

TEACHING IN THE CONTEXT OF HIGHER EDUCATION



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„For the things we have to learn before we can do them, we learn by doing them.“
Aristotle

Zuzana
Straková

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“FOR THE THINGS WE HAVE TO LEARN BEFORE WE CAN DO THEM, WE LEARN BY DOING THEM.”

ARISTOTLE

Higher education is typically seen as a place where highly motivated learners acquire skills and knowledge which create the base for their future profession. It is generally anticipated that learners at the academic level will be able to see the relevance of the learning process and based on their prior experience they will be able to direct their own steps in order to achieve the final aims. At the same time it is expected that teachers pursue the excellence by using such approaches which allow the learners to develop self-directed learning and will help them to acquire such skills they will need for their life-long learning.

This chapter looks at the complexity of the teaching and learning processes in higher education considering various aspects which may influence the success in reaching the anticipated learning outcomes.

1.1 TEACHER IN HIGHER EDUCATION

1.1.1 Teacher beliefs

The way a teacher acts in the classroom is always influenced by many factors which determine a teacher's style and manner. It is necessary, first, to mention the learners' and teachers' beliefs and assumptions about learning and teaching.

The role of beliefs is important not only in understanding the learning and teaching process, but they are a part of our everyday life since they help us understand reality as well as function properly in our social environment.

Michaela Borg (2001, p.186) outlines the concept of belief as follows:

“... a belief is a proposition which may be consciously or unconsciously held, is evaluative in that it is accepted as true by the individual, and is therefore imbued with emotive commitment; further, it serves as a guide to thought and behaviour...”

It is obvious that beliefs, especially those held unconsciously would serve a selective aspect of whatever new thing that one is being confronted with.

Richards and Lockhardt (1995, p. 30) claim that “*teachers' belief systems are founded on the goals, values, and beliefs teachers hold in relation to the content and process of teaching, and their understanding of the systems in which they work and their roles within it.*” In addition, other educational psychologists (Williams, Burden, 1997; Woods, 1996) admit the important role these beliefs have in whatever action we take in the classes and whatever decision we make as teachers. Their importance needs to be stressed even because they might guide a teacher more than a teacher training course or any methodological advice published in teacher's books can.

Research that has been conducted within the field of teachers' belief systems suggests that we need to look at the **sources** of their origin to understand the complexity of their substance. Richards and Lockhardt (1995, p. 30) for example state the following sources of teachers' beliefs:

1. Their own experience as language learners. Since all teachers used to be learners themselves and the practices they experienced are deeply rooted inside of them in connection with both positive and negative attitude. Richards and Lockhardt demonstrate it on one teacher's point of view comparing her prior learning experience as a learner and her teacher training: *„By the time we receive our bachelor's degree, we have observed teachers and participated in their work for up to 3,060 days. In contrast, teacher preparation programs [at the master's level] usually require [about] 75 days of classroom experience. What could possibly happen during these 75 days to significantly alter the practices learned during the preceding 3,060 days?“* (ibid.)

2. Experience of what works best. It is obvious that practice itself has a great influence on what teachers will believe since they would probably rely more on what works for them in certain circumstances and try to transfer it to various contexts.

3. Established practice. Certain teaching practices might be preferred within one school or area or even the whole country. This might also be put into the connection with the educational value theories that dominate certain areas (e.g. Classical humanism, Reconstructionism, Progressivism).

4. Personality factors. The personality of a teacher plays an important role in selecting certain patterns of interaction with students, preferences among teaching approaches and philosophies.

5. Educationally based or research-based principles. The professional development of teachers may also influence the formation of their beliefs, e.g. attendance at conferences, seminars, courses, sharing their experience with other professionals and learning from the latest results of pedagogical research.

Although the investigation of beliefs might lead to the disclosure of the source of such beliefs that would later enable the teacher to become aware of all consequences, it is important to note that teachers themselves are frequently not able to articulate and clearly state these beliefs. They are not even consciously searching for existence of such

phenomena in their teaching practice. The only evidence in such cases is the concrete manifestation of their own decision-making process in reality.

Young teachers, fresh from their university training, often start their teaching career with plenty ideas which they want to implement in their teaching. Carrying all former teachers inside of them, however (as one source of the beliefs), disables them to put in practice things they only heard about during their training. Hence, they go holding the baton and doing what their kept doing unless they are able to disclose, name and treat these beliefs the right way and modify their behaviour consciously.

