GETTING TO KNOW THEORY IN ORDER TO FACE CHALLENCES IN THE EFL CLASSROOM

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"In order to understand the individual it is necessary *to understand the social relations in which the individual exists* (Werthsch 1991:26 cited in Sullivan 2000)."

DISCUSSION POINT

- In the quotation above the writer would like to emphasise the importance of understanding learners' background better to teach better.

❖ Discuss what he meant by saying 'to understand the social relations in which the individual exists'.

- What kind of social relations could he mean? Begin with the family environment and extend it to his/her neighbourhood and circle of friends.

- Describe your own social relations and think about how those factors which have led you to motivate you to learn English.

1.1. Introduction

Teaching children anything requires some expertise and special education. Therefore, in contrast to laymen's thinking, teaching children is not a child's play. In fact, understanding what is happening during the process of any child's play demands a good understanding of child development.

That is, teachers and teacher candidates should have an in depth knowledge about child development. Here the term child development refers to child's cognitive, intellectual, psychological, linguistic and physiological development. As language teachers, we cannot ignore factors related to non-linguistic development. We need to adopt a holistic view of child development. In this vein, a teacher education programme is required to include courses which are expected to foster student teachers' (STs) understanding of how children think and learn.

Within the programme, these courses are expected to complement to one another. In some cases, topics they cover may overlap. However, ultimately they aim one thing: qualifying STs to teach English to young learners. In Turkey, English Language Teaching departments do not specifically prepare teacher candidates to teach a particular age group. For this reason, the course called Teaching English to Young Learners is the only one which could be taught with a specific age group in focus.

Even there, we need to distinguish pre-school age and school age and pre-adolescent age groups. But with careful planning and programming this cannot be seen as a problem. Following the Language Acquisition course, the Teaching English to Young Learners course is the one where STs are expected to begin developing a kind of understanding of how theory leads teachers to classroom practice.

It is essential for teachers to understand the learning needs of pupils. For various reasons, this may not be happening in our classrooms. These reasons can include the following:



Figure 1: A very crowded class in a Turkish primary school.
(http://merverdem.blogspot.com)

a- Crowded classrooms,
b- Text-book centred teaching,
c- Test result focused teaching.

Crowded classes are really an important obstacle on the way to success in education. Teachers often do not spare time to find out about pupils' specific learning needs, such as learning styles, preferences and strategies (Brown 2000; Lightbown and Spada 1999). However, finding out about these individual learner attributes is important as these will enable teachers to use contextualisation techniques in order to relate language to learners' lives (Yılmaz and Karatepe 2010). Unfortunately, the entire Turkish education system is ruled by tests and test scores. That is, it leads everyone

participating in the system to product oriented learning while the process of learning is ignored. The caricature depicts the contradiction between test based teaching and a child's instinct to be in interaction with his environment.



Figure 2: Dismal learning is not the path to success (http://blog.seattlepi.com/davidhorsey/2010/10/07/encore-cartton-dismal-learning-is-not-the-path-to-success)

DISCUSSION POINT

- Look at the caricature above.
- What does the boy see when looks out of the window?
- The bird flies a ribbon. It reads 'Arts'. Why do you think the artist who drew this caricature wanted to highlight 'Arts'?
- What does 'P.E.' on the signpost stand for? Why do you think artist wanted to draw our attention to this issue?
- The teacher in the caricature warns the child by saying 'Do you want to be a child left behind? ' But the child's does not seem to mind this.

❖ Discuss the teacher's and the pupil's attitudes toward teaching and learning.

- We teach English in a void to enable learners to pass tests.

❖ Discuss whether it could be possible to teach English in relation to arts and sports.

Teachers are always anxious to cover the textbook because the tests prepared centrally are entirely based on textbook units and language points included in these units. It seems that similar situation is experienced by many teachers and students in countries such as Canada and the USA. Below is an excerpt from former President George W. Bush's speech in Congress on 27 February, 2001 entitled 'Courage in a Time of Blessing'.

While reading this citation, pay special attention to the parts in bold font. The former president of the USA argues that politicians and state officials would like to see results and the only way of seeing results is 'to teach to the test'.

❖ Discuss what other ways can there be to see the results of teaching and learning as an output of educational system.

> When it comes to our schools, dollars alone do not always make the difference. Funding is important and so is reform, so we must tie funding to higher standards and accountability – for results.

> I believe in local control of schools. We should not and we will not run public schools from Washington, D. C.
>
> **Yet when the federal government spends tax dollars, we must insist on results.** Children should be tested on basic reading and math skills every year between grades three and eight. Measuring is the only way to know whether all our children are learning. And I want to know because I refuse to leave any child behind in America.
>
> Critics of testing content it distracts from learning. They talk about 'teaching to the test'. But let's put that logic to test**. If you test a child on basic maths and reading skills, and you are 'teaching to the test,' you are teaching maths and reading. And that's the whole idea** (Washington Post, 28 February, 2001: A10; cited in Kinginger 2002, p. 258).

Wells (1999) has complained that

> Without doubt, a major influencing factor is the increasing pressure of accountability for delivering a centrally determined curriculum and for increasing students' scores on standardized tests basic skills and memorized items of information (Wells 1999, p.51).

Certainly, such pressure on teachers does not encourage innovatory practices as educational administrators and parents alike limit their expectations to high scores. It seems that the USA education system suffers from the same problems but apparently, this did not bother the president.

