

**PSYCHOLOGY**



**SERIES**

**USER'S GUIDE**

**Developmental Psychology  
LANGUAGE DEVELOPMENT**



This Guide is designed to be read before viewing and an overview of the content and structure of the programme is given to assist with planning and lesson preparation. It is written to support the teaching of psychology and will be particularly helpful for those new to this subject. The DVD includes a menu linking to sections within the programme. The default setting is to play the DVD through automatically. To select a section highlight the relevant heading using the arrows on your remote control and press 'ENTER'. The chosen section will then play through and return to the menu for your next choice.

**Running time: 40 minutes (1996)**

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**We hope you find this programme a useful teaching tool.**

## Structure of the Programme

Ideally a suitable section should be watched in one session making liberal use of the pause or stop button for discussions and/or note-taking. We have included many breaks for thought, discussion or activities which are listed in this Guide. The 'Pause the Video' screens are on for about 10 seconds to allow those viewing on video to turn off and switch on again. It would be useful, but not essential, to have writing materials available while watching.

- Early Stages of Language Development 15 mins approx
- Can Non-Human Animals Use Language? 2 mins
- The Link between Objects Actions and Words 2 mins
- Theories of Language Acquisition 6 mins
- Later stages of Language Development 7 mins
- Language and Thought 3 mins
- Individual Differences 2 mins
- Practical Work with Children 2 mins
- Current and Future Research 2 mins

## Aims

The main aim is to illustrate the developmental stages of children's language. We do this by supplying the viewer with plenty of examples of language from 0 to 6 years, used in a variety of situations. Many young students may have little contact with children and some of the more mature students may not have recent or relevant experience of the ways in which children develop language. It is often not practical for teachers to bring children into the classroom and the film offers examples of children's thinking which may be used to demonstrate points.

This emphasis on practical examples is at the expense of in-depth analysis of the theories. We do outline the Nature-Nurture argument and the Thought-Language debates but these are described in much more depth in all current textbooks.

## Psychology Syllabus Links

AQA(A) A2 Mod 4 13.3 (a, b) Language Development  
AQA(B) AS Mod 1 10.1.2 Key Approaches – Cognitive  
AS Mod 2 11.7.1 Language and Thinking

Edexcel AS Unit 1 The Cognitive-Developmental Approach  
Edexcel A2 Unit Issues, perspectives and debates; Nature-Nurture debate

OCR AS Core Studies 2541 Themes, perspectives and methods; Cognitive Psychology;  
Developmental Psychology

OCR A2 Mod 2544 5.5.1 Psychology and Education

**Timing and Content of the Programme**

	<b>Introduction - The Pre-verbal stage</b>
01.00	<b>Talking to parents</b> Do you understand what your baby means by the sounds he/she makes?
03.45	<b>Activity</b> Can you tell what is happening to these four babies by the sounds they make?
06.00	<b>Development of Emotional States</b>
07.48	<b>Talking to parents</b> What makes your baby laugh?
09.40	<b>Babbling</b>
10.30	<b>Summary of significant steps in first year</b>
11.30	<b>First words</b>
12.20	<b>Break 1</b> Consider what other things that Michael will have to concentrate on at one year old
13.40	<b>Can Non-Human Animals Use Language?</b>
15.20	<b>Making the Link between Objects, Actions and Words - Bruner</b>
17.30	<b>Theories of Language Acquisition – Skinner, Chomsky</b> Nature-Nurture Debate
19.30	<b>Break 2</b> Try to describe the rules for saying whether we should say 'a cat' or 'the cat' in a sentence.
20.40	<b>Short sentence Stage</b>
25.30	<b>Break 3</b> How could you calculate how many words a day children speak and the number of words in their vocabulary?
28.00	<b>Break 4</b> Listen to these parents talking to their babies. What do you think are the main features of parentese?

29.00	<b>Break 5</b> In what ways can adults stimulate children's language?
31.50	<b>Do we need language to think or does thought determine language?</b>
32.30	<b>Break 6</b> Consider what words Lewis will be learning that would not be necessary for an Inuit child to learn.
33.00	<b>Break 7</b> What problems and biases may occur in observational studies?
36.10	<b>Practical work with children</b>
38.00	<b>Current Research Trends</b>

### Notes for Breaks for Exercises or Discussion

#### Break 1 13.20

Consider what other things Michael will have to concentrate on at around one year old.