Focusing on **beliefs about learning** it is necessary to underline that neither students nor teachers come to the learning-and-teaching process blank – with no prior experience, with no expectations. Students are influenced by what they have been through in the education process in general and by things they have experienced in other subjects. Teachers on the other hand may base their beliefs also on their pre-service and in-service training, on their experience from personal professional development or even on their early learning experience.

In connection with the **beliefs about teaching** it would be fair to admit that since we all differ in how we approach things outside the classroom, teaching necessarily reflects this personal nature. If two different teachers were asked the questions below, they would very probably reply differently, which cannot imply that one is a more successful and effective teacher than the other:

- How do you see your role in the classroom? How would this be apparent to a visitor?
- What teaching methods do you try to implement in your classroom?
- What teaching resources do you make use of?
- How would you define effective teaching? What are the qualities of a good teacher?
- What is your approach to classroom management?

Questions like these can provide the focus for thinking about what guides us to certain actions and what influences us in our decision-making process. Our beliefs, which are deeply hidden inside, form our teaching style and we unconsciously tend to have certain preferences. However, the process of becoming aware of why things are happening as they are seems to be vitally important to bridging what both we and our students want from the learning-and-teaching process. We need to learn how to direct our actions consciously and with a clear vision of how we should adjust our approach in relation to our learners.

1.1.2 Teacher style and roles

Experienced teachers would probably agree that there are certain areas of teaching manner through which they try to handle the teaching process with ease. Their demonstration in the classroom will of course depend on the above-mentioned teacher beliefs as well as the environment in which the teacher operates. These areas are:

Area	Aim
EYE CONTACT	<ul style="list-style-type: none"> - to gain attention - to select students to speak - to check whether students are listening - to check understanding - to encourage contributions - to show interest
GESTURES / FACIAL EXPRESSIONS	<ul style="list-style-type: none"> - to convey meaning - to focus students' attention - to manage the class - to select students to speak - to encourage - to avoid too much teacher talk
POSITION / MOVEMENT	<ul style="list-style-type: none"> - teacher at front / teacher at the back / teacher standing or sitting / - teacher moving around
ATTENTION SPREAD	<ul style="list-style-type: none"> - how many students speak - how often individual students speak - how many students receive individual attention - how many times teacher asks individual students questions
VOICE	<ul style="list-style-type: none"> - speed - volume - stress - intonation
RAPPORT	<ul style="list-style-type: none"> - relationship of teachers and students - responding to individual students - showing interest (in teaching itself, in students, in materials used) - asking for feedback - encouraging group dynamics and good relationship among students

TABLE 1.1 Handling teaching process

The teaching process requires handling many different **roles** during a lesson. First of all teachers need to organise the lesson and decide about the extent of their involvement in the lesson and the amount of time given to learners. They also need to listen to learners and give them feedback, correct their mistakes, provide information and sometimes even join learners in various activities. However, all these roles will be carried out in accordance with the teacher's overall understanding of their approach towards the teaching and learning process.

Generally, the most important distinction is made between the role of *controller* and the role of *facilitator* (Harmer, 1991, p. 235). We are apt to connect the role of controller with

a traditional classroom within which the teacher asks questions, explains, directs all actions and therefore stands in the centre most of the lesson and does most of the talking. The controller is also the one who makes all the decisions about the learning process. The learners are usually addressed as one homogenous group and the teacher uses the same pace for everyone.

The facilitator, on the other hand, is understood as a person who should address the individual needs of learners and not treat them as one identical group; the teacher - facilitator suggests rather than directs, encourages rather than asks and advises and prompts students into mutual interaction rather than a one-way communication.

Besides these two basic roles Harmer (ibid., p. 235) mentions the following ones:

- ASSESSOR: teacher functions as correcting mistakes, giving feedback, testing
- ORGANISER: giving instructions, explanations, making things go smoothly
- PROMPTER: eliciting, encouraging
- RESOURCE: "walking dictionary", the source of information
- TUTOR: for individual needs of learners
- PARTICIPANT: an equal member of the group
- INVESTIGATOR/RESEACHER: teacher's own professional development as well as own research which is particularly important in higher education.

