BRUNER’S THEORY OF COGNITIVE DEVELOPMENT

BATs

A01 - Outline Bruner's Theory of Cognitive Development (D) - Apply knowledge of Scaffolding to teach a new concept (C)

A02 – Evaluate Bruner's theory (B+)
- Piaget: the child = a scientist – dev. occurs in relative social vacuum.

- Vygotsky: child = apprentice – dev. occurs through social interaction.

Bruner – agreed with Piaget:
- Underlying cognitive structures mature over time – child can think about and organise world in increasingly complex way.
- Children are active, curious, exploratory – adapt to environment through interaction.
- Action / active experience essential to develop abstract thought.
Bruner differs from Piaget but like Vygotsky:

- Stresses role of language & interpersonal communication.
- Emphasises need for active involvement by experts.
- Instruction = essential part of learning process in natural and educational settings.

Bruner – Modes of Representation rather than stages – knowledge and understanding can take 3 different forms:

Enactive, Iconic and Symbolic modes.
Enactment Mode

- A baby represents world through actions = (sensori-motor stage from Piaget’s theory
- Knowledge stored as “muscle memory” – baby may carry on shaking arm even if you take rattle away – thought arm movement made the noise!
- Our knowledge for motor skills (eg riding a bike) are represented in the enactive mode.
- They become automatic through repetition.

Like Piaget, Bruner sees onset of object permanence = a major qualitative change in way child thinks.
Iconic Mode

- Knowledge represented through visual or auditory images – icons. Relates to last 6 months of sensorimotor + all of pre-op stage.

Baby can represent rattle as a visual image so it is now an independent “thing” = object permanence.

- Child’s thinking is dominated by images - things are as they look in this mode.

I’m in iconic mode - leave my rattle alone!
Symbolic Mode

- Like Piaget, major change at 6/7 yrs – **language** starts to influence thought.
- Not so dominated by appearance of things – can think beyond images and use symbols such as words or numbers.
- Information can now be categorised and summarised – can be more readily manipulated.

Language is the key to knowledge
Experimental evidence for the transition from iconic to symbolic mode of thought comes from the classic study by Bruner & Kenney. (1966)

- Read page 144-145
- Storyboard the 9 glass experiment or use another method to outline this piece of research
Bruner’s Theory - Key Points

- Development involves mastery of increasingly more complex modes of thinking from enactive to symbolic.
- As skills learned they become automatic and become units that can be combined to build up a new set of skilled behaviours.
- Learning not a gradual process - more like a staircase - sharp steps up - Environment rather than age that slows down or accelerates learning (something clicks to unlock understanding).
The organisation of knowledge - thinking based on categorisation (similarities and differences - system of coding to store info). Hierarchy - general at top getting more specific e.g. classification of animals
Bruner's Theory - Key Points

- Cultural Differences - he explained this in his book ‘The Culture of Education’ by suggesting that people from different cultures make sense of their experiences in different ways because of the differences in the society in which they live. They internalise their surrounding culture.

- e.g. Categorisation structures for birds may be different in UK and Africa.
**BRUNER’S THEORY - KEY POINTS**

- **Paradigmatic (analytic) and Narrative (intuitive) Thinking -**
  - **Paradigmatic** - based on logic, traditional type of thinking emphasised in schools, leads to construction of categories and hierarchies.
  - **Narrative** - more interpretive, complex and rich phenomena of life better represented in stories or narratives (Lieblich et al 1998).

Paradigmatic and narrative complement each other, but Paradigmatic may block the ability to think narratively, as it makes us look for patterns and logic rather than looking at things subjectively and creatively (Gardner 1982).
STRENGTHS AND LIMITATIONS

- Limitations - not concerned with infant development as much as Piaget and Vygotsky so not a lifespan theory of Cog Dev - more a general approach to learning

- Paradigmatic and Narrative thinking difficult to test and so theory can’t be demonstrated to be true

- Strengths - Focus on Education have had a profound effect on education
The theory uses a number of approaches -
Cognitive (information processing - like Piaget dev occurs through experience and maturation)

Social Constructionist - like Vygotsky - social context important

Explains Individual Differences - culture and environmental influences

Real world applications - major impact on education
Bruner and colleagues Wood et al (1976) first to introduce the term **Scaffolding** to describe the Vygotskian idea of helping children through the ZPD.

- The expert creates a temporary support (scaffold) which is gradually withdrawn as the child is able to work more independently.

see Wood et al’s research on p145
Create a poster for wall display or a summary sheet for yourselves outlining the key points, research, strengths and weaknesses of Bruner’s theory.
Try the cloze exercise about Bruner’s theory

Extension - Try the Bruner Word Web

http://www.psychexchange.co.uk/_hotpotatoes/7889588571265283492.htm
APPLICATIONS OF PIAGET, VYGOTSKY AND BRUNER’S THEORIES TO EDUCATION

BATs
A01 - Explain how each Cognitive Development theory studied can be applied to Education theories (C)
A02 – Evaluate the effectiveness of these applications (B)
OVER TO YOU...

1 hour limit

- In pairs/small groups research how one of the Psychologists' theories can be applied to education.
- Include commentary and examples of how they have been applied.
- Include summary sheet for rest of class

Stretch and Challenge

Use pages 146-147 plus anything you can find on the internet
STRETCH AND CHALLENGE

http://www.youtube.com/watch?v=BELlZKpi1Zs&feature=related

- Create and try out a method suggested by one of the Psychologists studied.
- Or write a manual for new teachers on how best to help learners.

B+
PLenary

- Share each other’s presentations
- Extension - Save or Steal sheet

Homework.

a. Outline one theory of cognitive development (9) b. Discuss the application of this theory to education (16 marks)
OR Discuss the application of one or more theories of cog dev to education (9+16 marks)