

Tuberculosis in Malaysia: A Continuing Surge

Roy Rillera Marzo

Department of Global Health and Community Medicine, Asia Metropolitan University, Malaysia

***Correspondence to:** Dr. Roy Rillera Marzo, Department of Global Health and Community Medicine, Asia Metropolitan University, Malaysia.

Copyright

© 2018 Dr. Roy Rillera Marzo. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Received: 05 October 2018

Published: 20 November 2018

Keywords: *Tuberculosis; WebQuest; Malaria*

Abstract

A WebQuest is a problem-based learning activity that involves the critical use of Web resources. It empowers students to take responsibility for their own learning, use and evaluate authentic sources of information to solve real-world questions and problems, think critically, collaborate with others, and create knowledge products. WebQuest design with the following parts: introduction, task description, process, list of Web resources and learner scaffolds, evaluation plan, including the rubric for assessing students' work and conclusion. You will be guided how to do a Webquest activity in Tuberculosis.

Learning Objectives

At the completion of this WebQuest learning module, students should be able to:

1. Evaluate the epidemiology of tuberculosis in Malaysia.
2. Create a health promotion strategy for tuberculosis in Malaysia.
3. Formulate a medical care plan posters and health teaching plan for tuberculosis.

Introduction

Tuberculosis (TB) is an airborne disease caused by the bacterium *Mycobacterium tuberculosis*. A chronic bacterial infection caused by *Mycobacterium tuberculosis* characterized pathologically by the formation of granulomas. The most common site of infection is the lung, but other organs may be involved in brain, kidneys, liver, and spleen.

Tuberculosis (TB) is one of the world's most important infectious causes of morbidity and mortality among adults. In 2015, the World Health Organization reported that there were an estimated 10.4 million new TB cases worldwide, of which 5.9 million (56%) were among men, 3.5 million (34%) among women and 1.0 million (10%) among children. About one-third of the world's population has latent TB, which means people have been infected by TB bacteria but are not (yet) ill with the disease and cannot transmit the disease. These people with latent TB can get active TB disease if their immune system is low or if they are taking any treatment that can suppress their immune system.

Malaysia is classified as a country with an intermediate TB burden, that is, notification rate for TB of 81 cases per 100,000 populations in 2016. A number of TB cases notified in 2016 are around 24,000. Three states with high TB cases are Sabah, Selangor, and Sarawak, making up a total of almost 50% of all new cases in Malaysia. In 2016 there were 1,696 TB deaths reported (excluding TB/HIV mortality), giving rise to 5.56 TB deaths per 100,000 populations. This TB death rate is the highest among all infectious diseases, including dengue, HIV, and malaria. The age groups commonly affected are above 35 years (62%) and it is always high in the elderly with other co-morbid diseases like diabetes, smoking and kidney diseases (Iyawoo, 2014).

TB is a treatable and curable disease. The vast majority of TB cases can be cured when medicines are provided and taken properly. Thus early detection and effective treatment can prevent TB deaths in Malaysia and all over the world.

Global Impact of TB

TB occurs in every part of the world. In 2016, the largest number of new TB cases occurred in Asia, with 45% of new cases, followed by Africa, with 25% of new cases.

In 2016, 87% of new TB cases occurred in the 30 high TB burden countries. Seven countries accounted for 64% of the new TB cases: India, Indonesia, China, Philippines, Pakistan, Nigeria, and South Africa. Global progress depends on advances in TB prevention and care in these countries (WHO, 2016).

The big questions are why is there a continuous rise in the number of incidences (new cases) of tuberculosis from then to now? What health promotion strategies, if any, have been taken to lower the number of tuberculosis? What are the indicating factors for the increase in the number of tuberculosis incidences by geographic location, economic status, or racial ethnicity? What are best medical care plan and health teaching plan for tuberculosis? The answers to these questions and more will be answered as you work your way through this activity.

The Director-General of Ministry of Health is looking for quick answers the alarming positive trend of tuberculosis in Sabah, Malaysia, and thousands of citizens are counting on you to halt the progress of this disease in your area. You are the public health specialist in that state that has a high incidence and prevalence of Tuberculosis. First, you need to present an evidence-based status of tuberculosis in Malaysia. Second, you suggest different types of health promotion to combat the increasing number of tuberculosis. Third, you should create a medical care plan for those patients with tuberculosis.

Task Description



Prepare to research, study and analyze information gathered.

Task 1: Present a powerpoint interactive presentation from a graphic organizer regarding the extent of morbidity and mortality of tuberculosis in Malaysia.

