Review

A Comparative Study on Language Teaching Approaches and Cognitive Processes: A Paradigm Shift for Language Learners and Speakers

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In learning languages, a distinction is usually made between mother tongues, second languages, and foreign languages. (This sounds very basic and may insult the intelligence of your readers). The acronyms ESL and EFL stand for the learning of English as a Second and as a Foreign Language. Even though, the students want to learn languages, (these sentences lack coherence) (language problem and confused statements).

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INTRODUCTION

Language is the human capacity for acquiring and using complex systems of communication, and a language is any specific example of such a system. The scientific study of language is called linguistics. Estimates of the number of languages in the world vary between 6,000 and 7,000. However, any precise estimate depends on a partly arbitrary distinction between languages and dialects. Natural languages are spoken or signed, but any language can be encoded into secondary media using auditory, visual, or tactile stimuli – for example, in graphic writing, Braille, or whistling. This is because human language is modality-independent. When used as a general concept, "language" may refer to the cognitive ability to learn and use systems of complex communication, or to describe the set of rules that makes up these systems, or the set of utterances that can be produced from those rules. All languages rely on the process of semiosis to relate signs with particular meanings. Oral and languages contain a phonological system that governs how symbols are used to form sequences known as words or morphemes, and a syntactic system that governs how words and morphemes are combined to form phrases and utterances.

The Structure of Language

Language is a system of symbols and rules used for meaningful communication. A language uses symbols and syntax and is meaningful and generative. Language is organized hierarchically from phonemes to morphemes to phrases and sentences.
Children develop language in a set sequence of stages.

Theories of Language Acquisition

Behaviorist B. F. Skinner strongly supported the idea that language depends largely on environment. Skinner believed that people acquire language through principles of conditioning. Critics argue the inadequacy of behaviorist explanations. Some cognitive neuroscientists have created neural networks that can acquire some aspects of language by encountering many examples of language. They think children may acquire language in the same way. Noam Chomsky is the main proponent of the importance of biological influences on language development. Chomsky proposed that human brains have a language acquisition device that allows children to acquire language easily. Some researchers believe that language is both biologically and environmentally determined. The linguistic relativity hypothesis states that language determines the way people think. Today, researchers believe language influences, rather than determines, thought.

Two ways that people use language to influence thinking are semantic slanting and name calling. People master a new language better if they begin learning it in childhood. Nonhuman animals can learn some aspects of language.

Language and Nonhuman Primates

Some researchers have tried to teach apes to use language. Apes can communicate, but researchers are divided on whether this communication can really be considered “learning language.”

The Structure of Cognition

Cognition involves activities such as understanding, problem solving, decision making, and being creative. People use mental representations such as concepts, prototypes, and cognitive schemas when they think.

Theories of Cognitive Development

Jean Piaget believed that children’s cognitive skills unfold naturally as they mature and explore their environment. Lev Vygotsky believed that children’s sociocultural environment plays an important role in cognitive development. Some researchers have shown that humans are born with some basic cognitive abilities.

Problem-Solving

Problem-solving is the active effort people make to achieve a goal that is not easily attained. Three common types of problems involve inducing structure, arranging, and transformation. Some approaches to problem-solving are trial and error, deductive and inductive reasoning, use of algorithms and heuristics, dialectical reasoning, creation of sub goals, use of similar problems, and changes in the way the problems are represented. Researchers have identified many obstacles to effective problem-solving, such as focus on irrelevant information, functional fixedness, mental set, and assumptions about unnecessary constraints.

Decision-Making

Decision-making involves weighing alternatives and choosing among them. Additive strategies and elimination strategies are ways of making decisions about preferences. Using expected value, subjective utility, the availability heuristic, and the representativeness heuristic are all ways of making risky decisions. Using the representativeness heuristic can make people susceptible to biases, such as the tendency to ignore base rates and the gambler’s fallacy.