As a result, there is a danger for teachers to confuse means and ends. They need to be aware of the fact that the textbook is just a tool not an end in itself. However, with test based education in mind, teachers can easily find themselves off-track.

Therefore, STs should be made aware of the consequences of mishaps of the context of education within which they will practice in the near future. For this very reason, they need to learn how to develop 'a learning-centred perspective' (Cameron 2001:1). Cameron distinguishes 'a learning-centred' teaching from 'learner-centred' teaching.

> Learner-centred teaching places the child at the centre of teacher thinking and curriculum planning (p.1)

It seems what is happening in our country is described in the above quotation. Various disadvantages of this is described by Cameron (2001) as follows:

> If a teacher's concern is centred on the child, there is a temptation to stay in that first place to follow the child. (p.2)

As a teacher educator, I have witnessed this many times. As Cameron (2001) agrees, when this happens, learners enjoy themselves immensely on what Cameron calls 'intellectually undemanding tasks'. However, these tasks should be suitable to learners' intellectual and cognitive capabilities. Tasks can be challenging and hard but at the same time stimulating and progressive. Then, we can have 'a learning-centred' teaching.

The number of hours spared for teaching English in the school curriculum is very limited in our country. Therefore, teachers should know how to make best of what little time they have. For this reason, teachers should put learning at the centre of their teaching.

This chapter is about the three main theories of learning and instruction: the theories of Piaget, Vygotsky and Bruner. Arguments proposed by educationalists such as Piaget, Vygotsky and Bruner have set foundations of today's education in the world. All three in a way revolutionised how teachers and educational administrators have perceived teaching and learning. While studying the ideas of these influential educationalists, you may perhaps question the relevance of them to our country's language teaching context. However, this is a good sign as it indicates that you have started to question what is happening in our country and you have got some expectations from a theory of learning.

You will also find that some ideas and arguments contradict one another while others complement to one another. When you are able to pin-point them, it means that you are on the right track because it shows that you do not just take anything you read before scrutinising.

You will be somewhat pleased to find out that similar problems reign education across countries. That is, many language teachers may encounter similar problems in their classrooms day-in day-out in distinctively different countries such as Turkey and the USA.

In addition to a solid background on learner psychology and development, teachers need to understand the socio-cultural environment where learners have been brought up and the context of education in which they teach. I would like to draw your attention to the quotation at the very beginning of this chapter.

> In order to understand the individual it is necessary to understand the social relations in which the individual exists (Werthsch 1991:26).

Unfortunately, this issue is ignored by educationalists, educational administrators and teachers. Wertsch (1991) points out that

> *The universalism* that has come to dominate so much contemporary psychology makes it difficult to deal in a serious, theoretically motivated way with *human action in context* (ibid.: 18 cited in Sullivan 2000) (my italics).

EFL teacher candidates are expected to be able to synthesise their knowledge about contemporary theories of child development and learning with their knowledge of socio-cultural environment where their students have grown and their own context of education. This is not an easy task to do. Those teachers who are not aware of the magnitude of this assignment may even give up the profession as a result of frustration and desperation. Or remain in the profession as a sordid school teacher.

DISCUSSION POINT

Think about what 'human action in context' means. Human beings exist in their cultural environment. Their behaviours are shaped up by their cultural and traditional context as well as their perception and understanding. Although languages have universal features and human values overlap to a great extent but still individuals' family background plays a very important role in how we perceive the world.

- In the light of this view, discuss to what extent it is viable to borrow or export foreign educational practices and attempt to apply in all schools country wide.

1.2. Piaget

The theory part begins with a very popular name, Piaget. Piaget was a biologist by profession. He started to develop an interest on child development after having his own children.

He proposed his theory as an alternative to that of the behaviourists. Unlike the behaviourists he thought babies' mind was not like a blank slate and they did not learn via trial-and –error technique. Rather they have some innate structures of knowledge (schema). Without this innate schema, babies could not have progressed forward from sensory experience (sensorimotor stage) in order to begin to develop cognitive reasoning.

Piaget has been an influential figure in the field of educational sciences. He proposed that children's capacity increased to understand what was happening in their environment. That is, they need to be mature enough to undertake certain tasks. He argued that this maturation process has got its stages. All babies and children go through similar stages which overlap the same age level. These can be seen as important milestones (transition points) in the life of a child. For example, 18 months, 7 years and 11/12 years are such kind of thresholds. Children become cognitively more mature after transiting the next stage.

Piaget hypothesised that each child went through process of cognitive development following the same order of stages though some individuals could develop faster or slower. He thought that all children in the world went through these universal developmental stages regardless of their social class, racial and cultural background.

1.2.1. Piaget's Stages of Cognitive Development

Sensory-motor (birth-2 years): The baby can

- differentiate self from objects,
- realises that s/he can take an action and begins to act intentionally, for example can hit a toy to the table to make noise and s/he shows that s/he enjoys it.
- Understand that things continue to exist even when they are not visible (Object permanence).

Pre-operational (2-7 years): The child

- Learns language and represent objects by images and words.
- Classifies objects based on a criterion. For example s/he can group together all the red blocks no matter what shape they have.
- The child's thinking is still egocentric. He cannot understand other people's view point.

Concrete-Operational (7-11 years): The child can

- Thinks logically about events and objects.
- Achieves conservation of number, mass and weight.
- Classifies objects according to several features and can order them in series according to a single characteristic such as size.