It is, however, important to be aware of a cultural dimension of roles. As Richards and Lockhardt (1995, p. 107) claim, teaching is embedded within a set of culturally bound assumptions about teachers, learners and the whole teaching-and-learning process. *"These assumptions reflect what the teacher's responsibility is believed to be, how learning is understood, and how students are expected to interact in the classroom."* (ibid., p.107) A teacher-centred approach might be considered as desirable in some cultures (e.g. in a Chinese classroom) while other cultures would view it as inappropriate way of approaching learning (e.g. Western cultures).

1.2 LEARNER IN HIGHER EDUCATION

The latest trends in educational theories have acknowledged the learner as a powerful contributor to the learning process and we can no longer be content with the image of the student as a blank slate. Students bring to the learning process a whole range of more or less visible things: their needs, their life experience, their home background, their worries, their day so far, their dreams, their moods, etc. (Scrivener, 1994). Recent research in the area of individual differences in language learning suggests that teachers need to be aware of these differences among learners in order to provide them with the most effective approach. These can be identified within the area of motivation, attitudes, self-esteem, risk-taking, anxiety as well as learning preferences and the use of learning strategies.

1.2.1 Motivation and attitudes

All learners have certain characteristics, which might enhance or hinder their learning. These characteristics have been categorised into many different groups, which, however,

have one thing in common - they all state motivation as one of the most important factors influencing learning. Teachers frequently say that if they have a group of motivated learners, the learning process is smoother and the learners achieve their aims with ease. On the other hand, if they work at school, where the English language is only of peripheral interest, the success is much harder to observe and the whole process is slow and ineffective.

Motivation is a rather complicated term and different approaches and people have defined it differently. Behaviourists, for instance, saw a big stimulus in a reward, which consequently motivated learners to proceed in the process of learning with anticipation of further rewards. Cognitive psychologists define motivation in terms of certain needs or drives. Brown (1994a, p.152) presents the example of Ausubel's theory, that learning takes place through a meaningful process of relating new events or items to already existing cognitive concepts, and his identification of six needs:

1. the need for exploration, for probing the unknown
2. the need for manipulation, for operating in the environment and causing change
3. the need for activity, for movement and exercise, both physical and mental
4. the need for stimulation, the need to be stimulated by the environment, by other people, ideas, thoughts, feelings
5. the need for knowledge, the need to process and internalise the results of exploration, manipulation, activity, and stimulation, to resolve contradiction and search for solutions
6. the need for ego enhancement, for the self to be known and accepted and approved by others

Of course, there are also other possible factors connected with motivation. One of the best known theories in the fields of needs is the one of Abraham Maslow, which is sometimes referred to as **Maslow's hierarchy/pyramid of needs**:



Williams and Burden (1997, p. 120) offer a definition within a **social constructivist** framework. They suggest that motivation is “a state of cognitive and emotional arousal”, i.e. the state when “the person’s interest or enthusiasm is activated, leading them to make a conscious decision to act in certain ways in order to achieve a particular goal related to the activity undertaken.”

Many authors (Harmer, 2001; Williams, Burden, 1997) and especially cognitive psychologists divide the nature of motivation into internal (intrinsic) and external (extrinsic). We talk about **intrinsic motivation** when the learner is learning because he has some inner desire, is interested in doing the tasks because it may, for example, correspond with his own interests and be, therefore, enjoyable. **Extrinsic motivation**, on the other hand, derives from the outside world – interests in jobs, good grades, rewards, influence of people around, etc. Though this distinction might be viewed as too simplified, since some drives cannot be identified clearly as either internal or external, it still brings a very important focus for the language teachers. Psychologists suggest that it is crucial for the teacher to involve learner’s intrinsic motivation into the learning process, since it enables the learners to store and retrieve the information or knowledge within the long-term memory and has, therefore, much more lasting effects on the learner in the long run.

According to the research studies in the field of extrinsic and intrinsic motivation it is interesting to notice though, that some extrinsic rewards, namely positive feedback and self-determination, can have an effect on intrinsic motivation (Brown, 1994b, p.39). Even though a clear extrinsic motivation for higher education students can be earning the qualification which will enable them to get a job, personal development and the development of life competences as the generator of intrinsic motivation should not be underestimated. Appropriate challenge through stimulating tasks and a variety of activities can bring the novelty in the learning process and feed the intrinsic motivation of the learner and influence their attitudes towards not only individual subjects but their future career orientation as well.

