Project Method in teaching

Project Based Learning (PBL) prepares students for academic, personal, and career success, and readies young people to rise to the challenges of their lives and the world they will inherit.

https://www.pblworks.org/

Historical Background

- 1900 - Richards Colombia University
- 1908 - Stevenson J.A used the term
- 1911 - Massachusetts State Board of Education
- 1918 - professor W.H. Kilpatrick of Colombia University made formal attempt to use in education
- based on John Dewey's philosophy of pragmatism, which stresses the principle of "learning by doing"

THE PROJECT METHOD OF TEACHING

BY

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OF THE

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1918

Characteristics

- It takes the student beyond the walls of the class room.
- It is carried out in a natural setting, thus making learning realistic and experiential.
- It encourages investigative learning and solution of practical problems.
- It is focused on the student as it enlists his/her active involvement in the task set.
- It encourages the spirit of scientific enquiry as it involves validation of hypotheses based on evidence gathered from the field through investigation.
- It promotes a better knowledge of the practical/functional aspects of knowledge gained from books.
- It enhances the student's social skills, as it requires interaction with the social environment.
- Teacher plays a facilitative role rather than the role of an expert.
- It allows the students a great degree of freedom to choose from among the options given to them, hence it provides a psychological boost.
- It encourages the spirit of research in the student.

Definition

- A project is a whole-hearted purposeful activity proceeding in a social environment – W.H. Kilpatrick
- A project is a bit of real life that has been imparted into school – Ballord
- It is a voluntary undertaking which involves constructive effort or thought and eventuates into objective results – Thomas & Long
- A project is a significant practical unit of activity of a problematic nature planned and carried to completion by the pupils in a natural manner involving the use of physical materials to complete the unit of experience - Bossing
- A project is any unit of activity, individual or group, involving the investigation and solution of problems, planned and carried out to conclusion under the guidance of the teacher – Callahan & Clark
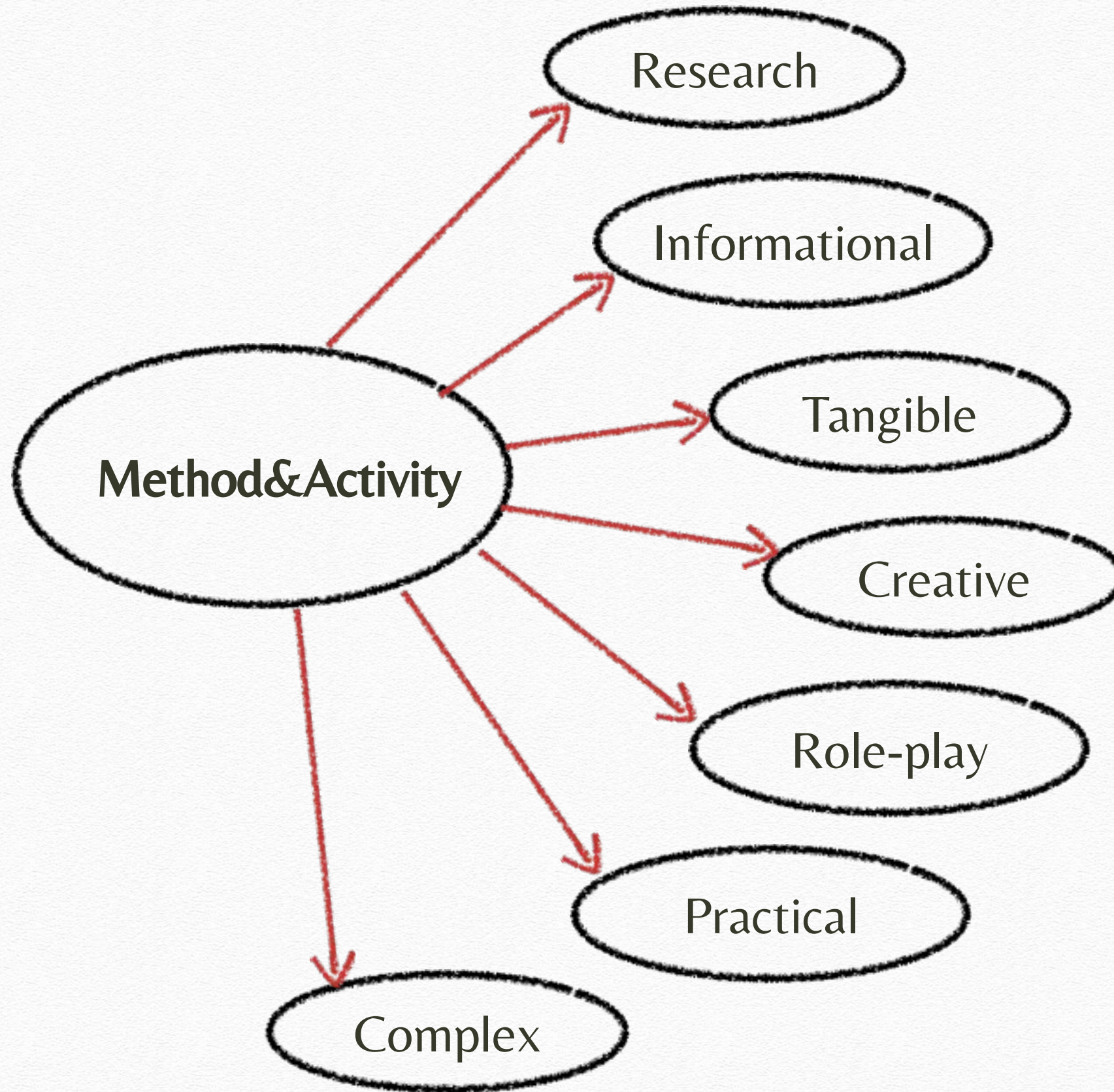
Types of Project method