Formal Operational (11 years +): S/he can

- Thinks logically about abstract propositions and test hypotheses systematically.
- Becomes concerned with hypothetical (What happens when oil reserves run out?) and ideological (how to combat poverty in the world) problems
  (Summarised from Wollfolk 1998).

Piaget proposed that all children were born with a kind of genetically inherited mental structure of knowledge. Following birth this evolves and forms a basis for all kinds of learning and knowledge in children's lives. Unlike the behaviourists he thought that the amount of learning and knowledge a child experiences was not as important as its quality. He believed that as the child matured his/her cognitive skills became more sophisticated, which was a sign of intellectual development.

Piaget regarded thinking as a kind of action whether it was performed as physically or not. Babies are born with the minimal innate cognitive structure. They begin with perceptual capacities and reflexes. Piaget regarded intellectual growth as a process of adaptation (adjustment) to the world. These are followed by three generalised adaptive processes

a) Perceptual capacities
b) Reflexes
c) Three generalised adaptive processes:
    i. Assimilation
    ii. Accommodation
    iii. Equilibration

In the process of maturing, babies gradually become more active and mobile. This is made possible as a result of developing muscles and joints. As the baby is physically active, s/he can begin to act on objects in the environment. A very young baby cannot move his body intentionally. His / her movements are rather reflexes. However, in time, s/he finds out how to control these reflexes such as grabbing reflex, such as s/he grabs an object and drops it while sitting on his chair. When s/he sees it falling downs/ he realises that s/he can act on objects and it looks or (sometimes) sounds interesting. Then, knowledge of what happens to objects when s/he drops develops. Ability to develop control over reflexes leads to more thinking and learning through three generalised adaptive processes.

1) **Assimilation**

Assimilation happens when a child uses his/her existing knowledge to make sense of new experiences.

2) **Accommodation**

Accommodation happens when a child modifies his/her existing schema to make sense a new situation. If there is no available existing schema, a new one need to be developed. The child adjusts his/her thinking to fit the new situation. When a child creates a new schema for an entirely foreign animal in addition to other animals in his/her mind. This is why; s/he shows accommodation by adding the new scheme to his/her existing scheme (Woolfolk 1998).

3) **Equilibration**

According to Piaget equilibration 'the act of searching for a balance' (Woolfolk 1998: 29). Piaget hypothesised that human mind preferred consistency and order. In human mind, there is a conflict between our wish to learn something new (via assimilation). It also resists to altering existing structures (via accommodation). Assimilation and accommodation are adaptive processes of behaviour and thinking and they occur together.

Piaget thought individuals do not like disequilibrium. They all have a kind of innate desire for equilibrium. This innate capacity motivates learning. As a result, it can be said that disequilibrium is a precursor for learning.

McLaughlin (1992) borrowed the idea of accommodation in developmental psychology and referred to it as 'restructuring' in second language learning. An example of restructuring in this sense can be as in the following example. A group of Turkish EFL learners may have already developed a schema for pronunciation of borrowed words in Turkish, such as television and telephone. When they realise that these words exist in the English language, they appear to think that it is all right to pronounce these words in Turkish way. However, they may gradually come to realise that they need to adapt their existing knowledge of pronunciation to the phonetics of the English language. That is, they restructure their existing knowledge and find out the right way.

Piaget saw child development as gradual accumulation of knowledge and thinking. The final stage of this intellectual maturation is the development of formal and logical thinking. He agreed that not all individuals could develop a fully mature formal and logical thinking. Piaget believed that children tried to make sense of objects and events in their environment. That is, they think about things. Language develops as a result of this intellectual growth.

Can you remember any such instances where you readjusted your knowledge of a particular language feature in English or perhaps in Turkish?

1. Object Permanence

According to Piaget, development of object permanence in a child's life is an important step towards developing linguistic ability. Object Permanence enables children "to use symbols to represent objects that are no longer present; these symbols become the child's first true words" (Bohannaon and Bonvillian 1997:281).

The child's accumulation of knowledge about the world is reflected in his /her language skills. The child needs to know animate and inanimate things existing in the world. And s/he realizes things. Therefore when reporting an action carried out by an animate subject on an inanimate object, the child will follow this order (S+V+O). This kind of knowledge is not only reflected on the child's knowledge of syntax but also semantics as s/he knows the difference between them maturation with the emergence of language. In the long run, when s/he begins learning the child will be able to talk about things (e.g. what s/he has got as in 'I have got an aunt.') that are not visible presently in the immediate EFL classroom context.

DISCUSSION POINT

Hickman (1985) reports that native speaker children were able to use determiners (a/an, the), pronouns, and possessive pronouns accurately not before the age of 10 (Cited in Wood 1999: 155).

Discuss in the light of this finding, how appropriate to teach grammar in traditional sense to young learners before the age of 10 in Turkish classes.

1.2.1.1. Criticising Piaget: Methodological Criticism

Many researchers have criticized Piaget's research methodology. They argued that his tasks were too difficult and his questions were not really good ones to guide his child subjects.

Particularly the research methodology he used while working with very young children has been criticised a lot. His sensorimotor tasks required a lot from young children. Failure to remove a piece of cloth or grasp an object does not always mean that the child cannot think. This may indicate that the child's motor skills may not have fully developed to grasp or remove objects. Piaget disregarded this issue.