Learners’ attitudes towards the target language and culture are closely connected with motivation and will have an influence on their achievements. Positive attitudes will enhance the learning process and foster the learners’ desire to achieve the aims. On the other hand, negative experience (with the target culture, language, a language teacher or even a negative classroom event) can develop a negative attitude towards the whole learning process and the learners themselves will not achieve their aims with ease.

1.2.2 Self-esteem, risk-taking and anxiety

When we consider **personality** factors, we need to address more than just one issue. Success in learning influenced by personality features is frequently associated with extroverted learners. This is taken for granted because they are more visible and more audible in the classroom and they take more turns in discussions than introverted learners. However, this does not necessarily mean they are better learners as well. Arnold and Brown (1999) define extroversion as “the need for receiving ego enhancement, self-esteem and a sense of wholeness from other people” and they compare it with introversion, which according to them “refers to the degree that

individuals derive this sense from within themselves”. As they further claim, “introverts can have a greater inner strength of character and may show high degrees of empathy, both qualities being useful for language learning”. However, we must not forget that there are also other features of behaviour connected with personality of the learner like self-esteem, risk-taking, anxiety, empathy, or inhibition.

Self-esteem is an essential aspect of human behaviour and as Brown (1994a, p.136) states, “no successful cognitive or affective activity can be carried out without a certain degree of self-esteem or self-confidence, knowledge of yourself, and belief in your own capabilities for that activity”. Success and self-esteem are mutually interacting factors influencing each other. If, for instance, a teacher encourages a learner through positive feedback, it might result in the desire to take part in learning and future success, which would, as a backwash effect, influence the learner’s self-esteem.

A learner’s desire to learn might furthermore transform into a higher level of **risk-taking**. Especially students in higher education need to be able to cope with the idea of trying out things, making intelligent guesses, saying things out loud, approximating the language. The desirable level is somewhere in the middle on a continuum because it can be counterproductive to take a risk at whatever cost. However, as adult learners they usually have a much lower level of risk-taking since the desirable image of themselves as learners seems to be threatened by a miscomprehension. In combination with the higher level of anxiety it can represent a barrier for the learner to function properly in seminars where their contributions are expected.

Anxiety is a factor, which is present in many different situations and does not occur only in a language classroom. However, it is especially a foreign language classroom, which leads to anxiety the most, since a learner is asked to perform in a comprehensible way in front of other people, to act and react in a new language and to expose oneself to many mischievous situations. Arnold and Brown (1999) mention two different sources of anxiety. One is termed as **existential anxiety** and can be further divided to *acceptance anxiety* (Will I be accepted, liked and wanted?), *orientation anxiety* (Will I understand what is going on?) and *performance anxiety* (Will I be able to do what I have come to learn?). The other source is termed as **archaic anxiety**, which has its roots in the personal history of each learner - the distress of the past (ibid., p. 9). The presence of anxiety in the classroom is conditioned by many factors – the selected approach or method, a teacher’s personality, rapport between the teacher and learners, relations inside a group of learners, as well as individual learner’s perception – self-esteem –of being able to contribute to specific classroom activities and situations.

Creating a positive classroom environment may result in lowering the level of anxiety. The teacher needs to respect students’ opinions and let them present their own viewpoints. It helps if instead of correcting students directly the teacher invites other students in the class to consider appropriateness of the content or the language form (if this is happening in the language classroom). Even though students in higher education vary in many aspects (see the chapter 1.2.4) in general it can be assumed that their willingness to participate in seminars will raise if they consider the task or the question personally challenging and if they see their own contribution as a meaningful one.

1.2.3 Learning preferences and learning strategies

All people have their own way of approaching learning, i.e. different learning styles. If a teacher discovers the benefits of raising students' awareness about their individual learning strengths, it results in higher interest and motivation in the learning process and it increases student responsibility for their own learning, and greater classroom community. These are affective changes, and the changes result in learning that is more effective (Reid, 1999).

Language **learning styles** are general approaches we use to learn a new language. These are the same styles we use in learning other subjects. One very important dimension of language learning styles is **analytical-global** dimension. It contrasts focusing on the details with focusing on the main idea or big picture. The difference between these two types of students is very important because they react differently in the language classroom.

