

Named studies:

Summaries and reference list

Cambridge IGCSE[™] Psychology 0266

Use this summaries and reference list for exams in 2027, 2028 and 2029. Exams are available in the June and November series.



Version I



Contents

Introduction	3
IGCSE named study summaries	4
1 Memory and forgetting	4
2 Sleep and dreams	6
3 Prosocial behaviour	8
4 Visual perception	10
5 Motivation and needs	13
6 Language development	15
Named studies reference list	18

Introduction

An essential part of teaching IGCSE Psychology is the delivery of the named study summaries.

This document will provide the information candidates need to know about each named study. The reference list will also provide a full reference for the named studies in the syllabus.

At IGCSE, students should be familiar with the following summaries of the named studies. Students do **not** need to have a detailed knowledge of the original studies.

Candidates will only be expected to have knowledge of each named study summary to support theories, concepts and explanations in the syllabus. Where the original research article includes more than one experiment or study, the study the candidate is required to know is indicated.

There are three compulsory named studies for each topic, 1–6. Candidates should have knowledge of the **results** and **conclusion(s)** of each named study to support theories and explanations in Topics 1–6 only. Candidates will **not** be expected to have knowledge of the strengths and weakness of the named studies.

Study summaries include:

- The aim(s) of the study
- The **procedure** of the study
 - how the aim was tested
 - how data was collected from participants
- The results of the study, including the main findings and how they are or could be represented and interpreted
- The **conclusion(s)** that can be reached from the study

The aim(s) and procedure of the named studies are provided for context only and will not be assessed.

More information on using the named study summaries in your teaching can be found in the *IGCSE Psychology* 0266 Scheme of Work.

Support documents can be found on the School Support Hub at www.cambridgeinternational.org/support

IGCSE named study summaries

1 Memory and forgetting

Levels of processing (Craik and Tulving, experiment 2 only)

Aim: To investigate the effect of depth of processing on memory.

Participants: 24 college students, including males and females

Procedure: Participants in the study were presented with a series of 60 common five-letter words. They read a 'yes/no' question about each word to prompt processing at one of three levels: structural, phonemic, or semantic. The questions were presented in a random order.

Structural Processing: Participants were instructed to focus on the physical appearance of the word, e.g. "Is the word in capital letters?"

Phonemic Processing: Participants were instructed to focus on the sound of the word, e.g. "Does the word rhyme with ____?"

Semantic Processing: Participants were instructed to think about the meaning of the word, e.g. "Would the word fit in the sentence ______?"

After processing the words at one of these three levels, participants were given a typed list of 180 words: the 60 original words and 120 distractor words. The participants identified the words in the typed list they had recognised from the first part of the experiment. This recognition test was the measure of memory performance.

Results:

- Participants who had processed the words at a semantic level recognised more words than those who had processed the words at phonemic or structural levels.
- Participants who had processed the words at a phonemic level recognised more words than those who had processed the words at a structural level.

Conclusion: Deeper processing of information during encoding leads to better memory. This provides evidence for the influence of different levels of processing on memory.

HM amnesia (Milner et al.)

Aim: To investigate the role of the hippocampus in recall and forming new memories.

Participants: 'HM', one 41-year-old male from the USA who was experiencing amnesia

Procedure: HM was studied 14 years after undergoing brain surgery to help control seizures. Most of his hippocampus and amygdala had been removed during the surgery. Although the surgery was successful in reducing his seizures, HM started experiencing amnesia.

Researchers studied HM at a research clinic, a medical centre and at his home. They also reported the results of previous testing on HM about his memory and intelligence.

- Tests showed that HM still had a normal level of intelligence and was able to recall childhood events but had difficulty recalling experiences from one to two years before his operation (retrograde amnesia).
- HM's ability to form new memories of people, places and events that were new to him since his surgery
 was severely impaired (anterograde amnesia). For example, in the night, HM would ask the nurse at the
 research centre how he got there.
- HM was able to form some simple memories. For example, he showed a small improvement over time in learning to solve a simple maze. This indicated he may be able to learn, but much more slowly and with more errors than people without anterograde amnesia.

