GCSE Psychology

Pearson Edexcel Level 1/Level 2 (9–1) GCSE Psychology

Topic Guide 10

Language, thought and communication – How do you communicate with others?

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Specification requirements

This topic is an optional topic and will be examined in Paper 2.

Candidates are expected to demonstrate and apply the knowledge, understanding and skills described in the content.

To demonstrate their knowledge, candidates should undertake a range of activities, including the ability to recall, describe and define, as appropriate.

To demonstrate their understanding, candidates should explain ideas and use their knowledge to apply, analyse, interpret and evaluate, as appropriate.

Candidates may be asked to consider the following issues when evaluating studies:

- validity
- reliability
- generalisability
- ethics
- objectivity
- subjectivity.

Candidates may be required to apply their understanding – for example by responding to scenarios that are drawn from the topic area and/or associated research – and in doing this they should use psychological concepts, theories and/or research from within their studies of language.

Opportunities for practical activities

Candidates should gain hands-on experience of carrying out ethical, investigative activities to aid their understanding of this subject. To help centres identify opportunities for carrying out these activities, studies that can be replicated have been marked with an asterisk.

Research methods are delivered in Topic 11. However, as a way to aid candidates in evaluating the studies, centres can encourage them to consider the methodology of the key studies as they progress through each individual topic.

Although candidates will not be directly assessed on practical activities, the experience they gain will give them a better understanding of this subject and may enhance their examination performance.
Guidance

10.1 Content

10.1.1 Understand the possible relationship between language and thought, including strengths and weaknesses of each theory:

- a. Piaget’s (1950) explanation that representational thinking precedes language
- b. Vygotsky’s (1981) explanation that language and thinking are separate; to include:
  - c. pre-linguistic thought
  - d. pre-intellectual language

Candidates may benefit from starting their learning with basic descriptions and definitions of both language and thought, and an introductory discussion about whether these concepts can be viewed as distinct. It may be useful for candidates to have a basic understanding of the terminology associated with language development and structure; for example, grammar, phonology, syntax and semantics. This could also support an understanding of the underpinning debate between Piaget (10.1.1a), who claims that language depends on thought for its development, and Vygotsky (10.1.1b), who considers thought and language as initially separate systems.

Candidates should understand and be able to evaluate the concepts proposed by Piaget (10.1.1a) in his explanation that representational thinking comes before the development of language. Candidates should know that this is essentially the belief that thought initially depends on the sensory input of images of objects which are stored and understood, almost as mental representations, before they can be ‘named’ through language. Candidates should understand that Piaget suggested that language begins in egocentric form and then develops into socialised speech.

Candidates should understand and be able to evaluate the concepts proposed by Vygotsky (10.1.1b) who considered that language develops from social interactions and is separate to thought in the early years of development. Once language and thought merge, language can be used to represent meaning and thought can become verbalised. The differentiation between social speech and private speech should also be understood. Within this, candidates should know that pre-linguistic thought (10.1.1c) is the recognition of people and things without language to name or express them (for example, a baby recognising a parent) and that pre-intellectual language (10.1.1d) is speech without thought or understanding (for example, babbling as a baby).

Application of these concepts to stimulus materials would benefit candidates. Centres could develop scenarios and examples from which candidates can identify the key features, structures and processes of language development that are evident and describe them in relation to the key concepts.

Charlotte is 3 months old. She shows recognition of her mother and her father, and will turn towards them when they are near her and reach out her arms. According to Vygotsky, what form of thought is Charlotte demonstrating?
10.1.2 Understand how thought and language structures affect views of the world, including strengths and weaknesses of each theory:

a. linguistic relativism
b. linguistic determinism

Candidates should understand the difference between the two opposing concepts and how each is said to impact on the way in which a person views the world. These arguments are also known as the Sapir–Whorf hypothesis. Centres may wish to deliver the study by Boroditsky (2001) (10.2.2) within this section to highlight how language was found to shape thought.