Using the availability heuristic can make people susceptible to overestimating the improbable or underestimating the probable. In an effort to minimize risk, people also make decision-making errors, such as the overconfidence effect, the confirmation bias, and belief perseverance.

Creativity

Creativity is the ability to generate novel, useful ideas. Creativity is characterized by divergent, rather than convergent, thinking. Some characteristics of creative people are expertise, nonconformity, curiosity, persistence, and intrinsic motivation. People can best realize their creative potential if they are in environmental circumstances that promote creativity.

Many theories about the learning and teaching of languages have been proposed. These theories, normally influenced by developments in the fields of linguistics and psychology, have inspired many approaches to the teaching of second and foreign languages. The study of these theories and how they influence language teaching methodology today is called applied linguistics.

The grammar-translation method (18th, 19th and early 20th century), for example, is an early method based on the assumptions that language is primarily graphic, that the main purpose of second language study is to build knowledge of the structure of the language either as a
tool for literary research and translation or for the development of the learner’s logical powers, and that the process of second language learning must be deductive, requires effort, and must be carried out with constant reference to the learner’s native language. Figure 1

**STRUCTURALISM**

| Language analysis | Identification of structures | Syllabus development |

**BEHAVIORISM**

| Correct behavior | Positive reinforcement |
| Incorrect behavior | Negative reinforcement |
| Habit formation |

The audio-lingual approach, which was very popular from the 1940s through the 1960s, is based in structural linguistics (structuralism) and behavioristic psychology (Skinner’s behaviorism), and places heavy emphasis on spoken rather than written language, and on the grammar of particular languages, stressing habit formation as a mode of learning. Rote memorization, role playing and structure drilling are the predominant activities. Audio-lingual approaches do not depend so much on the instructor’s creative ability and do not require excellent proficiency in the language, being always railed to sets of lessons and books. Therefore, they are easy to be implemented, cheap to be maintained and are still in use by many packaged language courses (especially in Brazil).

By the middle of the 20th century cognitive psychologists like Vygotsky and Piaget bring up theories that help to explain the limited effectiveness of the traditional prescriptive and mechanistic approaches to language teaching. These theories serve as a basis for the new natural-communicative approaches.

Beginning in the 1950s, Noam Chomsky and his followers challenged previous assumptions about language structure and language learning, taking the position that language is creative (not memorized), and rule governed (not based on habit), and that universal phenomena of the human mind underlie all language. This “Chomskian revolution” initially gave rise to eclecticism in teaching, but it has more recently led to two main branches of teaching approaches: the humanistic approaches based on the charismatic teaching of one person, and content-based communicative approaches, which try to incorporate what has been learned in recent years about the need for active learner participation, about appropriate language input, and about communication as a human activity. Most recently, there has been also a significant shift toward greater attention to reading and writing as a complement of listening and speaking, based on a new awareness of significant differences between spoken and written languages, and on the notion that dealing with language involves an interaction between the text on the one hand, and the culturally-based world knowledge and experientially-based learning of the receiver on the other.

There have been developments such as a great emphasis on individualized instruction, more humanistic approaches to language learning, a greater focus on the learner, and greater emphasis on development of communicative, as opposed to merely linguistic, competence.

In addition to Chomsky’s generativist, the advances in cognitive science and educational psychology made by Jean Piaget and Lev Semenovich Vygotsky in the first half of the century strongly influenced language teaching theory in the 1960s and 70s. These new trends favoring more humanistic views and putting a greater focus on the learner and on social interaction gave way to the Natural (USA) and Communicative (England) approaches. Psychologist Charles Curran’s Community Language Learning and Krashen’s and Terrell’s Natural Approach (in the 1980s) are good examples of this latest trend in language teaching that Hammerly calls Communicative Acquisitionist Naturalistic megatheory of language instruction.