Notes: The point being made here is that many other rapid developmental changes are taking place at this age, as well as language. Michael, whom we see playing football, will be learning to control his body eg feeding himself, walking, etc as well as learning social control eg sharing toys, waiting for attention, etc.

#### Break 2 20.40

Try to describe the rule for whether you should say 'a cat' or 'the cat' in a sentence.

Notes: This exercise aims to show that it is more difficult to explain language than it is to use it! Students could also try to explain the general rule for past tenses, plurals and making verbs into adverbs and see if it is possible to make a rule for the exceptions.

#### Break 3 25.30

How could you calculate how many words a day children speak and the number of words in their vocabulary?

Notes: There is a chart in this Guide (page 10) showing the rapid acquisition of vocabulary. This could form an introduction to the exercise. The answer is obviously to use some form of time sampling (discussed later).

**Break 4 28.20**

What do you think are the main features of 'parentese'?

Notes: Viewers are asked to listen to some examples and will notice, and know from their own experience, that we tend to move closer to babies as we speak, use simpler language, are often repetitive and change our pitch and intonation. Note that 'parentese' changes according to the baby's age.

**Break 5 29.00**

In what ways can adults stimulate children's language?

Notes: Discussion should include ways outlined in the programme and could extend to other aspects such as providing stimulating material to look at and play with as well as extending their social contacts etc.

**Break 6 33.00**

Consider what words Lewis will be learning that would not be necessary for an Inuit child to learn.

Notes: The point of this, what may appear to be a very simple exercise, is to help students to understand and remember the Whorf-Sapir Hypothesis through a very practical example.

**Break 7 37.00**

What problems and biases may occur in observational studies?

Note: There is more discussion about this later in the Guide.

**Notes on content**

**Do we need language to think or does thought determine language?**

The Whorf-Sapir Hypothesis (The Linguistic Relativity Hypothesis) is described and illustrated to support the view that we need language to think. The opposing view of Jean Piaget and the interactionist view of L.S. Vygotsky are outlined. The debate continues but we conclude that there is a very strong link between language and thought. The full answer to this question would require its own programme.

## Can non-human animals use language?

It is the symbolic nature of language that sets us apart from other animals. We briefly mention attempts to teach our nearest relatives, the primates, to use language.

Again, the work in this area could make a separate programme. We conclude that no primate has yet acquired language to the high level of comprehension of human children in spite of intense training programmes. Hockett's design features are a good basis for determining whether the 'language' of primates matches the criteria for spoken language. For more information on Project Washoe (Gardner 1973) see [Teaching Sign Language to the Chimpanzee Washoe programme](#)

### Development of Emotional States in Babies

From birth	<b>general distress</b>	cries with eyes tightly shut eg pain
2 months	<b>enjoyment</b>	smiling mouth with widening eyes eg seeing mother
3 months	<b>fun</b>	laughter eg being tickled
3/4 months	<b>anger</b>	cries with open eyes eg unable to get a toy
6 months	<b>joking</b>	laughter eg mother pretending to suck bottle
6 months	<b>wariness</b>	quietens, stares, frowns, turns away eg a stranger approaching
9 months	<b>fear</b>	stares, frowns, mouth pulled straight back and freezes eg heights, visual cliff

### **Significant steps in the first year**

#### **Babies have learned:**

- making sounds brings a response
- turn taking in interaction
- to make many different noises
- listening to other people's voices

**Expressive Children** - words related to social situations  
eg bye bye, stop it

**Referential Children** - mostly names of objects  
eg car, book

(Nelson 1981)

### **Stimulating a child's language development**

Talk to the child

Listen to the child

Encourage the child to talk

Ask open-ended questions and not just yes/no questions

Expand the child's statements into a longer grammatically correct form

Check that you understand the child's meaning

Name things in the environment

Read to the child

Offer a good language model:

use adjectives and adverbs

finish your sentence

try to answer children's questions although they may be endless

provide children with a safe, happy and stimulating environment with plenty of opportunities for expanding their vocabulary

## **Practical Work with Children**

We emphasise practical work in the Psychology Live Series because it is an effective and enjoyable learning experience for the student as well as forming a component of many courses.

