# LABORATORY AND DEMONSTRATION METHOD : Medical Bacteriological Laboratory

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## LABORATORY METHOD

➢Used to designate a teaching procedure in the physical/medical sciences that uses experimentation with apparatus.

➢Teaching procedure dealing with firsthand experiences regarding materials or facts obtained from investigation or experiment.

## AIMS

1. To give firsthand experience in the laboratory which may increase student interest.
2. To provide student participation in original research.
3. To develop skill in the use of laboratory equipment and instruments.

## STEPS IN LABORATORY METHOD

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| INTRODUCTORY STEPS | - determination of the work to be done. |
| WORKING PERIOD | - determine the length of the work period. |
| CULMINATING ACTIVITIES | - Explaining the nature and importance of the problem the group had worked on.<br>- Reporting data gathered or other findings.<br>- Presenting illustrative material or special contributions.<br>- Exhibiting various projects and explanation by their sponsors. |

## ADVANTAGES

1. It is learning by doing.
2. Impressions through several senses make learning more effective.
3. Undergoing actual experience.
4. It is a direct preparation for life.

## DISADVANTAGES

1. It is an uneconomical way of learning.
2. It becomes mechanical at times.
3. Expensive apparatus.
4. Loss of time occurs.

## DEMONSTRATION METHOD

➢Widely used to teach students how to use equipment and materials, rhythm and musical instruments and others.

➢Use to develop skills. Recommended for teaching a skill because it covers all the necessary steps in an effective learning order.

## AIMS

1. To teach a skill, concept or principle
2. To demonstrate delicate and dangerous works involving careful manipulation.
3. To let teachers participate in demonstration classrooms to help improve their own teaching strategies.

## STEPS IN DEMONSTRATION METHOD

- INTRODUCTION
- DEVELOPMENT
- CONCLUSION
- EVALUATION

1. EXPOSITORY – designed to impart information directly or to illustrate a skill as students observe.
2. QUESTING – designed to foster discovery of a concept or its application.

## ADVANTAGES

1. It follows a systematic procedure.
2. Possible wastage of time, effort and resources will be avoided.
3. It will not result to trial and error.
4. Curiosity and keen observing ability are instilled.

## DISADVANTAGES

1. Tends to foster passiveness and teacher dependence on the part of the students.
2. Becomes a failure when the number of students is greater.
3. It needs a lot of time for instructions and demonstration.
4. It requires a knowledgable and expert demonstrator

## DIFFERENCE OF BOTH METHODS

The chief difference between the two is that in the **laboratory method**, all the learners perform the experiment and “learning by doing”. In the **demonstration method**, the teacher does the experiment while the class observes.



## ACKNOWLEDGEMENT

R. M. Garrett, I. F. Roberts. (1982) Demonstration versus Small Group Practical Work in Science Education. A critical review of studies since 1900. Studies in Science Education 9:1, 109-146.