Basic English is an English-based controlled language created by linguist and philosopher Charles Kay Ogden as an international auxiliary language, and as an aid for teaching English. Basic English is, in essence, a simplified subset of regular English. It was presented in Ogden’s book Basic English: A General Introduction with Rules and Grammar (1930).

Ogden’s Basic, and the concept of simplified English, gained its greatest publicity just after the Allied victory in the Second World War as a means for world peace. Although Basic English was not built into a program, similar simplifications have been devised for various international uses. Ogden’s associate I. A. Richards promoted its use in schools in China. More recently, it has influenced the creation of Voice of America’s Special English for news broadcasting, and Simplified English, another English-based controlled language designed to write technical manuals.

What survives today of Ogden’s Basic English is the basic 850-word list used as the beginner’s vocabulary of the English language taught worldwide, especially in Asia. The word HYPERLINK “http://en.wikipedia.org/wiki/Grammar”use of Basic English is similar to full English, but the rules are much simpler, and there are fewer exceptions. Not all meanings of each word are allowed.

Ogden’s rules of grammar for Basic English help people use the 850 words to talk about things and events in a normal way.

Form plurals by appending an “S” on the end of the word. Where special rules are normally necessary, such as
using "ES" or "IES", use them. There are two word endings to change each of the 150 adjectives: "-ER" and "-EST".

There are two word endings to change the verb word endings, "-ING" and "-ED".

Form adverbs from qualifiers by adding "-LY". Talk about amounts with "MORE" and "MOST". Use and know "-ER" and "-EST".

Give adjectives a negative meaning with "UN-". Form questions with the opposite word order, and with "DO".

Operators and pronouns conjugate as in normal English. Make combined words (compounds) from two nouns (for example "milkman") or a noun and a directive ("sundown"). Measures, numbers, money, days, months, years, clock time, and international words are in English forms, e.g.

Date/Time: 20 May 1972 at 21:00

Where necessary, technical expressions or other terms required for the task at hand may be used and take on their local form.

In the novel The Shape of Things to Come, published in 1933, H. G. Wells depicted Basic English as the lingua franca of a new elite which after a prolonged struggle succeeds in uniting the world and establishing a totalitarian world government. In the future world of Wells' vision, virtually all members of humanity know this language. From 1942 to 1944 George Orwell was a proponent of Basic English, but in 1945 he became critical of universal languages. Basic English later inspired his use of Newspeak in Nineteen-Eighty.

Evelyn Waugh criticized his own 1945 novel Brideshead Revisited, which he had previously called his magnum opus, in the preface of the 1959 reprint: "It [World War II] was a bleak period of present privation and threatening disaster — the period of soya beans and Basic English — and in consequence the book is infused with a kind of gluttony, for food and wine, for the splendors of the recent past, and for rhetorical and ornamental language which now, with a full stomach, I find distasteful."

In his story "Gulf", science fiction writer Robert A. Heinlein used a constructed language called Speed talk, in which every Basic English word is replaced with a single phoneme, as an appropriate means of communication for a race of genius supermen.

Language is a system of symbols and rules that is used for meaningful communication. A system of communication has to meet certain criteria in order to be considered a language:

A language uses symbols, which are sounds, gestures, or written characters that represent objects, actions, events, and ideas. Symbols enable people to refer to objects that are in another place or events that occurred at a different time. A language is meaningful and therefore can be understood by other users of that language. A language is generative, which means that the symbols of a language can be combined to produce an infinite number of messages.

A language has rules that govern how symbols can be arranged. These rules allow people to understand messages in that language even if they have never encountered those messages before.

The Building Blocks of Language

Language is organized hierarchically, from phonemes to morphemes to phrases and sentences that communicate meaning.

Phonemes

Phonemes are the smallest distinguishable units in a language. In the English language, many consonants, such as t, p, and m, correspond to single phonemes, while other consonants, such as c and g, can correspond to more than one phoneme. Vowels typically correspond to more than one phoneme. For example, a corresponds to different phonemes depending on whether it is pronounced as in bone or woman. Some phonemes correspond to combinations of consonants, such as ch, sh, and th.

