROM	An adaptation of the CD that is designed to store computer data in the form of text and graphics. Its full name is Compact Disc, Read-Only-Memory.
Central Processing Unit (CPU)	The main part of a computer in which all processing is carried out and which controls the activities of the whole computer configuration.
Control Unit	The part which directs all operations inside a computer and can be known as the heart of the computer because it controls and coordinates all hardware operations including the Central Processing Unit, input and output devices.
Conferencing	Two or more people have simultaneous conversation using Internet, it is called conferencing. When this process is adding video streaming technology, it is called video conferencing.

Terms	Elaborations
Copyright	A set of rights granted to the author or creator of a work, to restrict others' ability to copy, redistribute and reshape the content. Rights are frequently owned by the companies who sponsor the work rather than the creators themselves, and can be bought and sold on the market.
Democracy	A system of government where the people have final authority which they exercise directly or indirectly through their elected agents chosen in a free electoral system. It also implies freedom to exercise choice over decisions affecting the life of the individual and the protection of fundamental rights and freedoms. In this context independent media and free access to information are fundamental to the pursuit of democracy and freedom in the whole world.
Digital	The electronic technology using two electronic states: ON and OFF expressed in Digits (ON = 1 and OFF = 0), to generate, store and process data. In computer system, the information are stored in the form of a string of 0's and 1's, and each digit is referred to as a Bit.
DVD	A digital optical disc storage format which can store computer data with higher capacity than a compact disc (CD), while having the same dimensions.
File	The digital version of resource or data stored in computer system.
Flash drive	A data storage device which is also called thumb drive, pen drive or flash stick. It is typically removable, rewritable and much smaller than an optical disk.
Folder	The cataloging structure of a directory in a file system which can put files inside.

Terms	Elaborations
Freedom of Expression	A fundamental human right. It is used to indicate not only the freedom of verbal speech but any act of seeking, receiving and delivering information.
Graphical User Interface (GUI)	A feature which allows users to interact with the system and applications through graphical icons instead of text-based user interfaces.
Hard Disk Drive (HDD)	An electromechanical data storage device which use magnetic storage technology to store and retrieve digital information.
Information Literacy	Focuses on the purposes of engaging with information and the process of becoming informed. It is associated with the concepts of learning to learn and making decisions through its emphasis on defining needs and problems, relevant information and using it critically and responsibly (ethically).
Input device	Any device that enters information into a computer from an external source.
Internet	The most well-known and the largest network linking hundreds of thousands of individual smaller networks all over the world.
Joystick	A cursor control device used in computer games and assistive technology, being a hand-held lever that pivots on one end and transmits its coordinates to a computer.
Local Area Network (LAN)	A network of computers that interconnect within a limited area.

Terms	Elaborations
Media	Physical objects used to communicate, or mass communication through physical objects such as radio, television, computers, films, etc. It also refers to a physical object used to communicate media messages. Media are a source of credible information in which contents are provide through an editorial process determined by journalistic values and therefore, editorial accountability can be attributed to an organisation or person. In more recent years the term media is often used to include new online media. Media are channels of information and education through which citizens can communicate with each other and disseminate stories, ideas and information, they are also vehicles for cultural expression and cultural cohesion within and between nations.
Media Literacy	The ability to read, analyse, evaluate and produce communication in a variety of media forms (e.g. television, print, radio, computers, etc.).
Memory	The part in a computer to store information, which can be recalled and accessed when required.
Metropolitan Area Network (MAN)	A network that interconnect computer resources in a geographic area or region larger than that covered by LAN.
Modem	A conversion device which converts signals from one device into signals another device can read. Its full name is Modulator-Demodulator. For example, a modem may covert the digital data of a computer into an analog signal that can be read and carried by a telephone line.
Operating System	The system software which operates hardware and acts as the platform for end-users' application software.
Optical character recognition	A device which reads printed or written text characters and then translates the character image into commonly used character codes for data processing.

Terms	Elaborations
Output device	Any device that translates the computer output into a form understood by human beings.
Processing device	Any electronics that process or transform information provided as an input to a computer to an output.
Right to information	The right of citizens to access information held by public bodies (Government, parliament, military, etc.).
Solid-state Storage Drive (SSD)	A data storage device which use integrated circuit assemblies as memory to store data persistently. SSDs are more resistant to physical shock, lower latency, faster access time but more expensive than HHDs.
Voice recognition	A device which enables the translation of spoken language into text.
Wide Area Network (WAN)	The computer network which is also called telecommunications network. The Internet may be considered a WAN.

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Ministry of Education