Linguistic relativism (10.1.2a) suggests that the language a person speaks can influence the way in which they think of, and view, the world around them. Candidates should know that this is connected to the notion of understanding the meaning of language that is relative to the culture or society in which a person lives. For example, the meaning underpinning the word ‘recycling’ includes the reasons for this, what it is, the benefits of it and so on, however, this would not make sense in a culture where ‘recycling’ does not take place. Evidence such as Boroditsky (2001) (10.2.2) or Frank et al.’s (2008) study of the Pirahã People of Brazil can be used to highlight how language can shape views of the world, although it is not entirely determinant of these views.

Candidates should be able to understand how linguistic determinism (10.1.2b) proposes a more fixed, or stronger, view of language and thoughts. This theory proposes that language determines views of the world and, therefore, is more than an influence - it is more of a structure for thinking and understanding. Candidates should understand that this explanation would claim that language does determine how you understand the world, and, therefore, that society can only be understood through the use of language to ‘name’ social features.

Candidates may benefit from discussing examples in order to highlight weaknesses of the explanations; for example, centres could use the concept of ‘invention’ in their evaluations, where inventions such as the computer, mobile phone or car required thought and views of the item/concept before there was language to explain what had been created. Centres could also discuss how words can change their meaning because of societal influences, and thus the ways in which society influences how we think in or use language, rather than vice versa. Candidates could come up with words that have had different meanings over time as an activity to further explore this issue.

Application of these concepts to stimulus materials would benefit candidates. Centres could develop scenarios and examples from which candidates can identify the key features, structures and processes of language development that are evident and describe them in relation to the key concepts.

Kumi lives in China and speaks Mandarin. Her friend, Bethany, from Wales, is planning to visit her soon. Kumi explains the visit as being ‘earlier than April’ and Bethany says it will be ‘before April’. How would Boroditsky (2001) explain this difference between how Kumi and Bethany explained the date of the visit?

The explanations can be evaluated through comparisons to each other, such as whether linguistic relativism may be a more realistic explanation than linguistic determinism. Supporting evidence can be used where available, such as Boroditsky (2001) (10.2.2). Equally, supporting evidence can be used where it shows that the theory or explanation may be inaccurate; for example, Frank et al. (2008) highlights how linguistic determinism may be too narrow a view to explain how language influences the way we perceive the world.
Candidates can also judge how useful the theory or explanation is, such as whether there is an application to society, for example by helping children to learn different languages in school. Some candidates may benefit from being extended by drawing on the concepts delivered in the 'issues and debates' content, where themes such as reductionism or nature versus nurture could be used to evaluate explanations.

10.1.3 Understand how communication is different in humans to animals, including:
   a. Aitchison (1983) criteria of language features
   b. similarities and differences between human and animal communication

Candidates should know that animals communicate, but that they do not use language features as humans do. Centres should discuss the ten language features proposed by Aitchison (1983) (10.1.3a) and candidates should understand that there are four that are considered specific to the human species:
- displacement – that humans can communicate real or hypothetical ideas
- semanticity – that human language conveys a range of meanings
- structure dependence – that humans have grammatical rules in languages
- creativity – that human language has a potentially infinite number of words.

Candidates could discuss how the remaining six features can be seen in animal communication. Centres may wish to draw on studies such as Savage-Rumbaugh (1998), who taught a chimpanzee to use a form of sign language, as part of their debate about the similarities and differences between human and animal communication (10.1.3b).

Application of these concepts to stimulus materials would benefit candidates. Centres could develop scenarios and examples from which candidates can identify the communication and language use that is evident and describe them in relation to the key concepts.

Elizabeth has a pet dog called Oscar. When she calls Oscar for his dinner, he comes to the kitchen. Oscar also recognises what Elizabeth means when she says ‘walk’, ‘sit’ and ‘bed’. However, even though Oscar understands these commands, can you explain why it does not mean that he can communicate in the same way as Elizabeth?

10.1.4 Understand examples of non-verbal communication, including:
   a. facial expressions
   b. eye contact
   c. body language, to include
      (i) postures
      (ii) gestures
   d. personal space, to include
      (i) proxemics
      (ii) cultural differences in non-verbal communication

Candidates should be able to understand how non-verbal communication (10.1.4) differs from verbal communication. It may interest candidates to know how non-verbal communication can make up between 50–80% of a human communication episode.