Task 2: Create a 5-7 minutes public service radio message (audio podcast) or 5-7 minutes public service television message (video podcast) that encourages Malaysian citizen to live a healthy lifestyle to prevent tuberculosis and help to lower the rise in tuberculosis.

Task 3: Formulate a medical care plan poster for the community that has high incidence and prevalence of tuberculosis with the use of Canva: Infographics.

Process

First Session: Total Duration - 4 Hours

Part 1: Epidemiology of Tuberculosis in Malaysia

You must watch the video entitled: Tuberculosis is the leading infectious killer – Ministers declare commitment to end Tuberculosis. (World Health Organization, July 13, 2017). This is will give you an idea why Tuberculosis is considered as Pandemic Disease.



Available at: <https://www.youtube.com/watch?v=mqPKp-ELPOg>

After you watch the video, you will be working together in medium-sized groups with 6 members. Within the group, you will be subdivided into 3 teams (Team A, Team B, and Team C). Two teams will work on the research and one team will be responsible for the compilation of the research and creation of a power point presentation.

Team A: You will research the incidence and prevalence of tuberculosis in Malaysia. You need to research if there is downward and/or upward trend of tuberculosis for the past 10 years.

Team B: You will research the risk factors of the upward and/or downward trend of tuberculosis in Malaysia.

*****Note:** Each group 1& 2 will create 5 slides, a summary, about their subject matter.

Team C: As cooperative learning team, you will compile the information and slides into a format to present to the general public (assume the general public is your classmates). You need to assign who will be a recorder and a presenter in order to expedite the process. As a public health specialist, you must learn to create an effective powerpoint presentation using a graphic organizer that is dynamic, informative and visually appealing.

Once the power point presentation is done, brainstorm as a group. You need to review and evaluate the power point slides for content, visual appeal, and creativity before presenting your output to the public. You are given to present your data for 15 minutes and 5 minutes question and answer from the facilitator and the audience. You will be assessed in this presentation with the use Oral Presentation Rubric.

After the presentation, please fill up the self-assessment and peer assessment forms. The purpose of these tools is to encourage reflection and collaboration among you as a group. As your facilitator, this tool is very important for me to have a clearer or in-depth perspective on the strengths and weaknesses of your learning experience and to hone in on the problem areas you have identified. Immediate feedback on your presentation will be given.

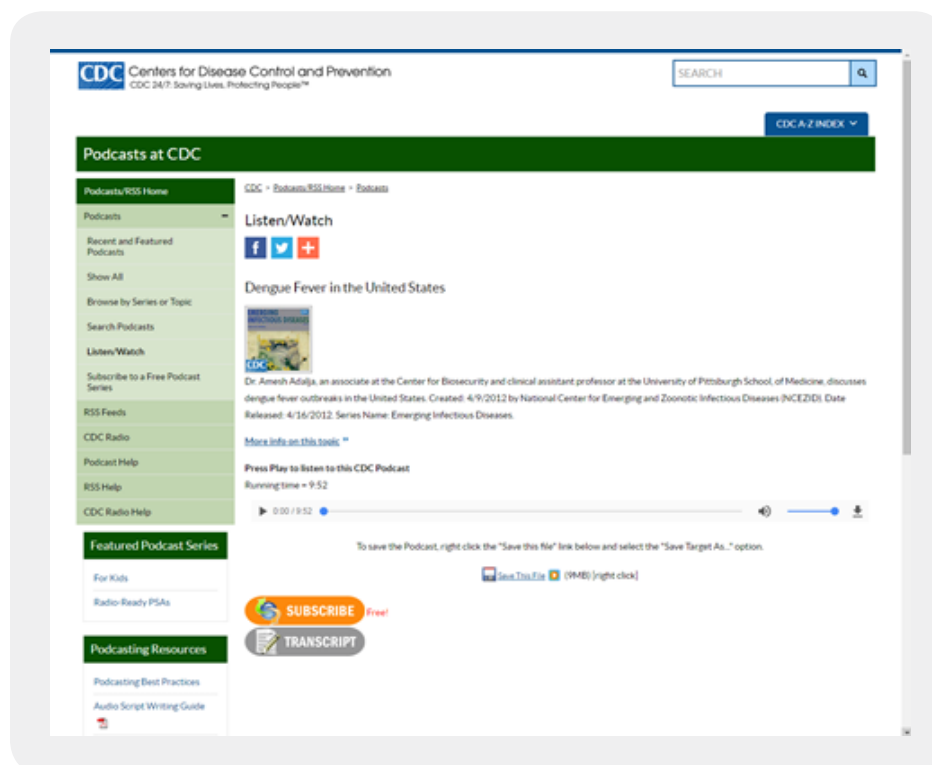
Second Session: Total Duration - 4 Hours

Part 2: Public Service Radio/Television Message

Part 3: Medical Care Plan Posters for Tuberculosis in the Community

First, you will receive feedback from your facilitator based on the previous self-assessment and peer assessment. This feedback is a form of formative and summative assessment.