The ease of finding willing and able participants for memory, perception, attention studies etc, has meant that cognitive development studies are attempted less frequently by students. This is compounded by the difficulties of studying young children which we can discuss under two headings: Practical Considerations and Ethical Considerations.

### **1. Practical Considerations**

The nature of children makes them everything a good experimental participant is not. They may be willing - but only until distracted by something more interesting. They may be able - but only for very short periods of time. Basically, any thoughts of carrying out a scientific experiment using standardised procedure go out of the window.

Even if one succeeds, the results should be treated with caution due to the other problems which make studying children especially difficult. For example, demand characteristics - the younger the child is, the less likely it is to be aware that it is being studied. This is good with regard to demand characteristics but difficult if you want them to stay in one place and play or do something particular! Also their level of language development may mean they are unable to understand the standard instructions so the wording has to be carefully thought out. Another problem can be actually finding children to take part, which usually requires contacts with pre-school groups or local primary schools if you require large numbers of children of the same age.

Unfortunately children don't produce behaviour, particularly language, to order. One of the biggest problems is the time taken to wait for a required piece of behaviour. We spent hours crawling around after babies waiting for that all important utterance. Time may be a problem for students wanting to tape record certain pieces of language for practical work. We make plenty of suggestions for easier ways later.

### **2. Ethical Considerations**

Children are especially vulnerable to manipulation by adult experimenters and far less able to refuse to take part if they do not wish to.

In brief, no research may be done which may harm the child in any way physically or psychologically.

The informed consent of the parent/guardian must be obtained where a child cannot choose to take part themselves by virtue of age, mental ability etc.

The child's freedom to choose to take part or discontinue at any time must be respected.

All personal details or results obtained must be treated as confidential.

Deceiving the child or guardians as to the true purpose of the investigation should be avoided unless absolutely necessary and de-briefing should then take place.

Possibly the most important question to ask when considering studying children is '*Do the ends justify the means?*'. It is especially important to give yourself an honest answer where children are involved! Usually studies involving children are enjoyable and beneficial for all involved but students must be made aware of the above.

See the References for how to obtain the ethical guidelines from The British Psychological Society Code of Conduct and Ethical Principles (2006) and The Association for the Teaching of Psychology. The Society for Research in Child Development and the American Psychological Society have published similar guidelines.

## Methods

### Observation

Most studies of children will involve observational techniques which have their own problems although they produce wonderfully rich naturally occurring behaviour.

These include:

**Observer bias** - Numerous factors can influence our observations eg emotional involvement with the child, how we perceive a situation, not seeing pieces of behaviour for various reasons, our judgments being swayed by knowledge of the hypothesis, etc.

**Reactivity** - It is very difficult to record language discreetly to avoid reactivity (a change in behaviour due to the presence of the observer) especially if you need to make notes or move a tape recorder or camera as the child moves around. In language studies it is technically difficult to record sounds and remain out of sight in most cases. We can't record without the knowledge and consent of the children's parents or guardians.

**Obtaining representative samples of behaviour** - Time sampling is really the only way to improve the reliability of the behaviour sampled eg observations could be made for ten minutes out of every hour for a morning and then an afternoon over a period of, say, a week. Event sampling could be used with language eg every occurrence of a certain word recorded over several hours/days.

**Analysis** – most studies will produce qualitative rather than quantitative data. If we observed a difference in language between two groups, say deaf and hearing babies, we could write about and discuss the differences and relate to current research. However it is difficult to actually obtain scores and also to allow replication of the situation exactly.

All these problems occur with animal observational studies as well. One of the criticisms of the claims that primates can use language is that the researchers appeared to be unconsciously cueing the animals. Anthropomorphism is also a tendency in animal observations (attributing human qualities and motives to non-human animals).