Dr.W.H.Kilpatrick, in his paper on "The Project Method" (1918), has classified projects on the basis of tasks involved.

- Problem Type: A project that involves investigation and solution of practical problems (eg: doing a project on the problem of low literacy level in a nearby village, investigating pollution problems, investigating community health problems etc.)
- Product Type: A project that involves construction of a useful material object or article to embody some idea or plan in external form.(eg: making a model of the wooden cantilever bridge over the Phochu river in Punakha)
- Consumer Type: A project that provides opportunities for experience on a particular area/field and writing an account of it. (eg: attending a festival in a village and writing an account on its aesthetic value.)
- Drill Type: A project that provides opportunities for mastery of skill or knowledge on a particular area/field. (eg: writing a critical analysis "on the system of government during the rule of first and second Desis")

Types of Projects

- The dominating activity (research, exploring, creative, role-play, applied, etc.)
- Subject
- Type of interaction (class, city, international)
- Number of participants
- Duration

Types of Projects

Types of Language Projects

- Multidisciplinary
- Country study
- Linguistic (comparative, monolanguage)
- Intercultural communication (comparative, monolanguage)
- Creative

Principles of Project Method

- The Principle of Utility: The project work attempts to study, investigate and find solution to a practical problem. The problem is not abstract but a concrete one which the learner can identify. The learner is convinced of the need to investigate the problem as it definitely has an impact on the life around him.

- The Principle of Readiness: The learners are allowed to choose any one from a set of problems presented. Thus, the learners are given freedom to choose the problem based on their interest. As a result, the learners show a high degree of readiness.

- The Principle of Learning by doing: This method is activity-based method and the learners acquire the knowledge based on work and practical experience. Thus, whatever learning takes place is the by-product of the activity and this makes learning a memorable and an enriching experience.

Principles of Project Method

- The Principle of freedom at work: The teacher acts only as a guide and facilitator and the learners enjoy a high degree of freedom to choose and work on their own with least assistance from the teacher. The freedom allowed to the student facilitates the process of emotional and intellectual development in the child.

- Principle of Socialization: The project work attempts to provide opportunities for the student to acquire social skills necessary at a later stage to move and fit into the system of society easily and profitably. The student under this method comes into contact with the social environment and during the course of active interaction with various elements of social environment acquires the social skill.

Stages & Steps in Problem type Project

According to Diana and L.Booth (1986), a **problem type** project has three distinct stages,

- Class room planning

- Execution

- Conclusion

Classroom planning: In this stage, the important aspects related to the project work are discussed and the execution of the project work is planned thoroughly. There are 4 steps under this stage.

Step 1 : Providing a set of problems: The teacher provides a set of problems to the students and initiates discussion on them. The students, individually or groups are asked to choose a particular problem that interest them.

Step 2 : Selecting and defining a problem: The students select a particular problem (individually or in groups) and define the problem precisely. The precise definition of the problem is very important because the student should be clear

Step 3 : Formulating hypothesis: Hypothesis are probable solutions to the problems. The students at this point, after reflection and discussion, frame a hypothesis for the problem selected.