Piaget has also been criticised for using complicated language and unfamiliar materials in his tasks. As a result, children could not show high levels of success. He also did not present his tasks within a context which was familiar. For this reason children may have misinterpreted or misunderstood what they were asked to do. Similarly, children may have misinterpreted researcher's intentions. Besides, he carried out his study on a small number of children. He did not analyse the findings of his study statistically. For this reason, other researchers find it hard to compare and contrasts his findings with that of Piaget's. His findings are based on cross-sectional studies not longitudinal. Therefore, he did not really observe developmental stages through which children matured in a long period of time. He claimed that he worked with every individual child one-to-one so that he could observe how each one of children reason and make sense of the world. While this could be one of his strengths, results based on more number of children would be more valid and reliable.

Researchers, such as Donaldson (1978) argue that in such studies, children should be presented familiar tasks within a familiar context of situation and researchers should use clear and simple language. Some studies such as Light et al (1979), and Donaldson (1978) reported on Piaget's studies. But they used clear and simple language and familiar tasks. Children performed better. These results suggested that the context of the task could be a very important factor in determining the response from children. Light et al (1979) for example, created little stories within contexts where children were convinced that there was a good reason for performing a particular task and they performed it much better than the ones who had participated in Piaget's study.

Piaget claims that language is not a separate ability on its own. It is rather one of several abilities which develop as a natural consequence of cognitive maturation. He argues that

> … language is structured or constrained by reason; basic linguistic developments must be based upon or derived from even more basic, general changes in cognition (Bohannon and Bonvillian 1997: 279-280).

According to Piaget children acquire structures as a result of continuing interaction between the child's present level of cognitive abilities and his/her verbal or non-verbal interactions with the environment language errors in children's speech can reveal valuable information not only about their knowledge of structure of language but also the structure of their knowledge in general (Bohannon and Bonvillian 1997).

1.2.1.2. Criticising Piaget: Theoretical Criticism

Piaget argues that there is a correlation between particular cognitive skills and the emergence of particular linguistic skills, such as emergence of a word. This hypothesis has been retested by various researchers. Although there is some evidence to support this, many researchers are still not entirely convinced about the existence of such kind of correlation. This hypothesis claims that first knowledge about a particular issue is gained by the child and then relevant speech emerges. However, Vygotsky argues just the opposite.

> Vygotsky in fact reverses Piaget, arguing that speech is initially social, is then internalized, and subsequently leads to inner and private (or egocentric) speech (Thorne 2009: 219).

> Unlike Piaget, Vygotsky argues that first language emerges through verbal interaction with caregivers and this leads to thought.

Vygotsky sees language having a higher-order mental function. He regards language use as a symbolic activity which is based on socio-cultural aspect of life.

> Piaget hypothesised that learning is an individual activity.

In contrast, Vygotsky saw children in interaction with others during learning process. In other words, for Vygotsky learning is a social activity.

The next part is about Vygotsky's Socio-Cultural Theory of learning. He is one of the important researchers who shaped up our understanding of human development and thinking. His opinions formed a basis for Bruner whose ideas revolutionised education during the second half of the last century.

Vygotsky and Bruner believed that children were not alone in the process of understanding the world. They are supported by an adult or a more knowledgeable member of the society. The next part of this chapter will present the ideas of Vygotsky. During this social activity knowledge is shared and understandings are built as well as knowledge. Therefore, social and cultural basis of learning is emphasised. The notion of learning as a social enterprise will be dealt with in some detail later in the chapter.

DISCUSSION POINT

- Language topics in the curriculum and textbooks are ordered from easy to grasp topics and as more concrete topics such as names of clothes towards more difficult topics such as tenses (the present perfect) and expressions of probability.

  Discuss the rationale of this kind of ordering from Piaget's perspective.

1.3. Vygotsky

Vygotsky was a Russian developmental psychologist. He lived during the beginning of the 20th century and died at the age of 36. In his short period of life, he carried out numerous experiments and wrote many scientific books and articles. But his name could only be heard outside of the Soviet world quite later in the 20th century. His ideas have been very influential in shaping up the modern day education

1.3.1. Learning according to Vygotsky

He believed that development and learning were two parallel and integrated processes. These two processes are embedded in children's social environment. Children learn from their interactions with the environment and the people in the environment. Unlike Piaget, Vygotsky believed the supportive role of child's interaction with adults and with more knowledgeable others within his/ her close environment in order to facilitate his / her learning.

He attributed language a significant role to language in this process. It is a critical tool because it is the symbol system, by means of which knowledge is coded and organised.

This was quite different to Piaget's main idea as he saw the child alone during the process of intellectual and cognitive development. He was more interested in what a child at a certain age could or could not do. But Vygotsky came up with the idea that child's cognitive development was a collaborative actualised by the child and others (Wood 1999; Woolfolk 1998).

1.3.2. Language as an Innate Ability

Vygotsky believes that children have an innate ability to learn a language. But this is not enough on its own. There should be some contribution from the environment. Vygotsky argued that initially language was only a tool to interact with his/her parents for the child. Gradually, the child learns to use the language by talking to himself while he is playing. Then s/he begins to think aloud and then the thinking aloud shifts into inner talk. All these shape up the child's thought processes and these thought processes shape up language skills. Language becomes the source of structure of the child's thoughts (Woolfolk 1998; Wood 1999).

1.3.3. Learning as Social Transaction

- Vygotsky argues that 'the child's capacity to learn through instruction' is a very important feature of human intelligence. It also shows to what extent is the child ready to co-operate with others.
- Vygotsky puts 'instruction' therefore 'interaction' at the heart of development. With instruction a child's potential for learning is revealed.