Candidates could be encouraged to engage in activities where they use only non-verbal communication features to express ideas or emotions to another person. They should understand that facial expressions (10.1.4a) are sometimes considered to have universality, meaning that certain facial expressions of specific emotions – such as happiness, sadness or anger – are recognised by people regardless of culture or spoken language. Activities can be found that use facial expressions where candidates can try to guess the emotion being shown. Discussions of eye contact (10.1.4b) should include how it not only communicates some meaning, but also indicates the engagement and
interest of the people involved in the communication. Candidates could explore this through role play and practical activities.

Candidates should understand that the use of **body language** (10.1.4c) includes both **postures** (10.1.4ci) and **gestures** (10.1.4cii), and how body language can communicate a variety of messages to others. Candidates would benefit from knowing the different types of **posture** (10.1.4ci) and the meanings of these; for example, the difference between open and closed body language or the use of mirroring in communications. They should also understand how different **gestures** (10.1.4cii) also convey meaning, such as illustrator gestures or regulating gestures.

Candidates should be aware of **personal space** (10.1.4d) and it may benefit them to know the concept of distances proposed by Edward Hall. Candidates should understand that the personal space between individuals and the person they are communicating with is considered to be the **proxemics** (10.1.4di) of communicating, and that these can vary due to the norms and expectations of **cultural differences** (10.1.4dii).

Centres may wish to deliver the study by Yuki et al. (2007) (10.2.1) at this point in order to develop the concepts of cultural differences in communication. This study can be replicated as a practical activity in lessons, or developed by asking candidates to discuss the use of ‘emoticons’ as a non-verbal communication tool.

Application of these concepts to stimulus materials would benefit candidates. Centres could develop scenarios and examples from which candidates can identify the non-verbal communication that is evident and describe them in relation to the key concepts.

**Pamela and Andrew have been married for 11 years. They often stand close to each other when they are talking. They have both known Daniel for 10 years and are good friends, however they do not stand as close to Daniel as they do to each other. Natalie is their neighbour and although they have known her for three years, they do not stand as close to her as they do to Daniel when having conversations. How could the idea of proxemics explain these differences in personal space?**

**10.1.5 Understand explanations of non-verbal communication, including Darwin’s (1872) theory of evolution**

Evolutionary psychology draws on Darwinian theory to explain how non-verbal communication may be embedded in the evolutionary instincts, such as survival of the fittest or selection for procreation. Candidates may benefit from making connections between the **examples of non-verbal communication** (10.1.4) and their role in evolutionary behaviours; for example, a facial expression of anger may be to warn someone away.

Equally, candidates should also understand that much of Darwin’s explanation included human survival techniques; for example, that the raising of the eyebrows in surprise actually increases the field of vision therefore allowing the individual to be more aware of what is around them at that point.

It may also be beneficial for candidates to understand that Darwin suggested that emotional expression was evolutionary and therefore universal. This can be used to demonstrate a weakness of **cultural differences in non-verbal communication** (10.1.4dii).
10.2 Studies

Candidates should understand the aims, procedures and findings (results and conclusions), and strengths and weaknesses of:

*10.2.1 Yuki et al. (2007) Are the windows to the soul the same in the East and West? Cultural differences in using the eyes and mouth as cues to recognize emotions in Japan and the United States

10.2.2 Boroditsky (2001) Does Language Shape Thought?: Mandarin and English Speakers’ Conceptions of Time Issues and Debates

Study One

Yuki et al. (2007) Are the windows to the soul the same in the East and West? Cultural differences in using the eyes and mouth as cues to recognize emotions in Japan and the United States.

Aim(s)

To investigate whether emotions are interpreted using a focus on the eyes or the mouth.

Yuki et al. wanted to find out if cultures where emotions are subdued, such as Japan, would focus on the eyes, compared to whether cultures where emotions are overt, such as America, would focus on the mouth.

Experiment 1

Background

Emoticons are facial expressions created by computer symbols. For example, in America :) and :-) denote happy, whereas :( and :-( denote unhappy. Whereas in Japan (^_^) denotes happy and (;_;) denotes sad. These emoticons highlight the American focus on the mouth and the Japanese focus on the eyes.

Procedure

Sample: The participants consisted of 118 American students (33 male and 85 female) from Ohio State University and 95 Japanese students (72 male and 21 female) from Hokkaido University. All participants volunteered to take part.

