

Unit 9 The Learning Process

Through examples of teaching and learning in practice we will explore the range of ways people construct knowledge from experience, build on prior knowledge, and organize their own learning. These ideas can help teachers make sense of what is going on in their classrooms and provide *lenses* for understanding students' growth, development, *stumbling blocks*, and successes. The work of cognitive psychologists, neuroscientists and educational researchers as well as expert practitioners has provided us with a set of understandings about how people learn that have *practical implications* for teaching.

Task 1A Speaking

Comment on the following statements about learning. What are the implications for teaching?

1. PEOPLE LEARN IN DIFFERENT WAYS
2. THE LEARNING ENVIRONMENT MAKES A DIFFERENCE
3. PEOPLE THINK ABOUT THEIR OWN LEARNING, AND THEIR FEELINGS MATTER
4. THE BRAIN PLAYS A ROLE
5. LEARNING IS BASED ON ASSOCIATIONS
6. LEARNING OCCURS IN CULTURAL AND SOCIAL CONTEXTS

Task 1B Match the statements from 1A with the texts below:

- A) The mind is set up to process outside stimuli, to make sense of them, and to draw connections. We know that while there are critical periods for motor and sensory development, the development of the brain is lifelong, and not predetermined at birth or within the first three years. However, psychologists have observed that individuals do progress through a predictable series of stages in their cognitive development. Learning changes the physical structure of the brain through the process of continuous interactions between the learner and the external environment. Differences in human processing and performance have been found to be related to different brain structures and functioning.
- B) People learn by making sense of the environment and of stimuli around them. Greater perceptual development and learning occur in environments that are rich with stimuli and provide useful feedback in response to a learner's efforts to act upon the environment. The nature of the tasks confronted, the ways in which information is presented, and the expectations for the learner's involvement all impact the learning process. In addition, the nature of the social environment – whether and how learners have access to others who can model, describe, or provide feedback – shapes the learning process. Reinforcements from the environment and the nature of feedback from significant others can stimulate or undermine greater effort.

- C) Learning is a process of drawing connections between what is already known or understood and new information. Thus, prior knowledge is important to the learning process. People make connections and draw conclusions based on a sense of what they already know and have experienced. Learning can be viewed, in part, as a matter of encoding and storing information in memory, processing, categorizing and clustering material, and later retrieving this information to be applied at the appropriate times and situations. For learning to occur, facts, concepts and ideas must also be stored, connected to other facts, concepts, and ideas, and built upon. Knowing in advance what the big ideas are and how they relate to each other conceptually helps learners to make sense of information and to remember and use it more flexibly.
- D) The associations people make and understandings they develop are dependent upon and influenced by what is valued and what is experienced at home, in the community, and within the classroom learning environment. Culture influences the knowledge and experiences people bring to the classroom, the ways in which they communicate, the expectations that they have for how learning will occur, and the ideas they have about what is worth learning. The social context created within the classroom—the ways in which communication, teachers' and students' roles, and opportunities for collaboration are structured—all influence the learner's understanding and construction of knowledge. The compatibility between cultural contexts, tasks, and modes of communication inside and outside of school influence the ease with which learners will be able to find and make connections to their experience, and hence to make sense of school-based learning experiences.
- E) Identifying individual differences among learners can help us to better understand and guide the learning process. People can be seen as possessing a number of intelligences beyond the linguistic and logical-mathematical abilities typically emphasized in schools. Learners also possess inter- and intrapersonal intelligences, musical, kinaesthetic, and spatial abilities. We also know that individual learners process information differently while they are reading or making mathematical calculations, for example. Learners have processing differences that influence how they handle visual, aural, or kinaesthetic information. Information that is available through learning modalities or pathways that are better developed will be easier to understand and use.
- F) Both thoughts and emotions shape the learning process. Metacognitive skills —being able to think about and monitor one's own thinking — enable learners to manage their learning process, to learn difficult new concepts, and to problem-solve effectively. Good metacognitive thinkers are also good intentional learners; they are able to redirect the normal frustration that occurs when things are confusing or not initially productive into further learning. Emotions also play a role; students who are fearful, anxious, depressed, or distracted cannot focus to process information. Positive emotions – feelings of confidence and willingness to exert effort – help students to think, perform a learning task, and process new knowledge. Emotional intelligence – the ability to recognize and manage one's emotions, to solve conflicts, to motivate oneself, and to persevere in the face of difficulty – can also be taught.

Task 1C Summarise the factors influencing the learning process using some of the expressions below. Are any of them close in meaning?

in other words

so to speak

that is to say

the thing is

to put it another way

(to put it) in a nutshell

to put it simply

the bottom line is

Task 2 Countable and uncountable nouns

A) Countable nouns can be "counted", they have a singular and plural form.

For example:

*a student – two students. Many, a few/few, these, those students. The students **are** interns.*

Complete the sentences and explain the difference between them:

There were a few students in the class...

There were few students in the class...

B) Uncountable nouns have only one form. This means you cannot make them plural by adding -s, because they only have a singular form. It also means that they **do not take a/an** or a number in front of them.

For example:

*information – some information, a piece of information. Much, a little/ little, this, that information. The information **is** accurate.*

Complete the sentences and explain the difference between them:

I have a little information about the project ...

I have little information about the project ...

C) Please notice also that some words in English form **irregular plural, for example**

a means – means, a species – species, a series – series

a stimulus -

a bacterium -

a phenomenon –

an analysis –

a hypothesis –

D) Some nouns end in –s but are **uncountable** and take a singular verb, for example:

Maths is a compulsory subject.

Gymnastics is a great sport for you if you need to improve your strength and coordination.

E) Study the following examples and notice the use of nouns, either uncountable or irregular.

Some people have the perception that scientific knowledge equates to 'the truth'.

This information has many implications in the field of neurology.

The child's lack of progress has caused some concern.

There are many ways of teaching student teachers to deal with problem behaviour.

Recent research shows that babies in the womb can be influenced by music.

Can you give us any more evidence? This evidence is not very reliable.

The Internet is an effective means for finding qualified job applicants.

These phenomena occur during early foetal development.

The news about the planned educational reform is very hopeful.

They believe that much of our unhappiness as a species can be seen in the increasing rates of many psychological disorders.

(sentences adapted from the British Academic Written English Corpus)

F) Choose the correct form of the verb.

1. Our knowledge of the subject is / are limited.

2. The new research is / are based on reliable data.

3. The money is / are insufficient.

5. Advice for parents of children with special needs is / are sorely needed.

6. First-hand experience in a school is / are invaluable.

7. The phenomena she studied is / are very complex.

8. The analyses is / are very detailed.

9. This species is / are threatened with extinction.

10. Athletics is / are only slightly more popular than physics.