One of his most important contributions to the field was his proposal of *the Zone of Proximal Development* (ZPD). He described the construct as

> …the distance between the actual developmental level as determined by independent problem-solving and the level of potential development as determined by problem-solving under adult guidance or in collaboration with more capable peers (Vygotsky 1978, p. 86).

With this construct, he underlined the fact that intelligence was not to be measured as the child's alone performance. He believed that a child's intelligence was understood better while the child was performing with the help and guidance of another person. The child's ability to follow instructions and ability to make use of the tips given by his/her partner is also indication of the child's level of cognitive development. In the process of such kind

of interaction, the child receives help, perhaps his/her partner would draw his/her attention to some crucial details about the tasks. If the child has got the capacity to analyse the situation and synthesise the extra information with what s/he knows already, s/he can achieve the task. Children may be more depended on the other person while solving problems or performing tasks but gradually they will learn to act more independently and they will gain self-confidence.

1.3.4. Domains of Zone of Proximal Development (ZPD)

Vygotsky described three domains through which ZPD operates.

a) Assessment

The first one is related to assessment. Since it indicates the difference between individual performance and assisted performance, it enables educational psychologists to assess a learner's educational potential in a more dynamic way. That is, instead of assessing the learner in one setting by means of a single test, the notion of ZPD advocates a multi-dimensional assessment where the child's potential is evaluated on how s/he negotiates meaning during interaction.

b) Scope of Concepts and Topics

The second one is about the scope of the concepts and topics to be introduced through interaction as Vygotsky describes in the quotation above. Vygotsky does not restrict the scope of variety of topics and issues. They can be everyday topics, such as how to brush one's teeth or teaching and learning about photosynthesis. Therefore, with ZPD, Vygotsky attempts to explain how knowledge about life and science is built through interaction between child and adult / or a more knowledgeable peers.

DISCUSSION POINT

An anecdote:

On the highway to the Uludağ University campus opposite the main train station Küçük Sanayi Station is a mast with a rotating metal globe on top. This metal globe represents a textile company (Saydam Tekstil) with metal framework of the continents. It is there to make a statement that this textile company is known worldwide and perhaps it is known all around the world.

It has been there for a long time. It used to be more visible as it was nearer the main road. But it has been relocated far away from the main road. That is, it is not completely noticeable anymore. One day the author of this chapter was travelling on a bus to the campus before the relocation of the mast. One of the passengers, a 7-8 year of boy kept asking 'Mom, what is this?' (Pointing to the mast). His mom kept quiet. But the boy was insisting. After a while she said 'shut up' with an angry tone of voice. As a consequence, the boy kept quiet.

- Discuss the reasons why the mom kept quiet first and then scolded the boy.
- What could she said to support curiosity of this perceptive boy? What would you say if you were the mom? You need to adapt such a strategy that the child should feel that you are very pleased that your son pays attention different things around him and wants to learn about them.
- Write a dialogue between your son and you where you explain the boy this symbol.

c) Pretend Play and Imagination

The third dimension was related to how Vygotsky regards play. He proposed that during a role play activity, the child personified an older person (for example, a doctor or a mother), who had more knowledge or more authority. Such kind of rehearsals prepares the child for the role s/he may take up in the future. That is, the child would like to be

> higher than his/ her average age, higher than usual everyday behaviour; he is in play as if a head of himself (Vygotsky 1933/ 1966: 74-75 cited in Valsiner & van der Veer 1993: 44).

According to Vygotskian view, adult guidance is needed to start up and to extend role-play and drama activities so that children could experience some kind of micro-world of what happens in real life. This way, children can learn about social role and social relationships in society. In this respect, play contributes not only to cognitive development but social development.



Figure 8: Children are playing with a doctor's stethoscope and pretending to be a doctor. Copy right material©

Language plays a very significant role in pretend play. In this respect, role play, drama or any kind of game activities are very beneficial tools for both learners and teachers in an EFL classroom. Play can have a positive effect on learners as it can help them to gain confidence through actions, such as talking to oneself to plan what one is going to say and by saying his/her part in the play. How these activities can be exploited and practised will be presented in detail in the coming chapters in this book.

1.3.4.1. Pretend Play and Cognitive Development

Pretend play is regarded as one of the first signs of child's developing cognitive ability to enable him / her to separate primary (real) representations of objects from pretend representations (Leslie 1987). For example, pretending that a banana is a telephone receiver and speaking to it is a play for a young child. Goswami & Bryant (2007) summarises that

> "During pretend play, this primary representation [banana as a fruit] must be detached or 'quarantined' from the pretend representation [banana as a telephone receiver] …The pretend representation is not a representation of the objective world, rather it is a representation of a representation from that world. It is *meta*representation. Thus the emergence of pretend play marks the beginning of a capacity to understand cognition itself - to understand thoughts as entities" (p. 11). (Italics as in the original)

DISCUSSION POINT

- In what ways, do you think having interaction during a play can contribute to child's development? Look at Figure 8. There you see boys in a village in Bursa playing with the stethoscope of a medical school student who visits the village school with other university students. These boys have met male and female university students and a doctor candidate.
- Try to figure out how these three boys feel at that moment. Perhaps the boy who holds the equipment has felt like a doctor.