Morphemes

Morphemes are the smallest meaningful units in a language. In the English language, only a few single letters, such as l and a, are morphemes. Morphemes are usually whole words or meaningful parts of words, such as prefixes, suffixes, and word stems.

Example: The word "disliked" has three morphemes: "dis," "lik," and "ed."

Syntax

Syntax is a system of rules that governs how words can be meaningfully arranged to form phrases and sentences.

Example: One rule of syntax is that an article such as "the" must come before a noun, not after: "Read the book," not "Read book the."

Language Development in Children

Children develop language in a set sequence of stages,
Ambiguous Language

Language may sometimes be used correctly but still have an unclear meaning or multiple meanings. In these cases, language is ambiguous—it can be understood in several ways. *Avoid biting dogs* is an example of an ambiguous sentence. A person might interpret it as *Keep out of the way of biting dogs* or *Don’t bite dogs*.

Receptive Language before Expressive Language

Children’s ability to understand language develops faster than their ability to speak it. Receptive language is the ability to understand language, and expressive language is the ability to use language to communicate. If a mother tells her fifteen-month-old child to put the toy back in the toy chest, he may follow her instructions even though he can’t repeat them himself.

Environmental Influences on Language Acquisition

A major proponent of the idea that language depends largely on environment was the behaviorist B. F. Skinner (see pages 145 and 276 for more information on Skinner). He believed that language is acquired through principles of conditioning, including association, imitation, and reinforcement.

According to this view, children learn words by associating sounds with objects, actions, and events. They also learn words and syntax by imitating others. Adults enable children to learn words and syntax by reinforcing correct speech.

Critics of this idea argue that a behaviorist explanation is inadequate. They maintain several arguments:

Learning cannot account for the rapid rate at which children acquire language. There can be an infinite number of sentences in a language. All these sentences cannot be learned by imitation.

Children make errors, such as over regularizing verbs. For example, a child may say *Billy hitted me*, incorrectly adding the usual past tense suffix *-ed* to *hit*. Errors like these can’t result from imitation, since adults generally use correct verb forms.

Children acquire language skills even though adults do not consistently correct their syntax.

Neural Networks

Some cognitive neuroscientists have created neural networks, or computer models, that can acquire some aspects of language. These neural networks are not pre-programmed with any rules. Instead, they are exposed to many examples of a language. Using these examples, the neural networks have been able to learn the language’s statistical structure and accurately make the past tense forms of verbs. The developers of these networks speculate that children may acquire language in a similar way, through exposure to multiple examples.

Biological Influences on Language Acquisition

The main proponent of the view that biological influences bring about language development is the well-known linguist Noam Chomsky. Chomsky argues that human brains have a language acquisition device (LAD), an innate mechanism or process that allows children to develop language skills. According to this view, all children are born with a universal grammar, which makes them receptive to the common features of all languages. Because of this hard-wired background in grammar, children easily pick up a language when they are exposed to its particular grammar. Evidence for an innate human capacity to acquire language skills comes from the following observations: The stages of language development occur at about the same ages in most children, even though different children experience very different environments.

Children’s language development follows a similar pattern across cultures. Children generally acquire language skills quickly and effortlessly. Deaf children who have not been exposed to a language may make up their own language. These new languages resemble each other in sentence structure, even when they are created in different cultures.
Biology and Environment

Some researchers have proposed theories that emphasize the importance of both nature and nurture in language acquisition. These theorists believe that humans do have an innate capacity for acquiring the rules of language. However, they believe that children develop language skills through interaction with others rather than acquire the knowledge automatically.

Language, Culture, and Thought

Researchers have differing views about the extent to which language and culture influence the way people think. In the 1950s, Benjamin Lee Whorf proposed the linguistic relativity hypothesis. He said language determines the way people think. For example, Whorf said that Eskimo people and English-speaking people think about snow differently because the Eskimo language has many more words for snow than the English language does.