The American and Japanese participants were shown the same computer-generated emoticons. They were instructed to complete a questionnaire to rate the emotional expressions of the emoticons on a scale from 1 (extremely sad) to 9 (extremely happy).

There were six different emoticons with combinations of happy, neutral and sad eyes and mouths:
- happy eyes/neutral mouth
- neutral eyes/happy mouth
- sad eyes/neutral mouth
- neutral eyes/sad mouth
- happy eyes/sad mouth
- sad eyes/happy mouth.
Results

Overall, when looking at the scores for emoticons with happier eyes, Japanese participants rated them as happier (mean rating score = 5.81) than American participants did (mean rating score = 2.99). When looking at the scores for emoticons with happier mouths, American participants rated them as happier (mean rating score = 5.54) than Japanese participants did (mean rating score = 4.78).

Where the emoticons included a neutral expression of either eyes or mouth in combination with an emotional expression in either eyes or mouth, there was a difference in rating scores between groups. American participants gave higher happiness rating scores to emoticons with happier mouths, whereas Japanese participants gave higher happiness rating scores to emoticons with happier eyes.

Where emoticons had conflicting expressions, such as sad eyes and happy mouth, or happy eyes and sad mouth, there was a difference in happiness rating scores. Japanese participants gave higher scores to emoticons with happier eyes, whereas American participants gave higher scores to emoticons with happier mouths.

Conclusions

Yuki et al. concluded that the Japanese gave more consideration to the cues from the eyes when weighing up the emotion of the symbol, whereas Americans gave more consideration to the cues from the mouth.

However, they do raise the issue that the American participants were not able to interpret the ‘happy eye’ symbols in the emoticons as well as the Japanese were able to interpret the ‘smiling’ and ‘frowning’ mouth symbols, which could have led to differences in the results.

Yuki et al. (2007) replicated this study using photographs of real people expressing emotions to eliminate this variance.

Experiment 2

Procedure

Sample: The participants consisted of 87 American students (45 male, 40 female, 2 gender undisclosed) from Ohio State University and 89 Japanese students (62 male and 27 female) from Hokkaido University. All participants volunteered to take part.

Photographs were edited using a computer software programme to combine happy, sad and neutral cues to reflect the same combinations as used in Experiment 1.

Participants were shown a total of 60 faces (each of the six expressions from Experiment 1 shown ten times). Each face appeared for ten seconds and participants had to rate the emotion using the scale from Experiment 1.

Results

Overall, the results replicated those from Experiment 1.

When looking at the scores for pictures with happier eyes, Japanese participants rated them as happier (mean rating score = 4.65) than American participants did (mean rating score = 4.33). When looking at the scores for pictures with happier mouths, American participants rated them as happier (mean rating score = 5.48) than Japanese participants did (mean rating score = 4.85).
Conclusions

Yuki et al. concluded that the study supported the findings of Experiment 1, in that the Japanese gave more consideration to the cues from the eyes, whereas Americans gave more consideration to the cues from the mouth.

Although there was a difference in the happiness rating scores between American and Japanese participants that replicated Experiment 1, the happiness ratings were often inconsistent. This may be because the computer superimposition of eyes/mouths in combination with opposing expressions did not give an effective overall image of the emotion, and that it may have appeared unnatural.

This indicated to Yuki et al. that there is more than interpretation of eyes or mouths when judging happiness or sadness from facial expressions.

Candidates may be asked to consider the following issues when **evaluating** studies:
- validity
- reliability
- generalisability
- ethics
- objectivity
- subjectivity.

Information for centres

*It is recommended that, wherever possible, centres combine the use of the summary of studies resource with the original study. However, where studies are not freely available or easily accessible, the summary resource is designed to help provide key starting points to enable teachers to deliver the content.*
Study Two


Background

English speakers predominately talk about time in forwards/backwards (horizontal) ways; for example, breakfast is before lunch, or a week behind schedule. In contrast, Mandarin speakers predominantly talk about time in up/down (vertical) ways; for example, lunch follows breakfast, or a week below schedule.

Aim(s)

To investigate whether language shaped conceptions of time in Mandarin and English speakers.