- Do you think even this feeling can motivate the child to study more to become a doctor?
- Do you think for a learner just pretending as if talking to foreigners in English in a role play activity, can have a similar activity?
- Communicative Language Teaching is in favour of the use of situational drama and role play activities where learners personify a character and speak pretending that their role is real.
- Think of such an activity and make a list of the benefits that learners can gain during the performance of this activity.

For Vygotsky imagination was a special cognitive activity which had significant effects on cognitive self-regulation. The main role of pretend play in the process of cognitive development is that rules of any pretend activity requires children to be patient and smart enough to act against their impulses. This was how they learn to develop control over their thoughts and actions (Goswami & Byrant 2007).

Vygotsky never talked about a scene where an adult preached children about a grammar rule or meanings of words. He had the adult is a facilitator in his mind. The adult creates curiosity and desire to understand what other children think or feel. As a result, children come up with real questions. These questions lead to answers, all of which build up a dialogue. This is what he means with knowledge building. As children find answers to their questions real understanding takes place. Kinginger (2002) refers to this kind of responsivity of children in the process of dialogue building as 'co-authoring'. She concludes that

> A broader understanding of the ZPD as an activity of 'co-authoring' might assist in furthering the agenda of communicative language teaching, one where the role of learners' contribution of awareness and creativity is better conceptualized…It is language awareness that can bring into relation with one another reproductive and creative needs of foreign language education… (p. 257).

Co-authoring can support communicative language teaching by fostering learners' creativity. It can also contribute to the development of language awareness if/ when used to increase interaction in foreign language classrooms.

1.3.4.2. Scaffolding and Teacher Role in the Process

The term *scaffolding* was first used by Vygotsky & Lauria (cited in Van der Veer & Valsiner 1991, p. 226). Their aim was to explain the role of adults in the process of introducing children to the culture they lived in. Wood, Bruner and Ross (1976) developed the term scaffolding. It is a metaphor which appears to describe the role played by the interaction between the child and the adult / more knowledgeable others. By means of interactional skills, adult guides the child to build up learning.



Figure 9: A volunteer university student is helping a pupil learn basic arithmetic.

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Hammond & Gibbons (2005) describes scaffolding in the context of classroom interaction as follows:

> In the context of classroom interaction, the term scaffolding has been taken up to describe the temporary assistance that teachers provide for their students to assist them to complete a task or develop new understandings, so that they will later be able to complete similar tasks alone (p. 9).

Bruner states that new learning is based on what is familiar in the child's world. Burns & de Silva Joyce (2005) summarise the process of scaffolding and the role of the adult in it as follows:

- Effective scaffolding is tuned to the needs of learners and constantly adjusted in response to what they are able to do.
- Support is gradually reduced as skills and knowledge are acquired.
- Learners are more likely to be successful when tasks are broken down into achievable parts.
- Demonstrating and modelling are important aspects of scaffolding learning.
- Focussing continually towards the whole task and the goals to be achieved is central to effective scaffolding.
- Learners have success with new tasks when they are located within formats and routines that are already familiar. (pp. 4-5).

Scaffolding can be accomplished during a task performance or it can assist learners while they try to understand a new concept. In both cases asking questions which would lead up to comprehension may be the simplest technique to initiate the process. It is important for teachers that they do activities not for the sake of doing them. They use activities in the classroom to support learning. For this purpose, teachers need to know what their learners know presently first they need to find out what they can do and cannot do with their present level of knowledge. Timing is very important. Timely support plays a key role in assisting learners to overcome challenges.




Figures 11 & 12: Two volunteer university students teach a pupil how to make a kite and fly it. Copy right material©

In this respect, it is crucial to know their learners' weaknesses and strengths. Teachers should be able to estimate to what extent they need to downgrade the challenge of a task into manageable small tasks. However, they should avoid getting lost in details and prevent learners from doing so. Teachers should have tried the task themselves in advance so that they can present a good role model. They should figure out how long the support should be provided for the learners. The support should be tailored to the demands of the task. The support should be reduced gradually in the right time to allow time and space for learners to perform independently (Guerrero & Villamil 2000). Perhaps most importantly, teachers are expected to be aware of the principles of how to contextualise a language topic in order to present it within a familiar format which is based on what learners know (Hadley 2002, Yılmaz & Karatepe 2010).

Scaffolding is the kind of support which would lead to learner autonomy and independence. It aims "to know not only what to think and do, but also how to think" (Hammond & Gibbson 2005, p. 10).

DISCUSSION POINT

- Remember Cameron (2000) distinguishes 'a learning-centred' teaching from 'a learner-centred' teaching.
- Where do you think *scaffolding* fits in according to Cameron?
- Discuss whether *scaffolding* supports a learning-centred teaching or a learner-centred teaching.

1.4. Bruner

Bruner developed a theory of cognitive growth in the 1960s. Bruner's theory of Constructivisim has been influenced by Vygotsky's and Piaget's ideas. However, in contrast to that of Piaget's, he was interested in how environmental and experiential factors shaped up cognition. He regarded learning as constructing knowledge of the world.

- Unlike Piaget, he saw the child in social interaction while learning.
- He agreed with Piaget on the issue that intellectual ability developed in stages.
- But he diverges from Piaget's thinking by arguing that how the mind is used during these stages determines this process of development.
- In this respect, Bruner's thinking was very much influenced by the ideas of researchers, such as Vygotsky.
- Bruner criticised Piaget for not taking social and cultural factors which have a significant potential to affect intellectual growth.