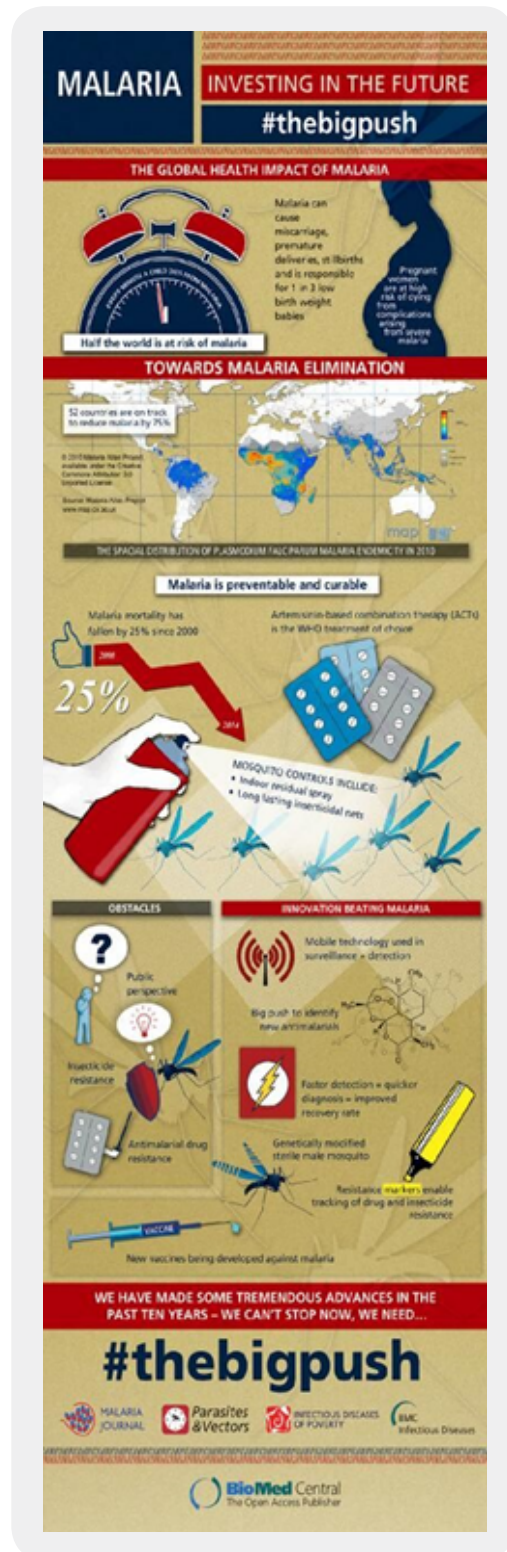
After the facilitator gives you feedback, you will watch a sample Audio podcast at Centers for Disease Control and Prevention regarding Dengue Virus and Video podcast at University of Oxford regarding Dengue Infection. This related to your Part 2 activity. Check out the selected infographics such Dengue and Malaria Prevention. This related to your activity in Part3.



Audiopodcast. Available at: <https://www2.cdc.gov/podcasts/player.asp?f=8623575>

The screenshot shows the University of Oxford Podcasts website. At the top, there is a navigation bar with the University of Oxford logo, the word "Podcasts", a search bar, and a "Search" button. Below the navigation bar are tabs for "Home", "SERIES", "People", "DEPTS & COLLEGES", and "Open Education". A message box says: "Thank you for visiting! Please consider filling out our questionnaire. This will help us improve our service providing free educational media recorded from the University of Oxford. Many thanks! Click here to access the survey (3 minutes to complete)." The main content area is titled "Dengue Infection" and has two tabs: "Video" (selected) and "Audio". A video player shows two women in a studio setting. Below the video player, it says "Duration: 0:05:18 | Added: 29 May 2012". There are buttons for "Video Embed Code", "Audio Embed Code", and "Embed HELP". A short paragraph follows: "Dr Kerstin Luhn talks about her research on Dengue infection. Dengue is a major public health problem in the tropics, with around 100 million cases each year. Dr Kerstin Luhn is investigating the effect of Dengue virus infection on innate immune cells to understand why Dengue, unlike other viral infections, is associated with high levels of immunopathology. An in vitro Dengue model is used and results are confirmed with Dengue patient samples from a cohort in Vietnam. This work may lead to future anti-viral treatments or vaccines." To the right of the video player, there is a "More in this Series..." section with a small image and text: "Global Health: Translational research in NDM has a truly worldwide impact, with scientists and clinicians investigating epidemiology, treatment, and prevention of disease on a global scale. Our podcasts on Global Health illuminate this work, and discuss research conducted in Oxford and around the world to better understand and manage emerging and endemic diseases." Below this is a "Subscribe" section with links for "iTunes U Audio", "iTunes U Video", "Audio RSS Feed", and "Video RSS Feed". There is also a "Download Media" section with links for "Video (41.5 MB)" and "Audio (6.07 MB)". At the bottom right, there is a "Please give us your feedback" form with a "Let us know" button.