Conclusion: Brain damage can affect our ability to form new memories and recall past experiences. Evidence from this study indicates the importance of the hippocampus and amygdala in memory and forgetting.

Serial position effect (Murdock)

Aim: To investigate the serial position effect of memory recall.

Participants: 103 psychology students, including males and females

Procedure: Participants were presented with a list of 10–40 common words. Each individual word was read aloud to participants. Each word was presented for the same amount of time.

Participants were then tested on their memory recall. They had 90 seconds to write down as many of the words as possible.

The test was repeated with the same participants over a few days, using different word lists each time.

Results:

- The results of Murdock's study showed a primacy effect and a recency effect in word recall.
- The first three to four words at the beginning of the list (primacy effect) and the final eight words at the end
 of the list (recency effect) were recalled the most.
- Words in the middle position on the list were the least recalled.

Conclusion: The primacy effect occurs because participants have more time to rehearse and transfer words from short-term memory to long-term memory. The recency effect occurs when items are still in short-term memory and readily available for recall. The findings support the theory that the short-term and long-term memory stores are separate.

2 Sleep and dreams

Sleep restriction (Robinson et al.)

Aim: To investigate the effects of one night of restricted sleep on cognitive function.

Participants: 18 healthy European-American and African-American teenagers aged 13–15 years old without any reported sleep disorders, including males and females

Procedure: Actigraphs (personal, wearable devices that record waking and sleeping times) were used to estimate sleep. A brain scan was used to measure activity in different areas of the brain. Two computerised behavioural tasks were used to measure risk-taking behaviour: a balloon-blowing task and a decision-making task.

Participants slept in their own homes wearing the actigraph to confirm the length of time for which they slept. On a Friday night, all participants were instructed to sleep for at least eight hours before their scan (normal sleep condition). On a different Friday night, the same participants were instructed to only sleep for four hours before their scan (restricted sleep condition).

On Saturday morning, participants came to the laboratory for their brain scan and completed the two behavioural tasks. They avoided naps and caffeine during both Fridays and Saturdays of the experiment.

Results:

- Areas of the brain including the amygdala showed greater efficiency after a normal night's sleep compared to a restricted night's sleep.
- In the behavioural tasks, sleep restriction led to greater risk-taking and less accurate decision-making.

Conclusion:

The experiment showed that restricting sleep, even for one night, has a negative effect on how well different areas of the brain work. This provides evidence for the importance of sleep in restoring cognitive function.

Teachers' notes:

This named study refers to the use of fMRI (functional MRI) and actigraphy. There is no requirement for candidates to show knowledge of either technique as they are included to support understanding of the context of the study.

Bizarreness of dream content (Williams et al.)

Aim: To investigate bizarreness in dreams, in comparison with fantasies experienced whilst awake.

Participants: 12 college students from the USA aged 23-45 years old, mostly females

Procedure: In their own homes, participants were asked to write down dreams that they remembered when they awoke in the night or the morning after. They were also instructed to record any fantasy they experienced whilst awake. A fantasy was defined as thinking about or perceiving an event or story without conscious intention or a clear link to the external environment.

120 sets of these reports were analysed by judges who rated each using a scale for bizarreness. 'Bizarreness' was categorised as thoughts, feelings or objects which were unlikely, unexpected or unrelated to previous events.

The researchers also measured the ability of judges to identify reports as either a dream or a fantasy.

- Participants reported bizarreness in dreams twice as often as in fantasies.
- Judges could accurately distinguish dream reports from fantasy reports.

Conclusion: Dreams contain much more bizarre content than fantasies. The strangeness and illogical content of dreams supports the activation-synthesis theory of dreaming.

Dreaming and trauma (lorio et al.)

Aim: To analyse the dream content of people with experience of isolation and trauma during the COVID-19 pandemic.