Analytical students (field independent), e.g. in a language classroom, tend to concentrate on grammatical details and react better in grammar-based activities. We can notice, however, that during activities that are more communicative they do not participate much or remain completely silent. They focus on contrastive analysis between languages, on learning the rules and principles but they do not like to make guesses or use synonyms and paraphrasing when they do not know a particular word. They only want to react when they are sure they are accurate so it might be problematic to lead them towards fluency. In contrast, **global students** (field dependent) like socially interactive, communicative events in which they can emphasise the main idea. They find it hard to cope with grammatical details, and they avoid analysis of words, sentences, and rules when possible. Such students are happy with compensation strategies like guessing the meaning of a word they hear or read, and using synonyms or paraphrases if they run into a communicative block in speaking or writing. However, some students might belong to both groups, because in some cases the distinction is not so strict.

Another significant dimension is based on **sensory preference**. According to this dimension, we distinguish three main groups of learning styles: visual, auditive (or auditory) and kinaesthetic.

Visual students like to read and receive information mainly through their eyes. If they are at lectures, they require a great deal of visual stimulation. It can be very confusing for them otherwise.

Auditive/auditory students, on the other hand, are comfortable without visual input and like to receive the information mainly through their ears. They, therefore, enjoy lectures, conversations, and oral directions. They would rather record lectures than take notes. They tend to participate frequently in role-plays and similar activities. They sometimes, however, have difficulties with written work.

Kinaesthetic students like lots of movement and enjoy working with objects. They find it difficult to remain sitting for a long time and prefer to have frequent breaks. Their preference for obtaining information is mainly through their hands, body and feelings.

Much learning style research has demonstrated that there are substantial individual differences among students' preferred styles and their selected use of learning approach and learning strategies. Moreover, as Becher and Trowler (2001) suggest that "the preferred learning style might be attributable to a relationship with a particular disciplinary framework. This may need to be taken into account when planning learning opportunities in different disciplines" (c.f. Fry, H. et al, 2003, p. 19).

Intelligence has traditionally been defined in terms of intelligence quotient, which measures a range of verbal/linguistic and logical/mathematical abilities. In 1983 Dr. Howard Gardner (1983) proposed his theory of **multiple intelligences** in which he argues that people possess a number of distinct intelligences that manifest themselves in different skills and abilities. He claimed that the traditional notion of intelligence, based on I.Q. testing, was too limited and he therefore presented his theory of eight different intelligences to account for a broader range of human potential in children and adults.

It is evident from Gardner's theory that our schools focus most of their attention on linguistic and logical-mathematical intelligence. However, Gardner says that we should also place equal attention on individuals who show gifts in the other intelligences. Gardner originally identified seven intelligences:

Linguistic (verbal) intelligence: using words effectively in both speaking and writing. This intelligence includes such skills as the abilities to remember information, to convince others to help you, and to talk about language itself. Students can develop this intelligence through things to look at, listen to, and write about as well as tasks for mutual interaction in the class.

Logical-mathematical intelligence: using numbers effectively and reasoning well. This includes such skills as understanding the basic properties of numbers and principles of cause and effect, as well as the ability to predict, using simple machines. Students can develop this intelligence through experimentation with numbers and by using simple machines or computer programs to think about cause and effect.

Interpersonal intelligence: understanding another person's moods, feelings, motivations, and intentions. This includes such skills as responding effectively to other people in some pragmatic way, such as getting students or colleagues to participate in a project. Students can develop this intelligence through activities that involve them in solving problems and resolving conflict.

Intrapersonal intelligence: understanding oneself – the strengths, weaknesses, moods, desires, and intentions. This includes such skills as understanding how someone is similar to or different from others, reminding oneself to do something, knowing about oneself as a language learner, and knowing how to handle feelings. Students can develop this intelligence through expressing their own preferences and understanding their own styles of learning.

Bodily-kinaesthetic intelligence: using the body to express ideas and feelings and to solve problems. This includes such physical skills as coordination, flexibility, speed, and balance. Students can develop this intelligence through opportunities for physical challenges during the lesson.

Musical (rhythmic) intelligence: sensing rhythm, pitch, and melody. This includes such skills as the ability to recognize simple songs and to vary speed, tempo, and rhythm in simple melodies. Students can develop this intelligence through using tape recorders for listening, singing along, and learning new songs.

Spatial intelligence: sensing form, space, colour, line, and shape. It includes the ability to graphically represent visual or spatial ideas. Students can develop this intelligence through opportunities for visual mapping activities and encouraging students to vary the arrangements of materials in space, such as by creating charts and bulletin boards.