He published his book entitled 'The Process of Education' in 1960. It was regarded as a landmark book in the history of USA education. His ideas have influenced thinking of many teachers and educational researchers. In his book he argues that education should treat children as active problem-solvers. They should be guided to explore new things and ideas themselves. This book has been published in Turkish in 2009 (see references for citation).

Bruner based his research on human cognition on the ability of categorization. He argued that all primary cognitive activities were performed in order to categorise things and ideas. In a way, he associated mental functions

- perceiving,
- conceptualising, and
- learning with categorising. He thinks human mind interpret concepts in terms of similarities and differences between them.



Figure 14: With 'Hand Washing Project' volunteer university students first created awareness about personal hygiene through cartoons, songs and rhymes.

DISCUSSION POINT

Discuss how an activity such as 'Hand Washing Project' carried out by the city health authorities with the support of university student volunteers in Bursa. Make an attempt to analyse the process of learning how to wash hands by diving it into three mental functions (perceiving, conceptualising and learning) Bruner described.

1.4.1. Bruner's Two-Primary Modes of Thinking

He also claimed that there were two primary modes of thinking: *narrative thought* and *paradigmatic thought*.

- Narrative thought requires action-oriented, detail driven and sequential mental processes, such as storytelling. The narrative mode is more about daily life and it is used to express beliefs and intentions. The language used in narratives can show variation depending on the speaker's/ writer's thinking. It reflects his/her idiosyncratic style.

Young children's narratives are embedded in the immediate context of situation. While telling about past events and giving information, children need to use decontextualised language which is described as the kind of language that refers to people, events, and experiences that are not part of the immediate context (Wood 1999). This ability develops gradually. Around the age of 10, children master the use of decontextualized language (Wood 1999).

- Paradigmatic thought requires analytical, systematic and categorical mental processes such as logical reasoning (Bruner 1978). The paradigmatic mode is logical and scientific. The language which is used to express this kind of thought is consistent and non-contradictory. This is the kind of language high school students and university students are required and expected to use in their assignments and presentations.

  As the child matures, s/he develops ability to use both modes of thought. If s/he has a more academic family background, s/he is expected to have readiness to develop mastery of paradigmatic thought. If s/he listened to many stories, if s/he was allowed to tell a story at a young age and motivated to do so, s/he can get the chance to develop mastery of narrative mode of language.

1.4.2. Bruner's Three Types of Cognitive Representation

Bruner's theoretical framework focuses on how learners construct new concepts by drawing on their background knowledge. According to Bruner, learner is very active in this process. S/he decides which part of new information to focus on and transforms it based on his/her past experiences. While doing this, s/he forms hypotheses and figures out how this new bit of information and background knowledge are related. This is how human beings perceive, understand and then learn new concepts.

Bruner describes three types of representation in the process of cognitive development in children:

The Enactive Mode: The infant gets to know the world through physical contact mostly. This way s/he stores information as muscle memories. The stored information is mostly a consequence of his/her physical actions such as grabbing an object, shaking it and perhaps tasting it. This experience is recorded and stored as a nasty or perhaps enjoyable experience. Thinking is based on these physical actions. Bruner refers to thinking as internal representation. He believes that infant learns through doing not thinking. Thinking requires internal representation of information and processing it. However, this is not possible during this early period of life.

The Iconic Mode: Information is stored as sensory images. Some children develop a very good photographic memory. But they lose it later in life. Thinking is based on mental images (icons) of things and senses the child experiences.

The Symbolic Mode: Information is stored as symbols. In this stage**,** language is a powerful symbol. The child can now store information as verbal memory. Representation of the world is mainly through language but music and numbers are also employed as symbol system (Bruner 1978).

1.4.3. Bruner's Theory of Instruction and Spiral Curriculum

Both Piaget and Vygotsky attempted to understand how children think and learn. Vygotsky described how interaction supports learning. However, Bruner's theory is regarded as a theory of instruction.

Bruner assigns an unconventional role to the instructor. S/he is there to guide the learner not to teach him /her in the traditional sense. By means of active interaction between the learner and the instructor they can discover the way of doing this. During this dialogue, the instructor can encourage the learner and support learning process by asking guiding questions.

However, the curriculum should also be designed so that it could facilitate this kind of learning process. Bruner suggests designing curriculum in a spiral manner. This can assist learners to build upon existing knowledge.

1.4.3. Four Major Aspects of Bruner's Theory of Instruction

Based on this argument, Bruner (1996) proposes four major aspects that a theory of instruction should have:

1- **Readiness for learning**: He argues that

> any subject can be taught effectively in some intellectually honest form to any child at any stage of development Bruner (1960, 33).

With this argument, he clearly disagrees with Piaget, who argues that children's cognitive skills develop in time.

Since learners construct ideas and concepts based on their existing knowledge, instructors are to prepare background knowledge for the upcoming concepts and issues, before introducing them in detail. This takes us to his idea of *spiral curriculum*.

2- **Spiral Curriculum**: The ways of how new information is structured to enable learners to grasp it. The idea behind Spiral Curriculum is that

> A curriculum as it develops should revisit this basic ideas repeatedly building upon them until the student has grasped the full formal apparatus that goes with them (Bruner 1960, 13).

3- **Intuitive and Analytical Thinking**: These two types of thinking contradict with one another.

- Piaget seems to favour analytical thinking. For this reason, teachers appear to aim to help their learners to think analytically. They like to use tasks to foster their analytical thinking.
- However, Bruner argues that children should learn how to make use of their intuitions. They should also gain self-confidence to depend on their intuitions.

