
DEMONSTRATE HOW LEARNING THEORIES CAN SUPPORT EFFECTIVE TEACHING AND LEARNING.

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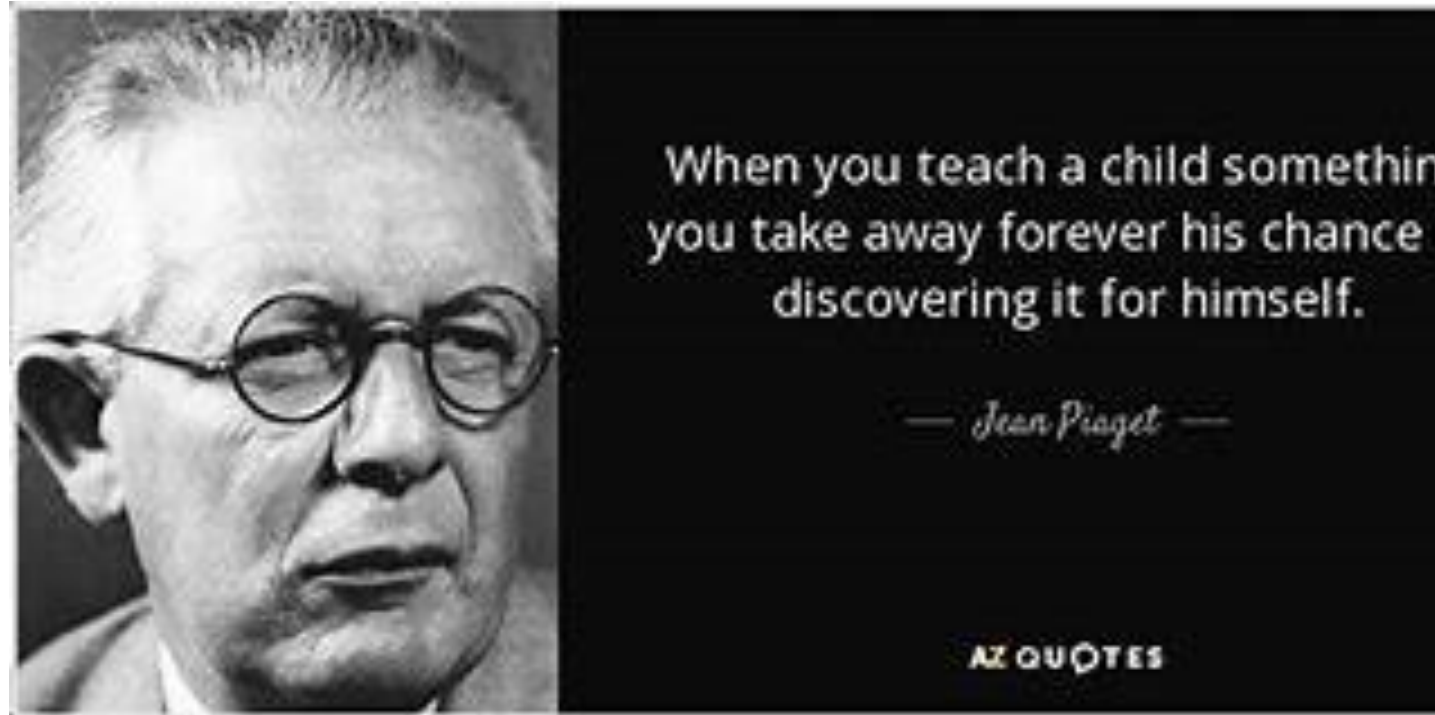
INTRODUCTION

This presentation is going to investigate a handful of educational theorists and what each of them believe to contribute towards a successful academic environment. The theorists we will be looking at are...

- Froebel
- Piaget
- Montessori

We will be considering the principles behind each of them, and how they support effective teaching and learning.

JEAN PIAGET (1896-1980)



JEAN PIAGET 'S THEORY OF COGNITIVE DEVELOPMENT.

- Children are **Active learners**, gaining knowledge by interacting with their environment.
- Proposed 4 stages of cognitive development
 - **Sensorimotor** (0-2 years) - learning happens through actions and senses (object permanence)
 - **Preoperational** (2-7years) - Language and imagination development with egocentric thinking (pretend play)
 - **Concrete Operational** (7-11 years) - logical thinking about concrete events (sorting shapes)
 - **Formal Operational** (12+) Abstract thinking with problem solving.
- **Schemas** – building blocks of knowledge by which children organise information and adjust their understanding through new experiences.