Adapted from Christison, 1998

Besides learning preferences our learners might differ in the way they are able to use **learning strategies** effectively. Oxford (1990) defines learning strategies as *steps taken by students to enhance their own learning*. Strategies are especially important for language learning because they are tools for active, self-directed involvement, which is essential for developing communicative competence. Appropriate language learning strategies result in improved proficiency and greater self-confidence.

Learning strategies should make learning easier, faster, more enjoyable, more self-directed, and more transferable to new situations. Oxford (1990, p.9) highlights the importance of learning strategies in several points. Language learning strategies:

- contribute to the main goal, communicative competence,
- allow learners to become more self-directed,
- expand the role of teachers,
- are problem-oriented,
- are specific actions taken by the learner,
- involve many aspects of the learner, not just the cognitive,
- support learning both directly and indirectly,
- are not always observable,
- are often conscious,
- can be taught,
- are flexible,
- are influenced by a variety of factors.

Learning strategies can be divided according to various criteria. Within the ELT field we can find a very useful division by Rebecca Oxford (1990) who differentiates between direct and indirect strategies, where indirect strategies involve universal learning strategies which can be used while learning any subject a direct strategies are focused mainly on language learning. Another division has been proposed by Anna Uhl Chamot and Michael O'Malley (1994) who distinguish three main groups of strategies – metacognitive, cognitive and social/affective. Metacognitive learning strategies usually direct the learner planning, monitoring and evaluation stages. They compare them to “executive processes that enable one to anticipate or plan for a task, determine how

successfully the plan is being executed, and then evaluate the success of the learning and the plan after learning activities have been completed” (ibid., p. 61). Cognitive strategies do not have such a broad application and are rather focused on processes involved in mastering an individual task. Social/affective learning strategies develop skills of effecting functioning within cooperative learning, communication within a group, supporting each other as well as themselves.

1.3. APPROACHES IN HIGHER EDUCATION

Learning in general can be described as a complex process influenced by many factors. Though the effects of learning, as the consequence of the change in behaviour, might be visible in the ways we think and act, learning itself is rather subtle and invisible process. It is much easier to observe a teacher teaching than a learner learning. It is, therefore, understandable that the central points of the discussions among teachers are more frequently teaching activities, techniques or procedures rather than the learning process. However, it needs to be stressed that teaching cannot be separated from learning though the learning itself is not so closely linked to teaching, and so we cannot speak about successful teaching techniques until we realize the reasons why they are successful and why they bring about learning. Teaching thus should be viewed as the facilitation of learning (Straková, 2013). Ambrose et al. (2010) describe learning in three ways:

1. Learning is a process, not a product. However, because this process takes place in the mind, we can only infer that it has occurred from students’ products or performances.
2. Learning involves change in knowledge, beliefs, behaviors, or attitudes. This change unfolds over time; it is not fleeting but rather has a lasting impact on how students think and act.
3. Learning is not something done to students, but rather something students themselves do. It is the direct result of how students interpret and respond to their experiences — conscious and unconscious, past and present (ibid. p.3).

As Fry et al. (2003) state the psychology identifies several schools of thought focusing on the areas of learning in general especially on how learning influences the basic motives for learning:

- **Rationalism** (or idealism) is one such school, or pole, of learning theory still with some vogue. It is based on the idea of a biological plan being in existence that unfolds in very determined directions. Chomsky was a foremost member of this pole.
- **Associationism**, a second pole, centres on the idea of forming associations between stimuli and responses. Pavlov and Skinner belong to this pole.
- In the twenty-first century cognitive and social theories are those used most widely, with **constructivism** being the best known. Most contemporary psychologists use constructivist theories of varying types to explain how human beings learn. The idea rests on the notion of continuous building and amending of structures in the mind that 'hold' knowledge. These structures are known as **schemata**. As new understandings, experiences, actions and information are assimilated and accommodated the schemata change. Unless schemata are changed, learning will not occur. Learning (whether in cognitive, affective, interpersonal or psychomotor domains) is said to involve a process of individual transformation. Thus people actively construct their knowledge (Biggs and Moore, 1993). Piaget (1950) and Bruner (1960, 1966) are two of the twentieth century's most eminent educationalists, with views that are largely congruent with constructivism.