Instruction should be designed to help learners to infer and discover. That is, instruction is to facilitate learners' thinking so that they are able to go beyond the information given and / or read between the lines when needed.

4- **Motives for Learning**: Bruner states that the best way to motivate learners is to present the course material in an interesting structure. It would motivate them better than exams or fear of future. It would certainly foster learning.

Bruner sees education as "the establishment of knowledge" (1966, 72). He thinks learners should take part of the process of "knowledge –getting" (*ibid*). To contradict today's exam score based education he argues that these scores do not tell us what learners know and how much they have developed during the process of education as it is a kind of end-product. However, Bruner claims that we need to know through which processes and how learners developed during the process of learning. Because he believes "knowing is a process not a product" (*ibid*).

While Piaget and Bruner agree on issues related to abstract thinking, they fall apart on the issues of 'logic' and 'intellectual development'. Piaget gives 'logic' prime importance. He argues that it is "a framework for understanding the nature and development of thinking" (Woods 1999, 10). However, Bruner claims that "logic is not the basis of mature adaptive thinking" (Woods 1999, 10). He sees logic as one of the ways of thinking.

1.4.4. Bruner versus Piaget

Bruner carried out experiments on adults to understand adult reasoning. He concluded that people did not make use of a single method or logic while solving problems. They utilized a variety of strategies. These might not be equally effective and good strategies. Bruner was interested in the process through which people solve problems. In other words these are the processes of creative thinking (Wood 1999, p.9). On the other hand, Piaget was interested in the structure of mature thinking. That is, Piaget focused on what they could do or could not do. In a way, he was more interested in the product not the process.

According to Woods (1999), both Piaget and Bruner emphasised the importance of action and problem solving.

> From both perspectives, [instruction] that teaches children only how to manipulate abstract procedures (e.g. learning how to solve equations) without first establishing the deep connections between such procedures and the activities involved in the solution of practical, concrete problems (which the procedures serve to represent at a more abstract level) is bound to fail (Wood 1999, p. 9-10).

"Abstract thinking, in both accounts, should grow out of, be abstracted from, material actions" (Woods 1999, 9). This way, the topic is presented as practical and concrete concepts. This is observed very frequently in our English lessons. Teachers typically teach modal verbs for example, without relating their usage to speech acts such as requests and suggestions. As a result, modal verbs will only remain as a grammar topic (abstract) in learners' mind. Whereas, they could easily be related to real life interaction situations where learners are required to make requests and suggestions and reply these speech acts.

Learners know how to perform these speech acts. Therefore, teachers can easily make use of social conventions in Turkish to lead the learners on the issues such as appropriacy in language use. This can easily help learners to grasp both meaning and usage of modal verbs in a more concrete and meaningful way. Bruner insisted that new topics should be based upon existing knowledge. Learners know how to use these speech acts in Turkish.

Unlike Piaget, Vygotsky and Bruner favour collaborative learning and teaching and the child's ability to follow instructions from his/her partners in group work. They support that this way leads to learning centred teaching. If you remember that communicative language teaching is also in favour of establishing interaction in the classroom via various communicative activities. But then, the assessment and evaluation system in our country and in many other countries assess and evaluate learners individually. Centrally-run multiple choice tests or True-False tests cannot measure a learners' ability to use English while performing a task during a co-operative task. Therefore, English language education principles are not incongruence with the country's assessment and evaluation conventions. As a consequence, teachers end up teaching to the test. That is, they adopt a learner-centred perspective. As a result, their teaching principles are based on that of Vygotsky's and Bruner's but the principles and conventions for assessing and evaluating the product of this teaching are based on the principles of Piaget's.

1.5. Why do we need theories of learning?

Teacher Education programmes aim to construct of an integrated body of knowledge about teaching and learning and to assist student teachers to develop cognitive skills to analyse teaching and learning processes. However, development of student teachers' professional knowledge can be hampered due to their tendency to focus on explicit non-cognitive student/

teacher behaviours. In so doing, they seem to ignore the cognitive nature of teaching and learning. Therefore, they may fail to interpret cognitive aspect of teaching and learning. Consequently, they tend to rely heavily on affective aspects of teaching and learning most of the time. That is, they may fail to misinterpret the reasons of student success or failure and learning process. For example, a teacher / a student teacher may attribute students' failure to produce sentences in English to anxiety while it could be well because of the fact that students could not understand the use of a particular expression or phrase due to lack of basic grammar knowledge or due to unfamiliar cultural elements in the textbook unit.

When teachers/student teachers do not have a firm grasp of cognitive underpinnings of their teaching and student learning, they tend to limit their classroom practice to colourful, attractive and playful activities with little value for learning English. They tend to fail to see whether a particular attractive activity may not really suitable to the students' cognitive skills and relevant to students' lives.

Teacher candidates should develop a solid understanding of cognitive aspects of processes of both learning and teaching in the classroom where not only students but also teachers learn new things. A well understanding of cognitive processes would not allow their pre-conceptions to shape the way they teach and interpret learning. The literature in the field of teacher education reports that teachers' understanding of how particular topic is taught is heavily influenced by how themselves were taught about it (cf. Stofflett & Stoddart 1994). It is also reported that teachers show a strong resistance to change their preconceptions regarding teaching. Therefore, it is essential for teacher educators to qualify future teachers with a strong body of knowledge on teaching and learning so that they are able to remain well- informed and open to change.

END NOTE:

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