



ALTERNATIVE ASSESSMENT USING MIND MAPS

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ABSTRACT

Educationists are always in the lookout for better ways to help students learn because learning is a complex human behaviour. Similarly assessments of the learned material also form a major issue of concern for the educationists. Today new forms of assessment have taken over the traditional formats of paper and pencil type of assessments. This is what we call as Alternative Assessments and is a blanket term that covers many types of assessments. This conceptual paper highlights one such form of alternative assessment techniques – Mind Mapping. Mind Maps in its various forms may be used to assess the learning outcomes and the achievements of the students.

Keywords: Mind Map, Alternative Assessment



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Introduction:

Teaching process is incomplete without the process of assessment. Assessment forms an integral part of the education system and it is an excellent way of giving a feedback to both the students and teachers. It assists the teachers in knowing their students and in establishing classroom routines with a focus. It is therefore essential that the assessment should be well – designed and assure the teacher and students of a quality that would ultimately provide a measure of students realistic progress. For decades we have followed the traditional forms of assessments that are usually taken with paper and pencil. Though these assessments are easy they usually cater to the lower-level thinking skills. The new age / authentic assessments are posing challenges to the students and are more fun for the students.

Traditional Assessments	Authentic Assessments
Selecting a response	Performing a task
Contrived	Real – life
Recall / Recognition	Construction / Application
Teacher-structured	Student-structured
Indirect evidence	Direct evidence

(<http://jfmuller.faculty.noctrl.edu/toolbox/whatisit.htm>)

Meaning of Alternative Assessment:

Alternative assessments measure performance in forms other than traditional paper-and-pencil test. (<http://www.learnnc.org/lp/pages/7041>) It is so called as it is alternative to the

traditional assessment. This is a blanket term that covers many forms of alternative assessments like essays, portfolios, presentations / demonstrations, performance based assessments, interviews, journal and learning logs, self and peer assessments, informal observations, etc. For evaluating them educators too need to be objective and for increasing the objectivity rubrics may also be used.

Rationale for Alternative Assessment:

- To capture complex outcomes as it goes beyond the assessment of knowledge and facts.
- To address realistic tasks as students are involved in realistic and meaningful tasks reflecting everyday situations.
- To include good instructional tools such that it focusses on the students' strengths.
- To communicate what we value. If as a teacher we value oral proficiency but only assess through written tests then students infer that only the written language matters.
- To meet the broad spectrum of students learning styles.
- To collaborate and interact with students.

(<http://www.ncpublicschools.org/docs/curriculum/worldlanguages/resources/aaa/altc3.pdf>)

There are many alternative assessments depending on the subject and the objective. Some assessments are:

- ✓ Creating a radio programme to showcase the time of the book that the students have just read.
- ✓ Making a poster for the key character in the story / lesson / book.
- ✓ Creating paper dolls and costume changes for the characters in the story.
- ✓ Students may be asked to create a slideshow on a powerpoint showing the process from start to finish.
- ✓ Drawing a comic strip that depicts the content.
- ✓ Creating a brochure that explains the steps involved in a process and which caters to different learners.
- ✓ Making a graph that explains the results.
- ✓ Students may be given a take home exam which may take longer to complete in a class. Students may use a variety of references to complete this examination.
- ✓ Students may find a list of websites that would help them explain the concept under study.
- ✓ Using the vocabulary from the chapter to be assessed to create a crossword puzzle.

- ✓ Each student can contribute one page to a scrapbook that would describe one word / keyword / theme / key concept.
- ✓ Students may be asked to find a pattern in the concept studied and any concept in other subject area.
- ✓ Students can be asked to cut and paste examples / pictures etc. from magazines to make a collage of the content to be assessed.
- ✓ Students may be asked to write an advice to an “anonymous friend” who may have a scientific / geographic problem that needs to be solved.
- ✓ Students may be asked to prepare a family tree of a famous historical person.
- ✓ Students may be asked to create a timeline that would depict the different eras or periods that they have studied in the class.
- ✓ Collaborative testing can also be used where the students may sit in a group and discuss the study material and teach each other. This also helps them to increase their grasp of the subject content.
- ✓ Using Venn Diagrams for assessment.
- ✓ Students may be asked to create a museum in their classroom where they can stand next to their artefact and explain and answer the questions asked by their peers and teachers.

(<http://www.teachhub.com/40-alternative-assessments-learning>)

Using Mind Maps for Alternative Assessments:

Similar to the above mentioned many alternative assessment techniques, in this paper the researchers have highlighted another unique assessment technique – **Mind Map**.

Meaning of Mind Map: A diagram that is used to represent words, ideas, tasks or other items linked to and arranged around a central key word or idea is called a Mind Map. It is characterised by colours, symbols, pictures and spatial arrangement of branches and is a collaboration between words and visual presentations.