Participants: 796 participants aged 18–79 years old from Italy, mostly females

Procedure: The participants completed questionnaires online. Participants were first asked to report information about the conditions they experienced during the COVID-19 pandemic, e.g. with family members and the size of their home. Participants then gave a detailed report of their most recent dream and completed a dream questionnaire. The dream questionnaire included ratings of frequency, realism, creativity and emotion.

The researchers calculated the mean word count for each participant's reported dreams. Three judges also scored each dream report using the same dream questionnaire.

Results:

- Participants who experienced trauma during the COVID-19 pandemic reported higher emotional intensity in their most recent dreams.
- There were few references to the COVID-19 pandemic in dream descriptions.
- Dream locations were frequently reported to be external to the home or place of isolation.

Conclusion: Events in waking life can be linked to specific experiences of dreaming. Dreaming is one way for people to experience wish fulfilment, which supports the psychodynamic theory of dreaming.

3 Prosocial behaviour

Heritability of social responsibility (Rushton)

Aim: To investigate the influence of genetics on pro-social behaviour.

Participants: 174 pairs of monozygotic (MZ) twins and 148 pairs of dizygotic (DZ) twins from a twin register in the UK, including males and females aged 18-75 years old

Procedure: Participants received a 22-item Social Responsibility Questionnaire. They completed it in their own homes and their responses were anonymous.

The questionnaire contained items about participants' prosocial behaviours, such as whether they thought it was important to volunteer in their communities and whether they would help others.

By comparing the responses of MZ and DZ twins, psychologists could analyse the variance due to genetic factors.

Results:

- MZ twin pairs showed more similar levels of social responsibility than DZ twin pairs.
- The twins' genes accounted for 42% of variance in social responsibility.

Conclusion: Genetics have a strong influence on individual levels of social responsibility. This research provides evidence for the biological explanations of prosocial behaviour.

Helping behaviour (Levine et al., study 1 only)

Aim: To investigate the role of identity in emergency helping.

Participants: 45 UK university students who were self-identified Manchester United supporters, aged 18–21 years, all male

Procedure: Participants completed two questionnaires to increase focus on identity. Participants were asked to identify the team they supported. They answered questions about why they supported their team, how they felt about the success and failure of their team, and their identification with other team supporters.

Participants were then exposed to a staged emergency incident, in which a stooge (confederate) slipped and fell over, held onto his ankle, and shouted out in pain. The stooge was wearing either a Manchester United team shirt, a rival team shirt (Liverpool) or an unbranded sports shirt.

The level of help offered by the participants toward the 'injured stranger' (stooge) was rated by three independent covert observers. Participants were debriefed.

Results:

- When the stooge (confederate) was wearing an in-group team shirt (Manchester United) they were more
 likely to be helped than when they were wearing a rival team shirt (Liverpool) or an unbranded sports shirt.
- There was no evidence that the stooge (confederate) wearing a rival team shirt (Liverpool) was less likely to receive help than when wearing an unbranded sports shirt.

Conclusion: People are more likely to help others if they recognise them as in-group members. This provides evidence that shared social identity increases prosocial behaviour.

Prosocial media (Prot et al., study 1 only)

Aim: To investigate prosocial media use and prosocial behaviour across seven countries.

Participants: 2202 teenagers and young adults including males and females from Australia, China, Croatia, Germany, Japan, Romania and the USA

Procedure: Participants were asked about their favourite media. They had to list their three favourite television programmes, three favourite films and three favourite video games.

The participants rated each programme, film and game for the amount of time they spent watching or playing it. Participants also gave ratings for prosocial content, e.g. 'How often do characters help each other?'

Prosocial media use was then calculated by multiplying the amount of time spent watching or playing the media with the prosocial content rating. Participants also completed questionnaires to measure their own prosocial behaviour.

Results:

- Participants with higher prosocial media use reported higher levels of prosocial behaviour, such as helping others.
- Across all countries, prosocial media use was linked with helping.