Fry et al, p. 9-10

As they make clear constructivism understands learning as „fitting new understanding and knowledge into and with, extending and supplanting, old understanding and knowledge“ (ibid). Even nowadays and at any level we witness the kind of instruction which applies the jug-and-mug principle and anticipates that students have no prior knowledge and should, therefore, take and remember all what teachers offer and store it in a linear order. “*Students as tabula rasa*” is a wrong conception and it is the transformation and extension of already existing knowledge which should be a starting point for designing the higher education instruction. In comparison *behaviourists*, dominant school of the first half of the twentieth century believed that learning is a process of habit formation and that through constant repetition and imitation of a model, learners would achieve the desired competence and bring about learning. This process is based on the formula stimulus-response-reinforcement and it is especially the last step – the positive reinforcement – that matters a lot because it provides the reason for forming the new habit.

Since constructivist view on learning claims the importance of change or modification in already existing knowledge it is crucial to design the learning environment where the concrete experience and reflection are the core. Kolb's theory of experiential learning provides condition for learning where the learner learns from **concrete experience** to **reflective observation** then to **abstract conceptualization** to the stage of **active experimentation**. This last stage ultimately brings the learner to the new phase of gaining another concrete experience as the beginning of a new cycle (Ur, 1996, p. 6).

Another example of applying constructivist view in higher education could be Honebein's seven goals for teachers to bear in mind when they design constructivist learning environments:

1. Provide experience with the knowledge construction process;
2. Provide experience in and appreciation for multiple perspectives;
3. Embed learning in realistic and relevant contexts;
4. Encourage ownership and voice in the learning process;
5. Embed learning in social experience;
6. Encourage the use of multiple modes of representation;
7. Encourage self-awareness in the knowledge construction process. (c.f. Murphy, 1997, p. 11)

These goals seem to be crucial especially when it comes to the higher education since adult learners at the tertiary level should be equipped with a high level of abstract thinking and should be able to operate at the higher order thinking level. Elisabeth Murphy (1997) designed a simple checklist which can serve as a tool for identification of the presence of constructivist characteristics in the learning process and learning activities:

Multiple perspectives – a variety of perspectives involved and encouraged when looking at particular issues of the learning content and the subject matter.

Student-directed goals – goals and objectives are derived by the student or in negotiation with the teacher or system.

Teachers as coaches – teachers serve in the role of guides, monitors, coaches, tutors and facilitators.

Metacognition – activities, opportunities, tools and environments are provided to encourage metacognition, self-analysis, self-regulation, self-reflection & self-awareness.

Learner control – the student plays a central role in mediating and controlling learning.

Authentic activities & contexts – learning situations, environments, skills, content and tasks are relevant, realistic, authentic and represent the natural complexities of the 'real world'.

Knowledge construction – knowledge construction and not reproduction is emphasized.

Knowledge collaboration – the construction takes place in individual contexts and through social negotiation, collaboration and experience.

Previous knowledge constructions – the learner's previous knowledge constructions, beliefs and attitudes are considered in the knowledge construction process.

Problem solving – problem-solving, higher-order thinking skills and deep understanding are emphasized.

Consideration of errors – errors provide the opportunity for insight into students' previous knowledge constructions.

Exploration – exploration is a favoured approach in order to encourage students to seek knowledge independently and to manage the pursuit of their goals.

Apprenticeship learning – learners are provided with the opportunity for apprenticeship learning in which there is an increasing complexity of tasks, skills and knowledge acquisition.

Conceptual interrelatedness – knowledge complexity is reflected in an emphasis on conceptual interrelatedness and interdisciplinary learning.

Alternative viewpoints – collaborative and cooperative learning are favoured in order to expose the learner to alternative viewpoints.

Scaffolding – scaffolding is facilitated to help students perform just beyond the limits of their ability.

Authentic assessment - assessment is authentic and interwoven with teaching.

Primary sources of data - primary sources of data are used in order to ensure authenticity and real-world complexity.

Adapted from <http://www.ucs.mun.ca/~emurphy/stemnet/cle4.html>

As students vary in many aspects (see chapter 1.2) this is reflected also in their approach to learning. Marton and Säljö (1976) identified different approaches of their students in reading. Some students focused only on superficial memorization of the text content with the aim to answer the questions afterwards. On the other hand there were students who tried to get deeply under the surface and grasp the the meaning and the implications of the text in order to understand it not merely remember the facts. That experience coined the terms **deep** and **surface approach** to learning and has been a focus to many studies in various subject areas. The former is typically seen as an approach where students try to understand the core substance, read or think critically evaluating their prior knowledge and experience and try to fit the new piece of information or knowledge in the system. This necessarily means reconsideration of things already learnt in order to approve or disapprove the change in the system. The latter, on the other hand, is a typical demonstration of behaviour in which students try to survive the course by memorizing what is necessary, accomplishing the basic requirements for the assignments in order to achieve such evaluation that would grant the credits. They do not immerse deep into the subject matter; instead they reproduce the ideas they have received from the teacher or found in the textbook. The clear evidence of such approach is missing ability to interconnect individual pieces of new knowledge and the prior knowledge or experience. The absence of this skill is crucial for application of the knowledge into a new situation, which means students are not able to actually make use of what they have learnt.