In Experiment 1, Boroditsky investigated whether the use of spatial metaphors to talk about time would have immediate and long-term implications on how people thought about time.

NOTE: Boroditsky (2001) contains three experiments. For their GCSE Psychology course, candidates are only required to know Experiment 1. However, the remaining two experiments within this study may help candidates in understanding the content of 10.1.2 and could be discussed briefly with them.

Procedure

Sample: 26 native English speakers and 20 native Mandarin speakers, who were all graduate or undergraduate students at Stanford University.

Each participant was tested in English. Questions were shown on a computer screen.

Participants answered two spatial prime questions followed by a target question about time. The priming materials were scenarios with a brief description that was either horizontal or vertical, to which they had to respond by pressing a key on a keyboard for ‘true’ or ‘false’ as quickly as possible within a five-second limit. Response times were recorded.

Figure 1 shows an example of what is meant by a horizontal and vertical prime.

![Figure 1](image)

The black ball is ahead of the white ball

The black ball is above the white ball

Horizontal spatial prime

Vertical spatial prime

Half of the target questions were spatiotemporal, designed to test the immediate effect of the spatial prime, and involved horizontal time-based questions, for example, ‘March comes before April’.
The other half were designed to test the longer-term impact of language, so asked purely temporal questions, for example ‘March is earlier than April’.

**Results(s)**

Both groups responded to spatiotemporal (before/after) target questions quicker following horizontal primes compared to vertical primes.

English and Mandarin speakers were affected in different ways by the prime when answering purely temporal questions (earlier/later).

English speakers answered purely temporal questions more quickly (2128 ms) following horizontal primes than they did following vertical primes (2300 ms). They also answered the spatiotemporal questions more quickly (2135 ms) than purely temporal questions (2294 ms).

Mandarin speakers answered purely temporal questions more quickly (2347 ms) following vertical primes than they did following horizontal primes (2503 ms). They also answered the spatiotemporal questions more quickly (2422 ms) after horizontal primes compared to vertical primes (2428 ms).

There was an overall effect on English speakers of the prime, but this did not have an effect on Mandarin speakers.

**Conclusion**

It was found that native English speakers think differently about time compared to native Mandarin speakers. English speakers were faster after horizontal primes, indicating a habit of thinking about time in a horizontal manner. The reverse is true for Mandarin speakers, thus indicating a habit of thinking about time in a vertical manner. This was evident in Mandarin speakers even though they were being tested using the English language, thus native language had an effect on how they thought about time.

Candidates may be asked to consider the following issues when evaluating studies:

- validity
- reliability
- generalisability
- ethics
- objectivity
- subjectivity.

**Information for centres**

*It is recommended that, wherever possible, centres combine the use of the summary of studies resource with the original study. However, where studies are not freely available or easily accessible, the summary resource is designed to help provide key starting points to enable teachers to deliver the content.*
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10.3 Issues and debates

The issues and debates content delivered in each compulsory topic, including research methods, is designed to enable candidates to understand the wider issues in psychology that underpin psychological knowledge and research.

Issues and debates will be specifically assessed in Paper 1 through an extended open-response question.

The inclusion of ‘the contribution of psychology to an understanding of an individual’ has been placed within the compulsory topic area of development through morality.

The inclusion of ‘reductionism/holism’ has been placed within the compulsory topic area of memory.

The inclusion of ‘nature/nurture’ has been placed within the compulsory topic area of psychological problems.

The inclusion of ‘how psychological knowledge and ideas change over time and how these inform our understanding of behaviour’ has been placed within the compulsory topic area of the brain and neuropsychology.

The inclusion of ‘the contribution of psychology to an understanding of individual, social and cultural diversity’ has been placed within the compulsory topic area of social influence.

The inclusion of ‘develop an understanding of ethical issues in psychology’ has been placed within the compulsory topic area of research methods because it allows for links to be made across all research methodology.

Candidates can, however, draw upon issues and debates in their evaluations and extended open essays across each topic area (compulsory and/or optional), and while this is not an expected feature of responses, it may – if appropriate, accurate and relevant – be creditworthy.

For example, if they chose to evaluate a linguistic determinism drawing from an accurate understanding of cultural diversity then this can be an acceptable response.