Conclusion: Prosocial media use can predict higher levels of prosocial behaviour, across different countries. This supports the theory that prosocial behaviour is linked with prosocial media use; learning from observing others.

Teacher's notes:

This study uses a correlational design. Candidates are not expected to have knowledge of correlations for this syllabus, but should know how the results and conclusions support the argument for the role of prosocial media use in prosocial behaviour.

4 Visual perception

Visual cliff (Gibson and Walk)

Aim: To investigate depth perception in children.

Participants: 36 children aged from six months to 14 months

Procedure: The researchers designed a 'visual cliff' (see Figure 1). A centre board was laid across a large sheet of strong glass raised above the floor.

On the 'shallow' side of the board, a sheet of patterned material was placed directly underneath the glass. The glass looked and felt solid. On the 'visual cliff' side of the board, a sheet of the same patterned material was on the floor.

Each child was placed in the centre, and each mother called her child to her from the cliff side and then from the shallow side.

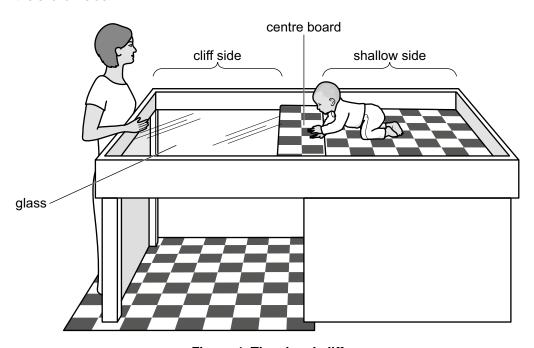


Figure 1: The visual cliff

Results:

- All the children who moved off the centre board, crawled out on the shallow side at least once. Only three children crawled onto the cliff side, when their mother called from there.
- Many children crawled away from the mother when called from the cliff side or cried when she stood there, as they could not crawl to her without crossing the cliff side.
- Some children touched the glass over the cliff side but refused to cross.

Conclusion: Depth perception is innate, as most children can perceive depth as soon as they can crawl. The results of this study provide evidence for the direct theory of perception.

Teacher's notes:

You may note that this named study includes results of additional tests of visual perception with animals. There is no requirement for candidates to have knowledge of these tests.

Familiarity and perception (Haber and Levin, experiment 2 only)

Aim: To investigate the effect of familiarity of objects on the ability to accurately perceive size.

Participants: 9 college students from the USA with normal vision, all male

Procedure: Participants viewed objects stood up vertically at various distances in a field. The objects included 15 'familiar objects which are usually similar in size' (e.g. a bicycle, a door), 15 'familiar objects which can vary in size' (e.g. a television, a plant) and 15 'objects of unknown size'. These objects of unknown size were flat shapes (e.g. rectangles, triangles) all painted in different colours. Participants estimated size by writing down the height of each of the 45 objects.

The participants then left the field and rated their familiarity with each of the 30 familiar objects and estimated the typical height of the object from their past experience.

Results:

- Participants' height estimates for the 'objects of unknown size' were much less accurate than their height estimates for the 'familiar objects which are usually similar in size'.
- For familiar objects, participants gave equally accurate height estimates from viewing the objects as they did from their past experience of the objects.

Conclusion: People rely on their familiarity with objects to help them accurately perceive size. Evidence from this study supports the constructivist theory of perception that experience helps develop our perceptual abilities.

Culture and visual illusions (Bremner et al., experiment 2 only)

Aim: To investigate the role of culture in experience of visual illusions.

Participants: 46 children 11–17 years old from the Himba culture (located in a rural, remote area of Namibia), 45 Himba adults, and the same number of children and adults from the UK (living in urban environments), including males and females

Procedure: The test was presented on the same computer screen to each participant individually. Participants were seated the same distance from the screen in each trial.