Videopodcast. Available at: <https://podcasts.ox.ac.uk/dengue-infection>



Dengue CanvaInfographics: <https://www.pinterest.co.uk/pin/95279348349238310/>

Malaria CanvaInfographics: <https://www.pinterest.co.uk/pin/407998047465054219/>

After viewing the samples of podcast and infographic posters, you will be working together in medium-sized groups with 6 members. Within the group, you will be subdivided into 2 teams (Team A and Team B).

Team A: You will create a 5-7 minutes public service radio message (audio podcast) or 5-7 minutes public service television message (video podcast) that encourages Malaysian citizen to live a healthy lifestyle to prevent tuberculosis and help to lower the incidence and prevalence of tuberculosis. You can use the two most popular sites for creating podcasts which are Audacity (for PCs) and Garageband (for Macs and mobile devices). Please check the list of web resources provided to guide you in this activity.

Team B: You will formulate a medical care poster for the community that has high incidence and prevalence of tuberculosis. You can use Canva to make an amazing graphic design for your poster. Please check the list of web resources provided to guide you in this activity.

Once the podcast and poster are done, all of you must gather and build a consensus review and evaluate the Podcast and Canva before presenting your output to the public. Consensus decision-making must be observed. You are given to present your final output for 15 minutes (5-7 minutes for the podcast and 5-7 minutes poster presentation) and 5 minutes question and answer from the facilitator and the audience. You will be assessed with the use of Podcast Presentation Rubric and Poster Presentation Rubric.

After the presentation, please fill up the self-assessment and peer assessment forms. The purpose of these tools is to encourage reflection and collaboration among you as a group. As your facilitator, this tool is very important for me to have a clearer or in-depth perspective on the strengths and weaknesses of your learning experience and to hone in on the problem areas you have identified. Immediate feedback on your presentation will be given.

List of Web Resources and Learner Scaffolds

Part 1: Incidence and Prevalence of Tuberculosis in Malaysia

Centers for Disease Control and Prevention (2005). Basic Epidemiology for Tuberculosis Program Staff. New Jersey Medical School. Global Tuberculosis Institute. 2nd edition.

Dony, J. F., Ahmad, J. & Tiong, Y. K. (2004). Epidemiology of tuberculosis and leprosy, Sabah, Malaysia. *Tuberculosis*, 84(1-2), 8-18.

Dye, C. (2005). Evolution of Tuberculosis Control and Prospects for Reducing Tuberculosis Incidence, Prevalence, and Deaths Globally. *Jama*, 293(22), 2767.

Practice Guidelines for the Control and Management of Tuberculosis. (2002). Ministry of Health, Malaysia. 2nd edition.

Malaysia: Incidence of tuberculosis.

Trends in Tuberculosis Morbidity and Mortality. (n.d.). 2018.

Tuberculosis country profiles (2017).

World Health Organization (WHO). (2015). Global health observatory data repository: Tuberculosis, incidence and case detection.

World Health Organization, Global Tuberculosis Report. (2016).

Risk Factors of the Upward and/or Downward Trend of Tuberculosis in Malaysia

Darbyshire, J. H. (1995). Tuberculosis: old reasons for a new increase? *BMJ*, 310(6985), 954-955.

Ghani, F. A. (2010). *Prevalence and associated factors of latent tuberculosis infection among healthcare workers in an institute of respiratory medicine Kuala Lumpur*.

Iyawoo, K. (2004). Tuberculosis in Malaysia: problems and the prospect of treatment and control. *Tuberculosis*, 84(1-2), 4-7.

Mohktar, K. S. & Rahman, N. H. (2015). Urbanisation process and the prevalence of tuberculosis in Malaysia. *Malaysian Journal of Society and Space*, 11(3), 123-127.

Sanusi, S. B. (2015). *Epidemiological and awareness study of tuberculosis in BatuPahat, Johor, Malaysia*. BatuPahat: Universiti Tun Hussein Onn Malaysia.