In correspondence with the above characteristics are also the principles which were highlighted by Ambrose et al. (2010) and which are based on the developmental and holistic approach. Their principles can be summarized as follows:

1. Students' prior knowledge can help or hinder learning – this clearly indicates the principle that students are not “tabula rasa” but they come to the classroom with the

whole lot of formed beliefs, schemas and attitudes which influence the acceptance or refusal of new knowledge.

2. How students organise knowledge influences how they learn and apply what they know – while listening to teachers or studying from textbooks students try to connect the pieces of information and new knowledge they are presented with into a clear and understandable system. If they succeed it will be easier for them to retrieve the particular piece of information they need in the future as well as make the system function when necessary. If they fail they will be only able to produce and mainly reproduce bits and pieces of scattered knowledge, not functioning in the practical use.

3. Students' motivation determines, directs, and sustains what they do to learn – it becomes clear that motivation is a crucial factor which influences a lot all decisions students make as well as the type of approach to learning they choose. If students find the learning environment stimulating, tasks and activities meaningful and in correspondence with the goals set for their future it can support their desire to become active participants in the process.

4. To develop mastery, students must acquire component skills, practice integrating them, and know when to apply what they have learned – the courses need to be designed and organized in such a way that students have a chance to develop not only the component skills and knowledge so that they can perform complex tasks. There needs to be also space to practise combining and integrating them to develop greater fluency and automaticity in order to be able to learn when and how to apply them.

5. Goal-directed practice coupled with targeted feedback enhances the quality of students' learning – students should be guided to address concrete goals or criteria so that they are clear on what is expected from them and how they should direct their performance. It is absolutely crucial to include feedback on how successfully the student managed to meet the expectations based on the announced criteria in order to motivate learners to develop in a particular area, modify or change their behaviour.

6. Students' current level of development interacts with the social, emotional, and intellectual climate of the course to impact learning – since students are not only intellectual but at the same time social and emotional beings they are developing their full range of intellectual, social, and emotional skills. The climate that teachers manage to create has implications for the students and may hinder or foster learning and performance.

7. To become self-directed learners, students must learn to monitor and adjust their approaches to learning – even though metacognition in the sense of planning, evaluating, monitoring reflecting on the learning process is extremely important in order to become a self-directed learner students might try to avoid these processes. It is important to set the course in such a way that metacognition is a legitimate part of the course and so that students are encouraged to build a repertoire of metacognitive techniques and strategies.

Adapted from Ambrose, 2010, pp. 4-7

CONCLUSION

This chapter focused on highlighting of the main features of how people learn in higher education and on the main principles of the approaches which are used in higher education. It seems to be crucial to acknowledge the responsibility for one's own learning at the side of the learner and to be aware of the factors which can play an important role in the success or the failure of a student.

Higher education requires students to be responsible for their outcomes and for the achievement of the aims set. However, it is also important to direct the teaching approach in such a way that the teachers do not only have their expectations but they anticipate that students' repertoire of learning strategies that they have been using so far may be due to various reasons limited and that they need to be provided with a guided instruction. Their prior learning experience may have not involved a wide variety of learning tasks and the students need not only the space for development but also examples of good practices.

QUESTIONS

1. How would you define learning and teaching?
2. What qualities of a good higher education teacher would you highlight?
3. How would you define teacher beliefs? What is their importance in the teaching process? What are their sources?
4. What teaching roles do you know? Which role is typical for the Slovak educational context?
5. How would you explain the importance of motivation for a higher education learner? What types of motivation do you know?
6. What's the importance of Multiple Intelligences Theory in a teacher's planning process?
7. How can learning styles differentiation help teachers to make the teaching process more effective?
8. What are learning strategies and what is their importance for learning a language?
9. How does the theory of constructivism translate into the practice of higher education?

RECOMMENDED READING

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