HOW PIAGET'S THEORIES SUPPORT EFFECTIVE TEACHING AND LEARNING (AGES 3-11)

- Developmental Stages: Lessons designed to meet children's cognitive stages.
- Constructivist Learning: Learning is built through doing and hands-on activities.
- Scaffolding: Teachers encourage independent thinking as children develop but offer support when needed.
- Problem Solving: Children encouraged to tackle and solve problems independently.
- Peer Interaction: important for developing ideas and social skills.
- Individualised Learning: Lessons adapted to children's individual developmental needs.

The Curriculum for Wales and Estyn highlight the importance of play, scaffolding, social interaction, and age-appropriate learning for children's learning and development.

HOW CAN LEARNING BE PLANNED IN RELATION TO PIAGET'S THEORIES?

- Stage Appropriate Learning
- Constructive approach (Children as little Scientists)
- Active Learning
- Scaffolding
- Group Work And Social Interaction
- Play Based Learning (foundation phase) (curriculum for Wales)
- Hands on Learning
- Unstructured Play

Stage Appropriate Teaching

- Children progress through four stages of cognitive development in a fixed order but not at the same rate.
- Development is determined by biological maturation and environmental interaction. (Mcleod 2024)

Using the **four stages** of cognitive development that Piaget identified – lessons can be planned depending on the development levels of the pupils (MacQueeney et al, 2022)

Examples:

Preoperational Stage (2-7 years): Children learning through hands on activities and having short instructions. Children are egocentric at this stage and very curious. Activities focus on symbolic play, storytelling and dress up costumes.

Concrete Operational Stage (7-11 years): Hand on activities, experiments, and problem-solving tasks such as brain teasers and riddles, classifying objects and having a focus on open ended questions that encourage higher order thinking skills. (Pakpahan, F.H. & Saragih, M., 2022)

Constructive approach - "Children are little Scientists"

Children acquire new information and understanding by constructing 'experiments'.

Information that children gather from their studies they use to draw their own conclusions from and learn from (Kennedy-Costantini, 2021)

Example

Hands on activities and learning through discovery and exploration - project work and experiments such as testing whether objects can float or not

According to Piaget, children construct knowledge by interacting with objects, people, and their surroundings rather than passively receiving information. (McLeod 2024)

Active participation and learning through exploration

Children learn best when they are actively engaged and this can help with long-term recall, creative thinking, and the ability to connect ideas (Aubrey, K. and Riley, A. (2016).

Example : Teachers can plan lessons that are hands on such as experiments, building models and solving problems.

The Curriculum for Wales focuses on active learning and exploration. In the Foundation Phase, lessons are based on exploration, first-hand experiences, and exploratory play. Lessons are planned to allow children to explore, test hypothesis and learn how to independently solve problems.

Emphasis on learning through play "Play is the work of childhood" Piaget

Matching Cognitive Capabilities

Children can only learn if they are taught at the right 'stage' of cognitive development

Example : baseline assessments used to find out what stage the child is at and then design lessons that allow progress from concrete ideas to abstract ideas.

Curriculum Wales stresses the importance of assessments in helping to understand individual learners and identifying their strengths, areas of improvement and where more focus or support may be needed.

Working with Peers

Social interaction allows for children to test their ideas and understanding (Ferreiro, E., 2012)

Example : lessons can be planned to incorporate group activities into their lessons

Learning from mistakes

Children learnt from their mistakes and children need to have opportunities for trial and error (Berk 2001) .

This is another example of how unstructured play within the Wales curriculum is effective in the classroom where new skills can be learnt through trial and error rather than formal instruction.

Scaffolding

This can be demonstrated when teachers guide independent learning and thinking but help and support when the pupil needs it.

Estyn highlights this teaching strategy as good practice.

HOW IS PIAGET'S THEORY DEMONSTRATED IN PRIMARY SCHOOLS TODAY?

- The 'Curriculum for Wales: Foundation Phase Framework' (Welsh Government, 2015) emphasises the importance of children learning through first-hand experiential activities with 'play' being at the heart of all learning. It recognizes that "through their play, children practise and consolidate their learning, play with ideas, experiment, take risks, solve problems, and make decisions individually, in small and in large groups".
- Piagets concept of play, child centred, active learning with group collaboration are all evident within this framework.

CRITICISM OF THEORY

Social Interaction – more emphasis on individual discovery than social interaction.

Stages of development – too rigid and may not be a true reflection.

Teachers – used as facilitators rather than teachers

Language – undervalued in cognitive development.

(Matusov, E. & Hayes, R., 2000)

CONCLUSION

- The emphasis on active learning, exploration and play aligns with the curriculum in Wales
- Promotes independent and holistic learning
- Individualised – pupils can develop at own pace

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To conclude all 4 of the mentioned theorists, play an important part in education practiced today. Although their focusses are different, the needs of the child is always at the fore front.