Tuberculosis in Malaysia: Combating the old Nemesis. (n.d.). 2018.

Zaman, K. (2010). Tuberculosis: A Global Health Problem. *Journal of Health Population and Nutrition*.

Part 2: Audio/Video Podcast

What is Podcast?

<http://www.howtopodcasttutorial.com/what-is-a-podcast.htm>

<https://www.thepodcasthost.com/listeners-guide/what-is-a-podcast/>

What is a Podcast? A Simple Explanation of Podcasting

https://www.youtube.com/watch?v=_awu2loGzL0

How to Start a Podcast: A Tutorial

https://www.youtube.com/watch?v=xu2QNUY5iyk&list=PLzJ1r4EGn-enCMU1kPstXd7e1SjI3jP_O

How to start a Podcast and get your Podcast on iTunes.

<https://www.youtube.com/watch?v=4RzcDqwSO3c>

Part 3: Canva Poster

How to design your own stunning poster with Canva’s Poster Maker

<https://www.canva.com/create/posters/>

How to create posters using Canva

<https://www.youtube.com/watch?v=92IO9p3kHRA>

How to use Canva for Beginners: Fast and easy Tutorial

<https://www.youtube.com/watch?v=lokz7kn5LJQ>

Evaluation Plan

Self-Assessment Rubric

Name of Student: _____

Matric Number: _____

Category	Exemplary	Proficient	Partially Proficient	Unsatisfactory	Score
Focus on the Task and Participation	3 points Consistently stays focused on the task and what needs to be done. Very self-directed.	2 points Focuses on the task and what needs to be done most of the time. Other group members can count on this person.	1 point Focuses on the task and what needs to be done some of the time. Other group members must sometimes remind this person to keep on task	0 points Rarely focuses on the task and what needs to be done. Let’s others do the work	___/3
	A true team member who contributes a lot of effort, and encourages and supports the efforts of others in the group.	A strong group member who tries hard!	Sometimes a satisfactory group member who does what is required	Sometimes chooses not to participate and does not complete assigned tasks.	
Dependability and Shared Responsibility	3 points Follows through on assigned tasks and does not depend on others to do the work, responsibility for tasks is shared evenly	2 points Follows through on most assigned tasks.	1 point Does not follow through on most assigned tasks and sometimes depends on others to do the work.	0 points Seldom or never follows through on assigned tasks. Depends on others to do all of the work.	___/3

Listening, Questioning and Discussing	3 points	2 points	1 point	0 points	___/3
	Respectfully listens, interacts, discusses and poses questions to all members of the team during discussions and helps direct the group in reaching consensus.	Respectfully listens, interacts, discusses and poses questions to others during discussions.	Has some difficulty respectfully listening and discussing, and tends to dominate discussions.	Has great difficulty listening, argues with teammates, and is unwilling to consider other opinions. Impedes group from reaching consensus.	
Research and Information-Sharing	3 points	2 points	1 point	0 points	___/3
	Routinely gathers research and shares useful ideas when participating in the group discussion. Defends/rethinks ideas relating to the group's project goals.	Usually provides useful research and ideas when participating in the group discussion.	Sometimes provides useful research and ideas when participating in the group discussion.	Rarely provides useful research or ideas when participating in the group discussion.	
Problem-Solving	3 points	2 points	1 point	0 points	___/3
	Actively looks for and suggests solutions to problems.	Refines solutions suggested by others.	Does not suggest or refine solutions, but is willing to try out solutions suggested by others	Does not try to solve problems or help others solve problems.	
Group/Partner Teamwork	3 points	2 points	1 point	0 points	___/3
	Always has a positive attitude about the task(s) and the work of others.	Usually has a positive attitude about the task(s) and the work of others.	Occasionally is publicly critical of the task(s) or the work of other members of the group.	Is often negative and publicly critical of the task(s) or the work of other members of the group.	
	Performed all duties of assigned team role and contributed knowledge, opinions, and skills to share with the team. Always did the assigned work.	Performed nearly all duties of assigned team role and contributed knowledge, opinions, and skills to share with the team. Completed most of the assigned work.	Performed a few duties of assigned team role and contributed a small amount of knowledge, opinions, and skills to share with the team. Completed some of the assigned work.	Did not perform any duties of assigned team role and did not contribute knowledge, opinions or skills to share with the team. Relied on others to do the work.	
TOTAL POINTS					___/18

Reference: University of Wisconsin Rubric (Updated February 21, 2017). Available at: <https://www2.uwstout.edu/content/profdev/rubrics/secondaryteamworkrubric.html>