The task required participants to point to which of two orange circles presented on the screen was larger. There were 24 experimental trials (see Figure 2) and 20 control trials (in which two orange circles were presented without any grey outer circles).

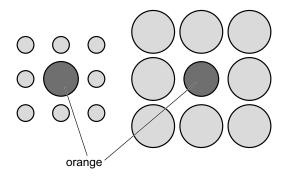


Figure 2: The Ebbinghaus Illusion

- Himba participants were more accurate at choosing the larger circle than UK participants across all age groups, meaning experience of the Ebbinghaus illusion was greater in the UK participants than in the Himba participants.
- The traditional culture of the Himba includes very limited use of 2D pictures and print compared to UK participants, which reduced the experience of this visual illusion.

Conclusion: Findings from research using participants from one culture may not represent perceptual development worldwide. Differences in experience of visual illusions are influenced by the person's culture.

5 Motivation and needs

Classroom token economy (Boniecki and Moore)

Aim: To investigate the effectiveness of using a token economy to increase student participation in the classroom.

Participants: 63 students from a psychology class at the same university in the USA

Procedure: During 11 meetings of the class, the teacher asked the students questions. Students who wanted to answer the questions raised their hands. The teacher then invited students to answer in the order in which they raised their hands, until a student answered the question correctly. If no one raised a hand following a question, the teacher gave the answer instead.

The first four of the 11 meetings were the 'baseline period'. During this time, students did not receive any reward for answering a question correctly.

Over the next four meetings, the teacher used the token economy. The first student to answer each question correctly received a token (a small wooden game piece). At the end of each meeting, students could exchange each token for one point towards their next exam result. For the final three meetings, the teacher stopped using the token economy.

During all meetings, a stooge (confederate) sat in the last row of the classroom, pretending to be a student. The stooge (confederate) recorded how many students raised their hands and how quickly students raised their hands.

Results:

- Students' participation doubled during the token economy, compared to the baseline period.
- Students responded more quickly to the teacher's questions during the token economy compared to the baseline period or after the token economy was removed.
- After the token economy was removed, classroom participation levels returned to those observed during the baseline period.

Conclusion: Token economy is an effective way to increase classroom participation. This supports the theory that positive reinforcement can increase motivation in education.

Nostalgic advertising (Merchant et al., study 3 only)

Aim: To investigate whether appeals to nostalgia in advertising could influence behavioural intentions.

Participants: 145 adult participants from an online consumer panel, including males and females

Procedure: This study used three print advertisements for products and brands which were designed to create feelings of nostalgia (longing for the past). The advertisements were for an amusement park, a food item and a television channel. Each participant was exposed to one advertisement at a time.

The participants then completed a nostalgia scale, rating their agreement with statements, e.g. 'I relived the event from my past'. Participants then rated the positive emotions, e.g. calm, and negative emotions, e.g. sadness, that they experienced when watching the advertisement.

Participants then answered questions on their attitudes towards the advertisement and brand and how likely they were to purchase the product shown in the advertisement (behavioural intentions).

- Advertising that creates feelings of nostalgia predicted stronger attitudes and behavioural intentions towards products and brands.
- Negative emotions evoked by the nostalgic advertising had a negative effect on participants' attitudes toward the advertisement.

Conclusion: Feelings of nostalgia caused by advertising can influence people's choice of products, by appealing to people's unconscious desires and longing for the past. This study provides evidence for the role of psychodynamic motivation in marketing.

Sports persistence (Calvo et al.)

Aim: To investigate how feelings of autonomy, competence and relatedness are linked to persistence in sport.

Participants: 492 players aged 13-17 years old from a football (soccer) training programme in Spain, all male

Procedure: This study used a questionnaire to measure self-determined motivation. Participants were asked about their motives for participating in football, including whether these motivations were intrinsic or extrinsic. They also rated items on relatedness, e.g. 'some of my best friends are on this team', competence, e.g. 'what do you believe to be your ability to play soccer?' and autonomy, e.g. 'I can make decisions during training and competition'.