Most subsequent research has not supported Whorf’s hypothesis. Researchers do acknowledge, however, that language can influence thought in subtle ways. For example, the use of sexist terminology may influence how people think about women. Two ways that people commonly use language to influence thinking are semantic slanting and name calling.

Semantic Slanting

Semantic slanting is a way of making statements so that they will evoke specific emotional responses. Example: Military personnel use the term “preemptive counterattack” rather than “invasion,” since “invasion” is likely to produce more negative feelings in people.

Bilingualism

Although people sometimes assume that bilingualism impairs children’s language development, there is no evidence to support this assumption. Bilingual children develop language at the same rate as children who speak only one language. In general, people who begin learning a new language in childhood master it more quickly and thoroughly than do people who learn a language in adulthood.

The Case of Washoe the Chimpanzee

Researchers at Central Washington University taught a chimpanzee named Washoe to use American Sign Language (ASL) to communicate. She could sign not only single words but also meaningful combinations of words. She could follow instructions and respond to questions given in ASL. Later, Washoe’s foster child, Loulis, learned signs just by watching Washoe and other chimps that had been trained to use language. Some research even suggested that language-trained chimps may use signs spontaneously to communicate with each other or to talk to themselves, although this behavior is not thoroughly documented.

Lev Vygotsky's Theory of Sociocultural Influences

Psychologist Lev Vygotsky believed that children’s socio cognitive development is a crucial part of cognitive development. After children acquire language, they don’t just go through a set series of stages. Rather, their cognitive development depends on interactions with adults, cultural norms, and their environmental circumstances.

Private Speech

Vygotsky pointed out that children use language to control their own behavior. After children acquire language skills and learn the rules of their culture, they start to engage in private speech. They first talk to themselves out loud, and then, as they grow older, silently, giving themselves instructions about how to behave.

Current Research on Cognitive Development

Current research indicates that children have complex cognitive abilities at much younger ages than Piaget suggested. As early as four months of age, infants appear to understand basic laws of physics. For example, a four-month-old infant can recognize that solid objects cannot pass through other solid objects and that objects roll down slopes instead of rolling up. At five months of age, infants can recognize the correct answers to addition and subtraction problems involving small numbers. These observations have led some researchers to speculate that humans are born with some basic cognitive abilities. Critics argue that researchers who find these results are over interpreting the behavior of the infants they study.

Problem-solving is the active effort people make to achieve a goal that cannot be easily attained.

Types of Problems

Three common categories of problems include inducing structure, arranging, and transformation.
Inducing Structure  
Some problems involve finding relationships between elements.  

Example: “Pineapple is to fruit as cabbage is to ____.” In this analogy problem, the answer, “vegetable,” requires people to figure out the relationship between “pineapple” and “fruit” and apply a similar relationship to “cabbage.”

Arranging  
Other problems involve arranging elements in a way that fulfills certain criteria.  
Example: The answer to the problem “Arrange the letters in LEPAP to make the name of a fruit” is “APPLE.”

Other problems involve making a series of changes to achieve a specific goal, a process called transformation.  
Example: A familiar riddle describes a situation in which a man has to take his fox, his chicken, and his tub of grain across a river in a boat. The boat will hold only him and two of his possessions at any one time. He can’t leave the fox and the chicken on the riverbank by themselves because the fox will eat the chicken, and he can’t leave the chicken with the grain because the chicken will eat the grain. He also can’t take the fox and the chicken in the boat together because the fox will eat the chicken when he’s occupied with rowing the boat. The same goes for the chicken and the grain. How will he get all three across? First he takes the fox and the grain across. He leaves the fox on the opposite bank and takes the grain back with him. He then leaves the grain on the bank and takes the chicken across. He leaves the chicken on the opposite bank and takes the fox back with him to retrieve the grain.