Peer Assessment Collaboration Rubric

Name of Student: _____

Matric Number: _____

Category	Exemplary	Proficient	Partially Proficient	Unsatisfactory	Score
Focus on the Task and Participation	3 points	2 points	1 point	0 points	___/3
	Consistently stays focused on the task and what needs to be done. Very self-directed.	Focuses on the task and what needs to be done most of the time. Other group members can count on this person.	Focuses on the task and what needs to be done some of the time. Other group members must sometimes remind this person to keep on task	Rarely focuses on the task and what needs to be done. Let's others do the work	
	A true team member who contributes a lot of effort, and encourages and supports the efforts of others in the group.	A strong group member who tries hard!	Sometimes a satisfactory group member who does what is required	Sometimes chooses not to participate and does not complete assigned tasks.	
Dependability and Shared Responsibility	3 points	2 points	1 point	0 points	___/3
	Follows through on assigned tasks and does not depend on others to do the work, responsibility for tasks is shared evenly	Follows through on most assigned tasks.	Does not follow through on most assigned tasks and sometimes depends on others to do the work.	Seldom or never follows through on assigned tasks. Depends on others to do all of the work.	
Listening, Questioning and Discussing	3 points	2 points	1 point	0 points	___/3
	Respectfully listens, interacts, discusses and poses questions to all members of the team during discussions and helps direct the group in reaching consensus.	Respectfully listens, interacts, discusses and poses questions to others during discussions.	Has some difficulty respectfully listening and discussing, and tends to dominate discussions.	Has great difficulty listening, argues with teammates, and is unwilling to consider other opinions. Impedes group from reaching consensus.	
Research and Information-Sharing	3 points	2 points	1 point	0 points	___/3
	Routinely gathers research and shares useful ideas when participating in the group discussion. Defends/ rethinks ideas relating to the group's project goals.	Usually provides useful research and ideas when participating in the group discussion.	Sometimes provides useful research and ideas when participating in the group discussion.	Rarely provides useful research or ideas when participating in the group discussion.	

Problem-Solving	3 points	2 points	1 point	0 points	___/3
	Actively looks for and suggests solutions to problems.	Refines solutions suggested by others.	Does not suggest or refine solutions, but is willing to try out solutions suggested by others	Does not try to solve problems or help others solve problems.	
Group/Partner Teamwork	3 points	2 points	1 point	0 points	___/3
	Always has a positive attitude about the task(s) and the work of others.	Usually has a positive attitude about the task(s) and the work of others.	Occasionally is publicly critical of the task(s) or the work of other members of the group.	Is often negative and publicly critical of the task(s) or the work of other members of the group.	
	Performed all duties of assigned team role and contributed knowledge, opinions, and skills to share with the team. Always did the assigned work.	Performed nearly all duties of assigned team role and contributed knowledge, opinions, and skills to share with the team. Completed most of the assigned work.	Performed a few duties of assigned team role and contributed a small amount of knowledge, opinions, and skills to share with the team. Completed some of the assigned work.	Did not perform any duties of assigned team role and did not contribute knowledge, opinions or skills to share with the team. Relied on others to do the work.	
TOTAL POINTS					___/18

Reference: *Information Technology Evaluation Services, NC Department of Public Instruction Available at: <https://projects.ncsu.edu/midlink/rub.pres.html>*

Podcast Presentation Rubric

Name of Student: _____

Matric Number: _____

Category	Exemplary	Proficient	Partially Proficient	Unsatisfactory	Score
Introduction	3 points	2 points	1 point	0 points	___/3
	Catchy and clever introduction. Provides relevant information and establishes a clear purpose engaging the listener immediately.	Describes the topic and engages the audience as the introduction proceeds.	Somewhat engaging (covers well-known topic), and provides a vague purpose.	An irrelevant or inappropriate topic that minimally engages the listener. Does not include an introduction or the purpose is vague and unclear.	
Content	3 points	2 points	1 point	0 points	___/3
	Creativity and original content enhance the purpose of the podcast in an innovative way. Accurate information and succinct concepts are presented.	Accurate information is provided succinctly.	Some information is inaccurate or long-winded.	Information is inaccurate.	