Participants, their parents/guardians and coaches provided consent to participate. The participants completed their questionnaires prior to their scheduled football practice.

One year after the questionnaires were completed, the football training programme provided information to identify participants who were still playing ('persisters') and those who had left the programme ('dropouts').

Results:

- 'Persisters' scored lower for external motivation and higher for relatedness and autonomy than 'dropouts'.
- 'Dropouts' scored higher for external motivation and lower for satisfaction of relatedness and autonomy needs than 'persisters'.
- Competence did not predict whether participants would persist or dropout of playing football.

Conclusion: The need for relatedness and autonomy influence sports persistence rates. This study provides evidence for the self-determination theory as an explanation of motivation to exercise.

Teachers' notes:

The original article of the named study also includes investigation of 'amotivation'. Candidates are not expected to be familiar with this concept, or results related to it.

6 Language development

Sign language acquisition (Senghas)

Aim: To investigate how the age at which sign language is learned affects the ability to use the language in complex ways.

Participants: 25 deaf sign language users from Nicaragua, aged 7–31 years old. Some had begun learning sign language from birth, and others for only the last few years.

Procedure: Each participant was presented with a 2-minute animated cartoon and then asked to sign the story to a deaf peer. This was video recorded, then researchers analysed the signing for different features of language.

The complexity of language was measured by counting features such as the number of verb inflections (e.g. adding -ed to the end of a verb to show past tense) and whether the verb inflections matched the context (grammatical agreement). Researchers also analysed the signing to count how many ways in which the same verb was used to give sentences a different meaning (known as 'arguments' of verbs).

Results:

- Participants who had been learning sign language since birth used more verb inflections and were more
 likely to use them to indicate grammatical agreement than those who learned sign language when they
 were older.
- Participants who had been learning sign language since birth indicated more arguments with their verbs than those who learned sign language when they were older.

Conclusion: The age at which people begin learning language will affect their ability to use the language in complex ways. This evidence for the critical period supports the biological explanation of language acquisition.

Teachers' notes:

Candidates should be aware that Nicaraguan sign language, (as well as other sign languages) meets the criteria for a full linguistic system in the same way spoken languages do.

The original article for this named study includes background on the social origins of Nicaraguan sign language as context for investigating biological influence. However, the focus on the named study summary is on the language acquisition in the critical period, and how language acquisition ability decreases with age.

Speech and social feedback (Goldstein et al.)

Aim: To investigate how social feedback facilitates speech development.

Participants: 30 children aged 8–10 months old and their mothers

Procedure: The study took place in a large playroom containing toys and picture boards. Each mother and child were observed for a play session.

For the 10-minute baseline period, each mother and child were allowed to play and interact in an unstructured way. During a 10-minute 'social response' period, mothers were asked to respond by smiling, moving closer to and touching their child.

In the experimental group, the mothers were told to react immediately after their child vocalised. In the control group, the mothers were told to respond to their child by instructions received through headphones. These responses were on a schedule that was not linked to their child's vocalisations.

The number of each child's vocalisations were recorded using cameras and microphones in the playroom. Researchers also measured the quality of vocalisation, in terms of how developmentally-advanced their speech was.

Results:

- The number and quality of vocalisations in the social response period was higher for children in the experimental group than in the control group.
- The vocalisations made by children in the experimental group were more developmentally-advanced than their speech during the baseline period.

Conclusion: Positive reinforcement helps children's language development. This study provides evidence for the learning theory of language development.

Teachers' notes:

You will note that the title of this named study refers to animal language as well as human language. There is no requirement for learners to have knowledge of non-human communication for the purpose of this syllabus.

Schemas and language (Hewitt)

Aim: To investigate children's use of schemas in different stages of early language development.

Participants: Four young children:

- 'Ethan' (one year and eleven months old)
- 'Robert' (two years and two months old)
- 'James' (three years and eight months old)
- 'Annie' (three years and nine months old)

Procedure: The researcher observed the speech and behaviour of each child within their normal nursery environment. The children were each observed playing at different times and on different days.