Approaches to Problem Solving  
There are many strategies for solving problems, included trial and error, algorithms, deductive reasoning, inductive reasoning, heuristics, dialectical reasoning, forming subgoals, using similar problems, and changing the way the problem is represented.

Trial and Error  
Trial and error involves trying out different solutions until one works. This type of strategy is practical only when the number of possible solutions is relatively small.

Example: It’s dark, and a man is trying to figure out which button on the dashboard of his newly rented car switches on the headlights. He might press all the available buttons until he finds the right one.

Algorithms  
Algorithms are step-by-step procedures that are guaranteed to achieve a particular goal.  
Example: A chocolate chip cookie recipe is an algorithm for baking chocolate chip cookies.

Deductive Reasoning  
Deductive reasoning is the process by which a particular conclusion is drawn from a set of general premises or statements. The conclusion has to be true if the premises are true.  
Example: If the premises “All birds have wings” and “A penguin is a bird” are true, then the conclusion “A penguin has wings” must also be true.

Inductive Reasoning  
Inductive reasoning is the process by which a general conclusion is drawn from examples. In this case, the conclusion is likely, but not guaranteed, to be true.  
Example: Given the premise “All the butterflies Fred has ever seen have wingspans of less than two inches,” Fred might conclude, “All butterflies have wingspans of less than two inches.”

Heuristics  
A heuristic is a general rule of thumb that may lead to a correct solution but doesn’t guarantee one.  
Example: A useful heuristic for finishing a timed exam might be “Do the easy questions first.”

Dialectical Reasoning  
Dialectical reasoning is the process of going back and forth between opposing points of view in order to come up with a satisfactory solution.  
Example: A student might use dialectical reasoning when she considers the pros and cons of choosing psychology as her college major.

Forming Subgoals  
Forming subgoals involves coming up with intermediate steps to solve a problem. This is a way of simplifying a problem.  
Example: Susan is asked to solve the analogy problem “Prison is to inmate as hospital is to ____.” Susan’s subgoal could be to figure out the relationship between “prison” and “inmate.” Once she achieves this subgoal, she can easily find the answer, “patient.”
Using Similar Problems

A problem is often easier to solve if it can be compared to a similar problem.

Example: Mike has to give his two-year-old daughter a bath, but she resists because she is afraid of the water. Mike remembers that he convinced her to get in the kiddie pool last week by letting her take her large plastic dinosaur toy with her for “protection.” He gives her the toy again, and she agrees to get in the tub.

Changing the Way a Problem Is Represented

A problem may be easier to solve if it is represented in a different form.

Example: If hundreds of guests at a banquet are trying to figure out where they are supposed to sit, written instructions might not be easy to follow. A seating chart, however, makes the seating arrangement easy to understand.

Obstacles to Effective Problem-Solving

Researchers have described many obstacles that prevent people from solving problems effectively. These obstacles include irrelevant information, functional fixedness, mental set, and making assumptions.

Irrelevant Information

Focusing on irrelevant information hinders problem-solving.

Example: A familiar children’s riddle goes like this: As I was going to St. Ives, I met a man with seven wives. Every wife had seven sacks, every sack had seven cats, every cat had seven kits. How many were going to St. Ives? People may think of this as a complicated math problem, but in reality, only one person, the “I,” is headed to St. Ives. The seven wives and their respective entourages are headed the other way.

Functional Fixedness

Functional fixedness is the tendency to think only of an object’s most common use in solving a problem.

Example: Rachel’s car breaks down while she is driving through the desert. She is terribly thirsty. She finds several soda bottles in the trunk but no bottle opener. She doesn’t think of using the car key to open the bottles because of functional fixedness.

Mental Set

A mental set is a tendency to use only those solutions that have worked in the past.