	3 points	2 points	1 point	0 points	___/3
	Includes a wide variety of appropriate, well-researched and informative sources and has well-edited quotes from “expert” sources. Quotes and sources of information are credited appropriately.	Includes appropriate and informative quotes from “expert” sources. Source quotes are credited appropriately.	Includes some variety of informative quotes from some “expert” sources. Source quotes need some editing and some credits are missing.	Includes no source quotes.	
	3 points	2 points	1 point	0 points	___/3
	The conclusion clearly summarizes key information.	The conclusion summarizes information.	Conclusion vaguely summarizes key information	No conclusion is provided.	
Delivery	3 points	2 points	1 point	0 points	___/3
	Well-rehearsed, smooth delivery in a conversational style.	Rehearsed, smooth delivery.	Appears unrehearsed with uneven delivery.	Delivery is hesitant, and choppy and sounds like the presenter is reading.	
	3 points	2 points	1 point	0 points	___/3
	Highly effective enunciation, expression, and rhythm keep the audience listening.	Enunciation, expression, pacing are effective.	Enunciation, expression, rhythm is sometimes distracting.	The enunciation of the spoken word is not clearly understood or expression and rhythm are distracting throughout the podcast.	
Graphic and Music Enhancements	3 points	2 points	1 point	0 points	___/3
	The graphics/artwork used to create a unique and effective presentation and enhance what is being said in the podcast and follow the rules for quality graphic design.	The graphics/artwork relate to the audio and reinforce content and demonstrate functionality.	The graphics/artwork sometimes enhance the quality and understanding of the presentation.	The graphics are unrelated to the podcast. The artwork is inappropriate to the podcast.	
	3 points	2 points	1 point	0 points	___/3
	All graphics and music enhancements are owned by the creator of the podcast or copyright cleared with appropriate documentation.	Graphic and music enhancements are owned by the creator of the podcast or copyright cleared.	Use of copyrighted works is questionable.	Copyright infringement is obvious.	
Technical Production	3 points	2 points	1 point	0 points	___/3
	Transitions are smooth and spaced correctly without noisy, dead space.	Transitions are smooth with a minimal amount of ambient noise.	Transitions are uneven with inconsistent spacing; ambient noise is present.	Transitions are abrupt and background noise needs to be filtered.	

	3 points	2 points	1 point	0 points	___/3
	Podcast length keeps the audience interested and engaged.	Podcast length keeps the audience listening.	Podcast length is somewhat long or somewhat short to keep the audience engaged.	The podcast is either too long or too short to keep the audience engaged.	
Group Work	3 points	2 points	1 point	0 points	___/3
	Performed all duties of assigned team role and contributes knowledge, opinions, and skills to share with the team. Always did the assigned work	Performed nearly all duties and contributed knowledge, opinions, and skills to share with the team. Completed the assigned work.	Performed half duties and less contributed knowledge, opinions, and skills to share with the team. Half completed the assigned work	Did not perform any duties of assigned team role and did not contribute knowledge, opinions or skills to share with the team. Relied on others to do the work.	
TOTAL POINTS					___/33

Reference: University of Wisconsin Rubric(Updated November 16, 2015). Available at: <https://www2.uwstout.edu/content/profdev/rubrics/podcastrubric.html>

Poster Presentation Rubric

Name of Student: _____

Matric Number: _____

Category	Exemplary	Proficient	Partially Proficient	Unsatisfactory	Score
Coverage of the Topic	3 points	2 points	1 point	0 points	___/3
	Details on the poster capture the important information about the topic and increase the audience’s understanding.	Details on the poster include important information but the audience may need more information to understand fully.	Details on the poster relate to the topic but are too general or incomplete. The audience needs more information to understand.	Details on the poster have little or nothing to do with the main topic.	
Use of Graphics	3 points	2 points	1 point	0 points	___/3
	All graphics are related to the topic and make it easier to understand.	All graphics are related to the topic and most make it easier to understand.	All graphics relate to the topic.	Graphics do not relate to the topic.	
Organization	3 points	2 points	1 point	0 points	___/3
	Information is very organized with clear titles and subheadings.	Information is organized with titles and subheadings.	Information is organized, but titles and subheadings are missing or do not help the reader understand	The information appears to be disorganized.	

Layout and Design	3 points	2 points	1 point	0 points	___/3
	All information on the poster is in focus and can be easily viewed and identified from 6 ft. away.	Most of the information on the poster is in focus and the content easily viewed and identified from 6 ft. away.	Most of the information on the poster is in focus and the content is easily viewed and identified from 4 ft. away.	Much of the information on the poster is unclear or too small.	
Sources	3 points	2 points	1 point	0 points	___/3
	All sources (information and graphics) are accurately documented.	All sources (information and graphics) are accurately documented, but there are a few errors in the format.	All sources (information and graphics) are documented, but information is incomplete or many are not in the desired format.	Some sources are not accurately documented.	
Mechanics	3 points	2 points	1 point	0 points	___/3
	No grammatical, spelling or punctuation errors.	Almost no grammatical, spelling or punctuation errors	A few grammatical, spelling, or punctuation errors.	Many grammatical, spelling, or punctuation errors.	
Presentation	3 points	2 points	1 point	0 points	___/3
	The presentation was the appropriate length. It did not seem hurried or too slow. The presenter spoke clearly and distinctly and established eye contact with the audience.	The presentation was the appropriate length but seemed slightly hurried or too slow. The presenter spoke clearly most of the time and established eye contact with the audience.	The presentation was the appropriate length but seemed very hurried or too slow. The presenter spoke clearly and distinctly only some of the time and/or established little eye contact with the audience.	The presentation was too long or too short. The presenter did not speak clearly most of the time and established little eye contact with the audience.	
TOTAL POINTS					___/21