**Case studies and Content Analysis** can also be used successfully with language studies.

### Growth of Children's Active Vocabulary

1.5 yrs	20 words 1 word sentence	4.5 yrs	1800 words 5/6 word sentences
2 yrs	270	5 yrs	2200 6 word sentences
2.5 yrs	425	5.5 yrs	2300
3 yrs	900 3/4 word sentences	6 yrs	2500 longer conversation
3.5 yrs	1200	6 yrs plus	more words, more complex, eventually use 'if', 'so', 'therefore' etc
4 yrs	1500		

## Current Applications

The huge amount of research on language acquisition by cognitive psychologists and neurolinguists has contributed especially to early **childcare and education**.

For example, it has directed teachers of special needs children and those with specific reading problems eg those with 'dyslexia' may take longer to process things they hear than things they see, therefore using 'look and say' is not appropriate.

In child rearing it has been found that there is no benefit in correcting young children's grammatical errors as, given normal circumstances, they will learn the rules of grammar anyway.

Non-verbal communication findings have also been applied to those with social skills problems and also to communication in commerce and public speaking.

## Current Research

There is still much research into the **nature-nurture debate** as related to the critical period for language development. The nature-nurture debate has still not been resolved but is moving towards an interactive view.

Research on language development is usually restricted to monolingual learners. With the development of multi-cultural communities speaking, reading and writing more than one language there is growing interest in **the ability of children to learn new languages** as well as developing their own.

Recent emphasis on multi-literacies and internet communication has reinforced the need for adults too to become multi-lingual. (See Foley & Thompson, 2003)

**Artificial intelligence** continues its attempts to make software which is able to communicate in a natural way with humans. The main sticking point remains our use of non-literal language such as puns, jokes and metaphors.

**Brain imaging** studies are helping to understand language brain centres. One recent study used transcranial magnetic imaging (TMS) to temporarily turn off the visual cortex in those who had been blinded early in life. They were asked to do a verb generation task and made many, mainly meaning, errors. The sighted control group only made errors when the frontal cortex was turned off. The results suggest that the visual cortex is playing a functional role in language ie the brain is flexible enough to use the visual brain areas for non-visual tasks. According to the researchers Amedi et al (2004): *'these findings offer further insights into critical periods and the limitations of the cross-modality of the brain in the adult human, issues of great potential interest for human **neurorehabilitation**'*.

## Websites

[www.uniview.co.uk](http://www.uniview.co.uk)

a large collection of psychology videos, DVDs, posters, brain jellies, X-psyting extras, etc; worth checking regularly for latest news

[www.theatp.org](http://www.theatp.org)

the home of the Association for the Teaching of Psychology  
invaluable access to information and advice for teachers of psychology in UK and Europe

[www.bps.org.uk](http://www.bps.org.uk)

the home of The British Psychological Society  
free downloads of recent articles from The Psychologist magazine

[www.apa.org](http://www.apa.org)

the home of the American Psychological Association  
nothing free on this site!

[www.psychology.heacademy.ac.uk](http://www.psychology.heacademy.ac.uk)

details of psychology events, resources and research  
lists all UK university psychology departments; BPS list of accredited undergraduate courses

[www.s-cool.co.uk](http://www.s-cool.co.uk)

revision site for students on a limited number of topics; club-like feeling with an s-magazine giving advice on bank accounts, interview skills and even how to shave!  
Teachers World with generic information

<http://www.mrmind.com/mrmind3>

turning the Turing Test upside down, MRMIND challenges you to take the Blurring Test and prove to him(?) that you are human - make your case to a robot of your choice  
take the Human Quotient test - great fun and time-waster!

[www.youramazingbrain.org.uk](http://www.youramazingbrain.org.uk)

just go and enjoy – the brain in great detail, packed with information, activities

[www.holah.karoo.net](http://www.holah.karoo.net)

information, fun activities, links – excellent for staff and students alike

<http://psyonline.edgehill.ac.uk>

A Level resource from Edgehill College for AQA. Good and reliable resource for students and teachers. Includes a countdown to Mod 4 exams to the nearest second!

<http://psyberfun.users.btopenworld.com/>

too new to comment on but looks promisingly weird, wacky and addictive!