Mind Maps can be used for pre and post assessment of students. Though its utility has been established repeatedly through various researches, it has not yet gained popularity as an assessment tool. Mind Maps may be used as an assessment tool in many ways.

- **Preview and Review:** To assess students pre and post learning so that the knowledge that the students have absorbed can be accurately gauged. Tony Buzan the proponent of Mind Mapping called this method as ‘Preview and Review’. This may be done as follows:

- After introducing the topic to the students, ask them to draw a pre assessment Mind Map that would showcase their initial thoughts and responses. These initial ideas can be their own interpretations or from any other part of the curriculum.
- After this pre assessment, the topic is taught by the teacher and the students may use their initial mind map as a reference and may keep adding branches as there is growth in their knowledge.
- Finally as a post assessment the students can create a mind map that should have much more accuracy and detail as compared to the initial mind map. This mind maps should present their ability to review the content area covered, ability to make connections between different topics and should reveal their ability of independent and divergent thinking.
- Thus the final mind map can act as a rich source of evidence for the teachers to assess the understanding of the students.

(<https://imindmap.com/articles/mind-maps-for-pre-and-post-assessment/>)

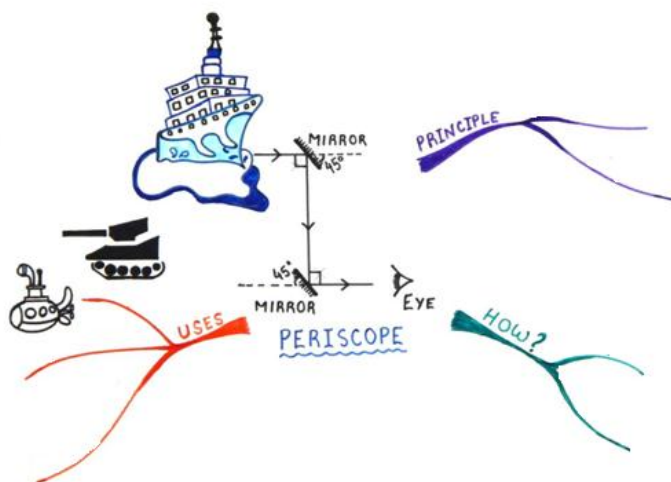
- Mind Maps give an accurate picture of the knowledge gathered as it does not depend on the students' language skills but only their contextual knowledge or understanding is enough to develop a mind map. The understanding measured by using Mind Map is transparent and realistic.
- Fill-in-the-blank Mind Map: Teacher may give worksheets containing incomplete mind maps to the students. Some words may be written while some others may have blank spaces. Students may be instructed to fill in the most appropriate words in the worksheets and thus the students learning may be assessed. At times teacher may leave certain branches of the mind map completely blank. This shall prompt the students to complete it according to their understanding of the concept.

There are other variations of this method of assessment:Teacher may construct a mind map and may remove one third of the concept labels (key words) while keeping the links. The students shall have to fill in the labels in a way that it gives a sense to the structure.

Thus, the teacher can assess the extent to which the most important concepts have been identified by the students and also how they have grouped logically the main ideas and the sub-ideas.

(http://www.tess-india.edu.in/sites/default/files/es_06_pdf_final.pdf)

One example has been illustrated below. The Mind Map is regarding the Principle, Uses and Method of working of a periscope. Only the key words and some branches have been given and the students are expected to fill up the blank spaces in the mind map.



- Mind Maps may be used for group assessment also by capturing everyone’s ideas and opinions on a white board at the beginning of the lesson. The class may be then asked to restructure the map after the class is over. This is a good means of formative assessment.
- Mind Maps can be used for assessment by providing the students with only images and some key words. The students can rearrange the images and words according to their understanding. The teacher can later support some of the students by giving further instructions and explanations if required.

Illustration 1:

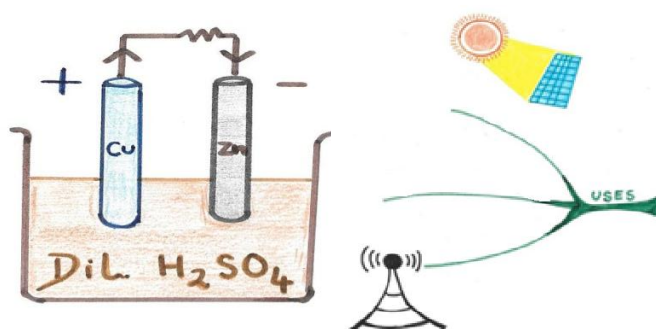
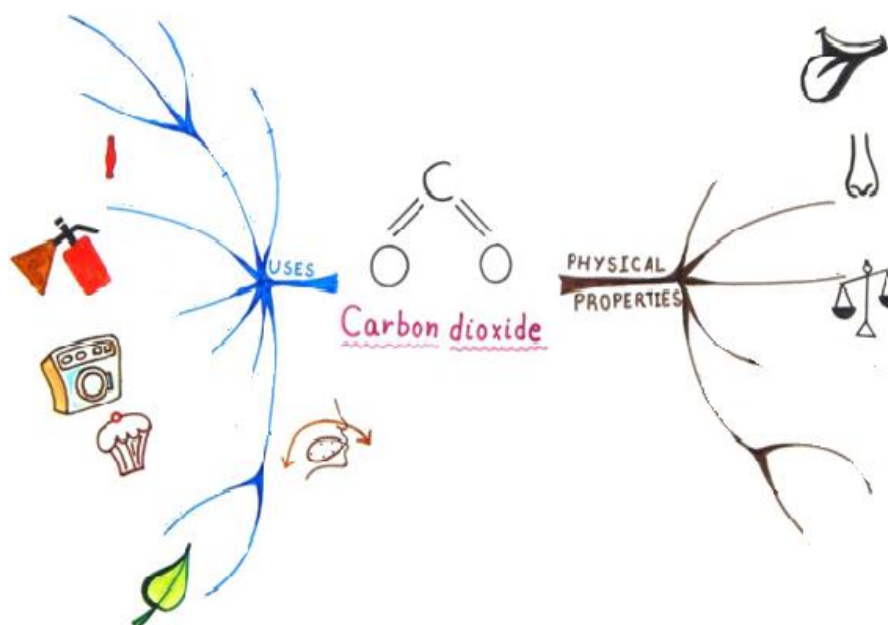


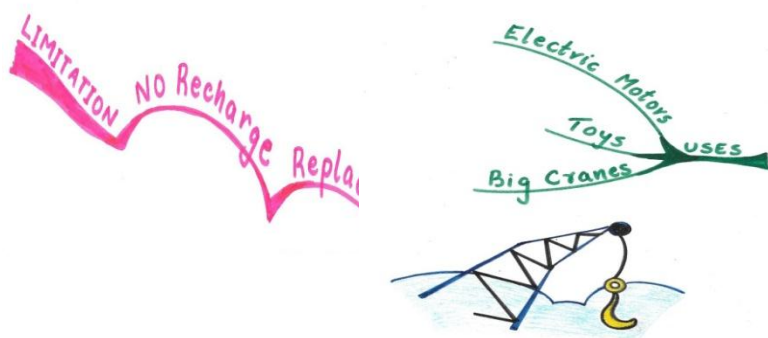
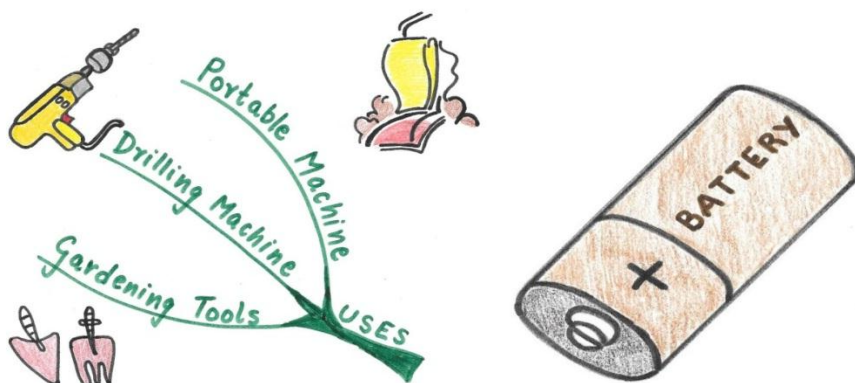


Illustration 2:



- Teachers may also give tailored mind map templates to the students using the mind map software. The students can then build on these files on word or power point format to present their ideas. These maps may then be assessed by the teachers to analyze the understanding of the students.
- Teachers may also assess the students by presenting them with some guiding questions related to a particular content and then asking them to develop the map by considering these questions.
- Teacher may give an incorrect mind map to the students by building an incorrect set of internal connections between the concepts. The students may be asked to rearrange the

mind map and give it a proper and correct structure. This shall help the teacher to assess the clarity of the concept that the students have.



Conclusion:

With younger students the teachers may keep the mind maps simple and may use more of images in place of words. Students may also be given the option of sticking these images on the mind maps instead of drawing them. As the students get older, teachers may start giving simple questions on the basis of which the mind maps can be developed by the students. They may add additional words to support their ideas as well.

The assessment of the Mind Maps also helps the teachers to understand the misconceptions that the students may have had regarding a particular concept. It can help the teachers to identify the areas of weakness in the knowledge of the students and may help the teachers to decide which areas to be focused on when they start the next topic. Thus, though mind maps are a very useful teaching and learning tool they can be equally used as a tool to assess the students' knowledge.

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