Reference: Rubric developed with materials from the Rubi Star Website: http://www.readwritethink.org/files/resources/lesson_images/lesson1076/rubric.pdf

Webquest activity is part of your Continuous Assessment. Total marks will be converted to 15% of your final grade. The breakdown of assessment as follows:

Peer Assessment	:	10%
Self Assessment	:	5%
Oral Presentation	:	25%
Podcast Presentation	:	30%
Poster Presentation	:	30%

Conclusion

Now that you have completed the task you have now a better understanding of the epidemiology of tuberculosis and the extent of morbidity and mortality of tuberculosis in Malaysia. You are also able to identify the risk factors of the upward trend of incidence and prevalence of tuberculosis in Malaysia. In this activity, you will be able to help people in your community on how to prevent tuberculosis and formulate a medical care plan caused by *Mycobacterium tuberculosis*. For a better understanding of the disease, please visit the Ministry of Health, Malaysia, Centers for Disease Control and Prevention (CDC) and World Health Organization websites.

Note: Next page is my reflection on my experience of designing a WebQuest.

Reflection

A WebQuest is student-centered and inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the Internet [1]. A WebQuest is constructed and presented in six parts called building blocks: introduction, task, process, resources, evaluation, and conclusion.

Designing a WebQuest has been an enlightening experience. Since I do not have a strong background in technology and have very little formal training I am a little bit afraid on working this assignment, however, with the proper instruction provided by our facilitator and research reading about this activity, I able to design my WebQuest activity appealing.

I recognize that WebQuest can assist me as a teacher to see how my students gather and analyze information provided and produce a new knowledge product out of their analysis. I personally like Webquest because of the use of scaffolding. I included questions for each team to guide their thinking in the right direction, along with the use of links that will directly assist them with the questions they have to answer. I also inserted video to remind them of the important events that may help them with their questions. In this way, students are being guided through the WebQuest process and given enough resources to attend to all types of students' needs for this module. Indeed, WebQuest customizes and personalizes learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources [2].

From this experience, I learned a lot about technology integration as a teacher, and how you would incorporate it into your teaching instruction. Many times when I think about technology integration, I only think about how students will use technology to strengthen and or practice their skills. However, during the process of creating my own WebQuest, I realized how much technology could work well in the educator's favor by thinking of a creative way of instructing, teaching, and creating an assignment. I love that WebQuest gives my students the creativity to pretend as if they are something else or enter a new world, thus, students give some excitement and encouragement in their learning, along with giving the teacher like me a new inventive way to assign tasks. For instance, the use of technology allowed me in my WebQuest to use direct links and resources, pictures, text, and videos to information needed for questions.

During the process of creating this WebQuest activity, I discover that it can facilitate and inspire student learning and creativity because it promotes innovative thinking and inventiveness. It facilitates effective use of current and emerging digital tools to locate, analyze, evaluate and use information resource to support and learning. Also, WebQuest are not just activities that utilize the internet. They are more than that. The students can experience both individual and team learning. This can be done by encouraging them to produce an authentic end product that is creative and applicable to real life. It is my responsibility to develop a WebQuest that is real, rich and relevant. I like the ideas where students work in teams, learn to cooperate and collaborate, can access the internet for information together, and most importantly apply the information in a new way (in this activity, students will create podcasts and medical care poster for the community). This leads students to use their higher thinking skills for a deeper understanding and more independent learning. As a result, they become responsible for their own learning. I also like the evaluation of Webquests with rubrics because it increases consistency of judgment when assessing their performance and authentic task. However, reliability and validity of the rubrics must be tested first before it will be used.

Bibliography

1. Dodge, B. (2001). FOCUS: Five rules for writing a great webquest. *Learning and Leading with Technology*, 28(8), 6-9, 58.
2. Abbit, J. & Ophus, J. (2008). What we know about the Impacts of WebQuests: A review of research. *AACE Journal*, 16(4), 441-456.