The researcher then interviewed each child's parents and nursery worker about the observation. The researcher also asked questions about the child's interests, abilities and relationships with others.

Results:

- Ethan heard a nursery worker describe a container of toys as 'heavy'. He later picked up the same container and said 'my heaby!', suggesting he had accommodated the vocabulary, but not perfectly.
- As Robert filled containers with water from a tap, his nursery worker laughed and said 'more water?' Robert then poured the water out and started to refill, saying 'more water', showing he had accommodated the idea.
- James shouted 'first one to the gate is the winner' as he ran with his friend, showing his interest in the schemas of movement and numerical order.
- Annie described her actions as she played. She used phrases like 'I close the curtains' which showed her thoughts about the world and her role in it.

Conclusion: Children actively build their own understanding of the world using language, across different developmental stages. This evidence about the way children accommodate new vocabulary supports the cognitive theory of language development.

Teachers' notes:

The participants in this named study are all children. Candidates are not required to have any additional knowledge of additional ethical considerations when working with young or otherwise vulnerable participants beyond those indicated in the syllabus: 7.7 Ethical Guidelines.

Like other case studies in psychology, this named study has some methodological challenges. Candidates are not expected to evaluate any methodological strengths or weaknesses, as explained in the Introduction to this document.

Named studies reference list

Alphabetical order within topic:

1 Memory and forgetting:

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2 Sleep and dreams:

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Iorio, I., Sommantico, M., and Parrello, S. (2020). Dreaming in the time of COVID-19: A quali-quantitative Italian study. *Dreaming*, 30(3), 199–215.

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3 Prosocial behaviour:

Rushton, J. (2004). Genetic and environmental contributions to pro-social attitudes: a twin study of social responsibility. *Proceedings of the Royal Society of London. Series B: Biological Sciences*, 271(1557), 2583–2585.

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Prot, S., Gentile, D., Anderson, C., Suzuki, K., Swing, E., Lim, K., Horiuchi, Y., Jelic, M., Krahé, B., Liuqing, W., Liau, A., Khoo, A., Petrescu, P., Sakamoto, A., Tajima, S., Toma, R., Warburton, W., Zhang, X. and Lam, B. (2014). Long-term relations among prosocial-media use, empathy, and prosocial behavior. *Psychological Science*, 25(2), 358–368.

4 Visual perception:

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Gibson, E. and Walk, R. (1960). Visual Cliff. Scientific American. 202 (4): 64-71.

Haber, R. and Levin, C. (2001). The independence of size perception and distance perception. *Perception & Psychophysics*, 63(7), 1140–1152.

5 Motivation and needs:

Boniecki, K. and Moore, S. (2003). Breaking the silence: Using a token economy to reinforce classroom participation. *Teaching of Psychology*, 30(3), 224–227.

Calvo, T. G., Cervelló, E., Jiménez, R., Iglesias, D., and Murcia, J. (2010). Using self-determination theory to explain sport persistence and dropout in adolescent athletes. *The Spanish Journal of Psychology*, 13(2), 677–684.

Merchant, A., Latour, K., Ford, J., and Latour, M. (2013). How strong is the pull of the past?: Measuring personal nostalgia evoked by advertising. *Journal of Advertising Research*, 53(2), 150–165.

6 Language development:

Goldstein, M., King, A., and West, M. (2003). Social interaction shapes babbling testing parallels between birdsong and speech. *Proc. Natl. Acad. Sci. U.S.A.* 100, 8030–8035.

Hewitt, E. (2022). An exploration of the relationship between schema and language: four young child case studies. *Early Child Development and Care*, 192(12), 1931–1939.

Senghas, A. (1995). The development of Nicaraguan Sign Language via the language acquisition process. *Proceedings of the 19th annual Boston University conference on language development*. 543–552. Cascadilla Press.