Step 4: Planning/Designing methods to test the hypothesis formulated: The teacher then asks the students to plan or design methods to test the correctness of the hypothesis framed for the problem selected. The student reflect on the nature of the problem, the hypothesis framed, the data required to validate the hypothesis, the mode of collecting such data etc., and plan/design a comprehensive method to test the hypothesis. The teacher, before the commencement of the execution stage, discusses the evaluation criteria with the students and briefs

Step 5 : Collection of data: The students move out of the class room and as per their plan begin to gather data from various sources. They have to carefully record the information collected and later organise the information in a way that would facilitate further study and interpretation.

Step 6 : Interpretation of data: At this point the students study carefully the data collected and interpret information collected. The interpretations are noted down and the findings and conclusions are arrived at.

Step 7: Reviewing: The students then critically examine the methods adopted to collect the data, the adequacy of the data collected, the interpretation of the data

Conclusion: In this stage, the project work report is submitted by the students and the Evaluation of the same is undertaken by the teacher. The steps under this stage are,

Step 8 : Reporting: The students present their findings in the form of a project-report, after receiving the corrected first drafts submitted. The report generally consists of the following components,

Introduction: A description of the topic being studied, along with relevant background information is given here. A clear statement of the purpose, and scope of the study should be included.

Materials and methods used: A description of the equipments, methods and procedures used and

Project report

Introduction: A description of the topic being studied, along with relevant background information is given here. A clear statement of the purpose, and scope of the study should be included.

Materials and methods used: A description of the equipments, methods and procedures used and experiments performed is given.

Observations and results obtained: The recorded observations and the data collected are noted under this section.

Discussion: Interpretation of the data/ findings, comparison of the results with other workers in the same field and the conclusions arrived at.

Bibliography: List of references if any

Stages & Steps in Problem type Project

Step 9: Evaluating: The teacher evaluates the work submitted, on the basis of the evaluation criteria discussed and decided upon with the students. The evaluation criteria should be clear, specific and comprehensive.

EXAMPLE TENDER EVALUATION METHODOLOGY		
ASSESSMENT	**DESCRIPTION**	**SCORE**
Excellent	Exceeds the required standard. Response answers the question with precision and relevance. Includes improvement through innovation / added value.	5
Good	Meets the standard required. Comprehensive response in terms of detail and relevance to the question.	4
Acceptable	Meets the standard in most aspects but fails in some areas. Acceptable level of detail, accuracy and relevance.	3
Limited	Fails the standard in most aspects but meets some. Limited information / inadequate / only partially addresses the question.	2
Inadequate	Significantly fails to meet the standard. Inadequate detail provided / questions not answered / answers not directly relevant to the question.	1
Not Eligible for consideration	Completely fails to meet the standard. Response significantly deficient / no response.	0

Project Waterfall Method
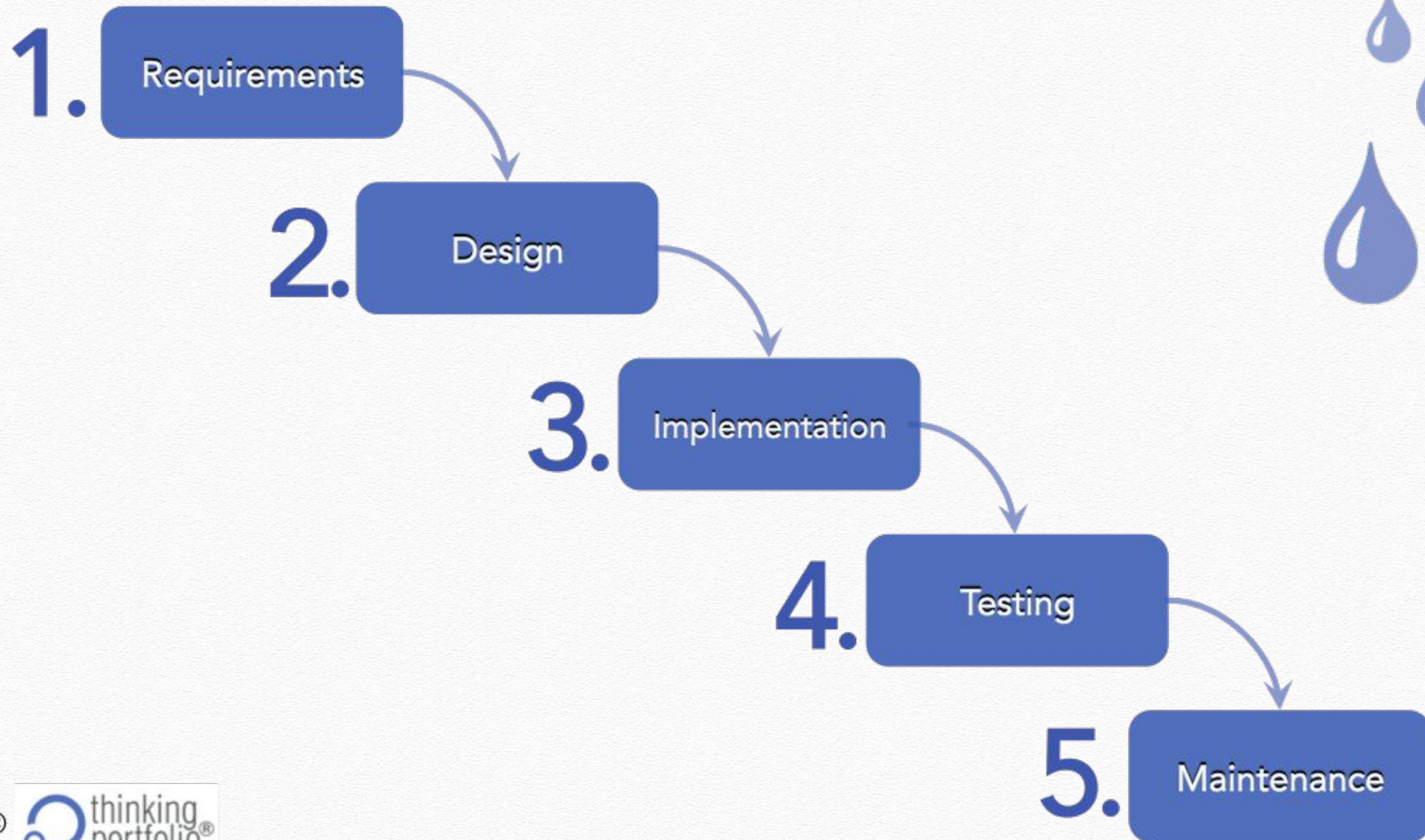
1. Requirements
2. Design
3. Implementation
4. Testing
5. Maintenance