<http://en.wikipedia.org/wiki/Psychology>

extraordinary free encyclopedia which anyone can edit anytime even without being online! Over 1 million entries with definitions and further information

<http://www.brainconnection.com/>

an award-winning site (USA) with lots of relevant material and some excellent animated mini-demonstrations. Stages of Language Development covered including animation of brain activity when speech used.

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## References for Film Script and Guide Update

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### Further Reading for Students

- Association for the Teaching of Psychology (1992) *Ethics in Psychological research: Guidelines for Students at Pre-degree Level* Leicester ATP available on <http://www.theatp.org/>
- Cardwell, M. (2003) *Complete A-Z Psychology Handbook 3<sup>rd</sup> Ed.* Ideal students' companion throughout A level and undergraduate courses. Very user-friendly, definitions and jargon explained, revision and exam tips, diagrams and worked examples
- Cardwell, M., Clark, L. & Meldrum, C. (1996) *Psychology for A Level* London Harper Collins
- Coolican, H. (1994) *Research Methods and Statistics in Psychology 2<sup>nd</sup> Ed.* London: Hodder & Stoughton
- Crystal, D. (1987) *The Cambridge Encyclopaedia of Language* Cambridge University Press
- Griggs, R. A. (2005) *Psychology: A Concise Introduction* Palgrave Macmillan All the main topics in psychology covered, clearly and concisely - American. A companion website <http://bcs.worthpublishers.com/gray/content/psychsim5/launcher.html> is worth looking at for 20 animated activities
- Gross, R.D. (1990) *Key Studies in Psychology* London: Hodder & Stoughton
- Gross, R. (2003) *Themes, Issues and Debates in Psychology 2<sup>nd</sup> Ed.* Hodder Arnold
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- Thornton, S. (2002) *Growing Minds* Palgrave Macmillan

### Further Reading for Teachers

- Anderson, J. R. *Cognitive Development and its Implications 5th Ed.* Palgrave  
British Psychological Society (Mar 2006) *Code of conduct, Ethical Principles and  
Guidelines* Leicester BPS available on [http://www.bps.org.uk/the-society/ethics-rules-charter-code-of-conduct/code-of-conduct/code-of-conduct\\_home.cfm](http://www.bps.org.uk/the-society/ethics-rules-charter-code-of-conduct/code-of-conduct/code-of-conduct_home.cfm)
- Foley, J. & Thompson, L. (2003) *Language Learning A Lifelong Process* Hodder Arnold  
An excellent up-to-date book for cross-cultural descriptions of learning more than one  
language sequentially and simultaneously. Very rare to find a book that looks at language  
specifically in a lifelong context.
- Graham, (Ed.) (2004) *Complete Psychology* Hodder Arnold A first year undergraduate  
text written by British team – very comprehensive, plenty of artwork, activity boxes,  
applications, up-to-date and user-friendly.
- Harley, T.A. (1995) *The Psychology of Language: From Data to Theory* Hove Taylor and  
Francis
- McBride-Chang, C. (2004) *Children's Literacy Development* Hodder Education

## Contacts

### The Association for the Teaching of Psychology

The ATP has highly experienced teachers and examiners ready to give advice and assistance, especially for new teachers of this topic. They can recommend textbooks and resources that will get you started.

ATP Helpline: Dorothy Coombs

work: [dorothy@pursglove.ac.uk](mailto:dorothy@pursglove.ac.uk) 01287 280800

home: [dorothycoombs@24whinchat.freemove.co.uk](mailto:dorothycoombs@24whinchat.freemove.co.uk) 01287 636502

New teachers of this topic are well advised to get in touch with the ATP:

The Association for the Teaching of Psychology  
c/o The British Psychological Society  
St Andrew's House  
48 Princess Road East  
Leicester  
LE1 7DR  
<http://www.theatp.org>

Annual Conference - The ATP holds an excellent conference for members each July. As well as lectures and workshops, there is an opportunity to meet the examiners and to browse all the latest books and resources.

### The British Psychological Society

The British Psychological Society  
St Andrews House  
48 Princess Road East  
Leicester  
LE1 7DR  
Tel: 0116 254 9568  
[www.bps.org.uk](http://www.bps.org.uk)

### The American Psychological Association

The American Psychological Association  
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Washington DC 20002-4242  
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