Example: When Matt’s flashlight hasn’t worked in the past, he’s just shaken it to get it to work again. One day when it doesn’t come on, he shakes it, but it still doesn’t work. He would be subject to mental set if he keeps shaking it without checking whether it needs new batteries.

Making Assumptions

Making assumptions about constraints that don’t exist prevent people from solving problems effectively.

Example: Another familiar riddle goes as follows: A father and his son are driving on a highway and get into a terrible accident. The father dies, and the boy is rushed to the hospital with major injuries. When he gets to the hospital, a surgeon rushes in to help the boy but stops and exclaims, “I can’t operate on this boy—he’s my son!” How can this be? If people have a hard time answering, they may be making a false assumption. The surgeon is the boy’s mother.

Decision-making involves weighing alternatives and choosing between them.

People don’t always make rational decisions. In the 1950s, economist Herbert Simon proposed that people’s capacity to process and evaluate multiple alternatives limits their ability to make rational decisions. Because it is difficult to simultaneously evaluate all possible options, people tend to focus on only a few aspects of the available options. This can result in less than optimal decisions. Two types of decisions are decisions about preferences and risky decisions. People generally use a variety of different approaches when making these types of decisions.

Decisions about Preferences

Some decisions require people to make choices about
what they would prefer.

Example: Josh needs to choose which of two armchairs to buy. He must decide which one he likes better.

People may use additive or elimination strategies when making decisions about preferences.

**Additive Strategies**

When using an additive strategy, a person lists the attributes of each element of the decision, weights them according to importance, adds them up, and determines which one is more appealing based on the result.

Example: To decide which armchair to buy, Josh may list the features he considers important in an armchair. For example, he might list attractiveness, comfort, and price. Then, for each armchair, he rates each feature on a scale from +5 to −5. He also weights each feature according to its importance. For instance, if he considers comfort to be twice as important as price, he multiplies the ranking for comfort by 2. Josh then adds up the ratings for each armchair. The chair with the highest ranking wins.

**Elimination Strategies**

Another strategy for making decisions about preferences is called elimination by aspects, which involves eliminating alternatives based on whether they do or do not possess aspects or attributes the decision maker has deemed necessary or desirable. People often use this type of strategy when a large number of options and features have to be evaluated.

Example: When using this strategy to choose his armchair, Josh sets a minimum criterion for each feature he thinks is important. For example, minimum criteria for attractiveness, comfort, and price of an armchair might be blue color, soft fabric, and under $300, respectively. He then compares the two armchairs according to these minimum criteria, starting with the most important criterion. An armchair that doesn’t meet a criterion gets eliminated, and the remaining one wins.

**Risky Decisions**

When making choices about preferences, people select between known features of alternatives. In other types of decisions, however, they have to decide between unknown outcomes. This type of decision-making involves taking risks.

Example: If Eric is trying to decide whether to buy a $5 raffle ticket, a risk is involved, since he has only a 1 in 1000 chance of winning a $500 prize.

People make risky decisions by judging the probability of outcomes. Strategies people use to make risky decisions include calculating expected value, estimating subjective utility, and using heuristics.

**Expected Value**

One strategy for making a risky decision is to calculate the expected value of the decision. People calculate the expected value by adding the value of a win times the probability of a win to the value of a loss times the probability of a loss.

Example: For Eric, the value of a win is +$495 ($500 prize − $5 cost), and the value of a loss is −$5. The probability of winning is 1/1000 and the probability of losing is 999/1000. Therefore the expected value is −3.5. That means Eric can expect to lose $3.50 for every raffle ticket he buys.

**Subjective Utility**

Even when decisions have negative expected values, people still make such decisions. Some researchers believe that this occurs because people make some decisions by estimating subjective utility, or the personal value of a decision’s outcome.

Example: Eric may still buy the raffle ticket because having the ticket lets him dream about buying a stereo he’s always wanted.