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Procedural steps for Product type, Consumer type and Drill type project works

The following procedural steps may be followed while carrying out **Product type, consumer type** and **drill type** project works,

1. Providing a set of topics/ sub topics/issues etc.,

2. Selecting

3. Purposing (Objectives)

4. Executing

5. Reviewing

6. Reporting

7. Evaluating (In this case, the set of criteria may differ from that of problem type)

Role of the Teacher in a project work

The teacher is not a commander but a friend, guide and a working partner.

He should provide occasions for shy pupils to come forward and contribute something towards the success of the project.

He should help the students in developing the character and personality by allowing them to accept the responsibilities and discharge them efficiently.

He should provide democratic atmosphere in the class so that the pupils can express themselves fully without any fear of the teacher.

He should be alert and active all the time to see that the project is running in its right lines.

He should have a thorough knowledge of individual children so as to allot them work accordingly.

He should have initiative, tact and zest for learning

Merits of Project Method

- This method is based upon the laws of learning. ie.,

  - Law of readiness: The pupils are made ready to learn by creating interest, purpose and life-like situations.

  - Law of exercise: By practicing, we learn things. There is self-activity on the part of the students. They carry on the activity in the real life situations; the experiences gained thus are very useful in the later life of the children.

  - Law of effect: The sense of success and satisfaction should accompany the learning process. This law makes it essential for the teacher to make the child satisfied and feel happy in what he/she is learning.

- It promotes co-operative activity and group interaction. As a result habits of thinking for a common cause, tolerance, self-dependence, resourcefulness and other socially desirable habits are formed.

Merits of Project Method

- It is a democratic way of learning. The children choose, plan and execute the project themselves.

- It teaches dignity of labour and the pupils develop respect and taste for all types of work.

- It affords opportunity to develop keenness and accuracy of observation and to experience the job of discovery.

- It helps to widen the mental horizon of pupils. Old beliefs and prejudices are overcome when the child experience and analyse the problems in their natural settings.

- It sets up a challenge to solve a problem and this stimulates constructive and creative thinking.

Demerits of Project Method

- It absorbs a lot of time, with the result that the quantity of knowledge suffers.

- The whole syllabus, especially for more advanced classes, cannot well be included in a collection of projects and it is difficult to finish the syllabus in the limited time.

- It is expensive in the sense that a well-equipped library and a laboratory are required and at the same time, the pupils have to bear the expenses on excursion and other visits etc.

- The teacher will have to be exceptionally gifted, knowledgeable as well as alert and helpful.

Gold Standard of PBL

Student learning goals for projects include standards-based content as well as skills such as critical thinking, problem solving, communication, self management, project management, and collaboration.

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