Another example may involve candidates who wish to draw upon ethical considerations when evaluating key studies.
Resources and references

Studies

10.2.1 Yuki et al. (2007) Are the windows to the soul the same in the East and West? Cultural differences in using the eyes and mouth as cues to recognize emotions in Japan and the United States

10.2.2 Boroditsky (2001) Does Language Shape Thought?: Mandarin and English Speakers’ Conceptions of Time Issues and Debates
http://cognitrn.psych.indiana.edu/rgoldsto/courses/concepts/boroditsky.pdf

Resources for language, thought and communication

Sources suggested here are additional guidance for centres to aid with teaching resources and ideas. These are not compulsory components and centres should select delivery content as appropriate to their candidates. Centres can draw upon any research evidence to support evaluations and explanations of topic areas. This list is not exhaustive.


Summary slides (Piaget, Vygotsky, Whorf, Boroditsky)
http://isites.harvard.edu/fs/docs/icb.topic823420.files/4%20language%20and%20thought%20E%202010%20-%20Handout.pdf

Vygotsky (slide share)
https://www.slideshare.net/danilavsky/vygotsky-and-language-development


Language development and acquisition
http://shodhganga.inflibnet.ac.in/bitstream/10603/43713/11/11_chapter%203.pdf

Linguistic relativism
https://pdfs.semanticscholar.org/82d7/1b38b1faddfee77a81e4b6ba64c0514f6752.pdf

http://lchc.ucsd.edu/mca/Mail/xmcamail.2014-12.dir/pdf2Yb7JAQ0ZG.pdf

http://isites.harvard.edu/fs/docs/icb.topic815646.files/Linguistic%20Relativity%20Whorfian%20hypo.pdf

Linguistic determinism and relativity
http://www.linguisticsociety.org/resource/language-and-thought

Human and animal communication
https://the3rdword.wordpress.com/academic-assignments/psychology/does-language-make-humans-distinct-from-other-animals-full-version/
Aitchison language features

Facial expressions
http://www.telegraph.co.uk/news/picturegalleries/howaboutthat/10736128/In-pictures-Scientists-map-21-facial-expressions-and-emotions.html

Eye contact
https://www.evenesis.com/blog/why-eye-contact-is-important-during-conversation/

Body language
http://www.businessballs.com/body-language.htm
https://www.skillsyouneed.com/ips/body-language.html

Personal space
http://www.psychlotron.org.uk/resources/environmental/A2_OCR_env_personalspace.pdf

Evolutionary non-verbal communication
https://www.academia.edu/1080287/An_evolutionary_approach_to_understanding_nonverbal_communication
http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.572.4060&rep=rep1&type=pdf

Teacher resource sharing

Further suggested resources can be found in the ‘Getting Started’ publication, where a scheme of work has been provided.

http://www.psychlotron.org.uk
http://www.psychteacher.co.uk
http://www.resourcd.com

Teacher and student resource sites

http://www.simplypsychology.org/ – this website gives an overview of many of the key areas.

https://www.psychologytoday.com/ – this is an online magazine (with an option to subscribe) that brings psychological theories into modern, contemporary issues.

https://play.google.com/store/search?q=psychology%20free%20books&c=books&hl=en – this site has a number of free short books about key areas of psychology.

http://www.open.edu/openlearn/body-mind/psychology – The ‘OpenLearn’ programme offers freely accessible resources provided by the Open University.

http://allpsych.com/ – a useful site with books, articles and summaries of some of the key concepts.

https://www.youtube.com/playlist?list=PL8dPuuALjXtOPRkJzVLY0iJY-uH0H9KVU6 – Psychology ’Crash Course’ is a YouTube channel that provides 40 short overviews of psychological issues.
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http://www.bbc.co.uk/programmes/b008cy1j – ‘BBC Mind Changers’ is a series of radio episodes (that can also be downloaded) about key psychologists, their work and the development of psychology over time.

http://www.bbc.co.uk/programmes/b006qxx9 – ‘BBC In the Mind’ is a series of radio episodes that focus on the human mind using the application of psychological concepts and theories.

*All weblinks included here have been checked as active at publication. However, the nature of online resources is that they can be removed or replaced by webhosting services and so it cannot be guaranteed that these sites will remain available throughout the life of the qualification.