**Availability Heuristic**

People often use heuristics to estimate probabilities. One heuristic people frequently use is the availability heuristic. When people use this rule-of-thumb strategy, they estimate probability based on how readily they can remember relevant instances of an event. If people can quickly remember instances of some event, then they will estimate that event as being quite likely.
Example: If Eric can think of several friends who have won raffles, he will judge that he is likely to win the raffle.

Representativeness Heuristic

People also use the representativeness heuristic to estimate probability. The representativeness heuristic is a rule-of-thumb strategy that estimates the probability of an event based on how typical that event is. For example, if Eric the raffle ticket buyer lives in the United States, has several tattoos, and often wears dark sunglasses and a leather jacket, is it more likely that he owns a motorcycle or a car? If people use the representativeness heuristic, they may judge that Eric is more likely to own a motorcycle. This happens because the description of Eric is more representative of motorcycle owners.

The Gambler’s Fallacy

The representativeness heuristic can also make people susceptible to the gambler’s fallacy. The gambler’s fallacy is the false belief that a chance event is more likely if it hasn’t happened recently. This belief is false because the laws of probability don’t apply to individual independent events.

Example: Mindy tosses a coin and get heads. Because of this, she believes that on her second toss, she’ll get tails, since 50 percent of her tosses should yield tails. This belief is incorrect. Over a series of tosses, she can estimate that the probability of tails will be about 50 percent, but this logic can’t be correctly applied to a single toss.

Overestimating the Improbable and Underestimating the Probable

Using the availability heuristic can cause people to overestimate improbable events. This happens because rare but memorable events come to mind easily.

Example: Recalling a few dramatic TV reports of plane crashes could make people overestimate the likelihood of a plane crash.

Using the availability heuristic can also cause people to underestimate likely events. This can happen when events are hard to visualize and don’t easily come to mind.

Example: Beth may have unprotected sex because she doesn’t think anyone she knows has a sexually transmitted disease (STD), and she doesn’t know what the symptoms of an STD might be. In reality, the majority of the adult American population has contracted one or more STDs, and Beth has a very high chance of contracting one herself through unprotected sex.

Minimizing Risk

People sometimes make irrational decisions in an effort to minimize risk. An event is more likely to be chosen if it’s framed in terms of winning rather than losing.

Example: People are more likely to buy a raffle ticket if they hear they have a 1 in 1000 chance of winning than if they hear they have a 999 in 1000 chance of losing.

Confirmation Bias and Belief Perseverance

Confirmation bias is the tendency for people to look for and accept evidence that supports what they want to believe and to ignore or reject evidence that refutes their beliefs. When people reject evidence that refutes their beliefs, it can also be called belief perseverance, because rejecting contradicting evidence makes it easy for people to hold on to their beliefs.

Example: If Carl is a believer in herbal nutritional supplements, he may willingly accept research that supports their benefits while ignoring or rejecting research that disproves their benefits.

The Overconfidence Effect

The overconfidence effect is the tendency for people to be too certain that their beliefs, decisions, and estimates are correct. People can minimize the effects of overconfidence by collecting a lot of information and evaluating it carefully before making a decision.

Example: At the outset of the Civil War, young Southern men eagerly enlisted in the Confederate Army, believing their superior gallantry would help them make speedy work of the Union soldiers.
CONCLUSION

In learning languages, a distinction is usually made between mother tongues, second languages, and foreign languages. A mother tongue is the first language or languages one learns (or acquires) as a child. When immigrants come to a new country and learn the language of that country, they are learning a second language. On the other hand, when English-speaking students in the United States learn French or Spanish in school, or when Brazilians study English in Brazil, they are learning a foreign language. The acronyms ESL and EFL stand for the learning of English as a Second and as a Foreign Language. Even though, if the students want to learn languages, they need way of the cognitive process, for example, if the child learn to play the games, they have to use their cognitive domain. That is the only way of languages learners, then the child try to speak that language that is called language speakers. so I am conclude, We have to learn languages only the help of cognitive process of human beings.

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