CONTESSA
Contemporary Teaching Skills for South Asia

Co-funded by the Erasmus+ Programme of the European Union

MODULE 1
BUILDING BLOCKS OF PRIMARY EDUCATION

1.2 LESSON PLANNING AND METHODOLOGICAL SKILLS: CONCEPTS, TOOLS AND APPLICATION

Co-funded by the Erasmus+ Programme of the European Union

Building Blocks of Primary Education. Lesson Planning and Methodological Skills: Concepts, Tools and Application.

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Introduction

What is the CONTESSA course?

The CONTESSA course is one of the results of the "Contemporary Teaching Skills for South Asia" project co-funded by the Erasmus+ Program of the European Union. Its aim is to be a contribution to establishing successful teacher education programs for primary teachers, particularly in Cambodia and Sri Lanka, which will create a long-lasting positive impact on the overall educational systems.

It is increasingly important for successful educators to stay up-to-date with contemporary skills and methods to use inside and outside of the classroom. The CONTESSA course therefore offers five carefully selected modules, each of which contain three focuses aimed at the development of contemporary teaching skills. The modules and their focuses are as follows:

Module 1. Building Blocks of Primary Education
1. Twenty-First Century Teaching and Learning
2. Lesson Planning and Methodological Skills: Concepts, Tools and Application
3. Designing Learning Environments

Module 2. Excellence in Teaching: Profession-Specific Competences of Primary School Teachers
1. Teaching Comprehension: Roles, Tasks and Functions
2. Assessing Learning Results
3. Pedagogical Professionalization

Module 3: Learner-Centered Primary Education: Enhancing Co-Created Learning Processes
1. Individual Development and Problem-Solving Skills
2. Lifeworld-References and Future Prospect
3. Self-Determination, Empowerment and Self-Efficacy

Module 4: Embracing the Differences: Pedagogic Approaches to Diversity, Heterogeneity, Special Needs
1. Inclusive Pedagogy: Approaches and Strategies
2. Teaching and Learning in Diversity: Preparation, Realization, Assessment
3. Diversity-Sensitive Classroom Management

Module 5: Digital Teaching and Learning
1. E-Pedagogy and Digitally Enhanced Learning Environments
2. Digital Media and Technology: Tools and Formats for Educational Purposes
3. Online-Based Lesson Preparation and Conduction

Upon completion of this course, participants will be able to implement newly acquired contemporary teaching skills, engage all students in classroom activities and learn new ways to help students reach their full potential.

Who is the CONTESSA course for?

The "Contemporary Teaching Skills for South Asia" project aims at promoting contemporary teaching skills for pre-service and in-service teachers working in primary schools. The following document is specifically adapted for pre-service teachers.

Furthermore, the CONTESSA course is available for anyone interested in staying up-to-date with contemporary teaching skills.

This is the English version of the CONTESSA course. Material is also available in Khmer, Sinhala and Tamil.

What is the structure of the CONTESSA course?

As mentioned before, the CONTESSA course consists of five modules, each worth the equivalent of 3 ECTS. Ideally, the modules are all used together since individual modules refer to other modules, but they are also designed in a way that each one can be used on its own.

Each module contains three thematic focuses and documents are available for each focus. This makes a total of 15 documents available in the CONTESSA course. Each document contains a theoretical introduction to the focus, followed by practice exercises based on the theory. **STEP 1 – THEORY –** is meant as a revision of what has been read in the theoretical introduction. Practice exercises check the comprehension of the text to make sure that the underlying theory has been understood. **STEP 2 – EXPERIENCE –** offers examples of real teachers and how they practically implement the theory explained in the theoretical introduction. These examples are again connected to practice exercises which are meant to allow for the application of the previously learned theoretical knowledge. **STEP 3 – (SELF-)REFLECTION –** includes reflection questions based on each focus. **STEP 4 – PRACTICE –** is the final STEP where a teaching project is created based on what has been seen before in STEPs 1 and 2.

The practice exercises in STEPs 1 and 2 can be directly completed in this document. STEPs 3 and 4 are part of a separate portfolio document which has to be created by each individual. A template for this portfolio is available as a separate document.

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1 HOW STUDENTS LEARN – LEARNING PARADIGMS

Understanding how students learn is crucial to understanding how to successfully teach them. Teachers should be able to discern between two main types of learning: surface learning and deep learning. These do not refer to a student's propensity or approach to learning, but rather the depth of a student's understanding of the content being taught. Surface learning is when a student concentrates on their lower cognitive skills to memorize and recall facts, which are then forgotten after a short period of time. In contrast, deep learning is when a student can understand, evaluate and analyze concepts and apply that knowledge to different problems and ideas (Keeble, 2016). Primary school students are naturally curious about their world and respond best to deep learning activities which inspire and engage them. Effective teachers employ deep learning in the classroom in order to encourage their students to become critical thinkers who apply their newly acquired skills in various contexts (Johnson et al., 2016).

In order to apply deep learning methods in the classroom, teachers must address the diverse needs and abilities of each student. Understanding common learning theories can help teachers achieve this. **Learning theories** provide the foundation for the needs of students and guide teaching strategies that could be employed to meet them. Once teachers become more aware of learning theories, they can help make more educated decisions about how to teach. There are several learning theories, however this module is going to focus on five theories that most influence teaching: behaviorism, cognitivism, constructivism, connectivism and subject-orientation (Johnson et al., 2016).

Behaviorism views learning as a proper reaction to the presentation of external stimuli. According to the theory, students learn through reinforcement: constant positive and negative feedback from their teacher tells them what they are doing is either right or wrong. In behaviorism, the

Learning theories are abstract frameworks that describe how knowledge is received and processed during the learning experience. Learning theory informs the application of instructional design through models. (*Learning Theory*, 2020, online)

role of the teacher is a controlling one: the teacher initiates behavior through certain input and reinforces desired behavior, i.e., through consequences and rewards. Since behaviorism focuses on the importance of consequences and rewards, learners are characterized as inherently passive rather than taking an active role in their learning environment. For this reason, employing behavioral principles is best suited for learning that involves quick feedback, establishing routines and reinforcing good behavior (Ertmer & Newby, 2013). Example ideas of how this can be applied in the primary school learning environment are below:

- Bring music into the classroom to establish a routine. Teach students that when music is played, the current activity is over, and they should clean up and be ready to move on to the next activity. To incorporate students into the routine, ask them to request songs they want to hear.
- Provide students with constructive feedback directly after they finish a task, explaining what they did well and what they might improve upon for next time. Waiting too long to give them feedback may make it less likely that they associate the comments with the task they did.
- Create a reward system for students by showing them they will earn praise, extra credit or tokens (e.g., stickers) for proper behavior such as raising their hands or staying on task.

According to modern pedagogy, teaching in a classroom with a foundation in behaviorism is considered outdated and unsuccessful in helping students learn "higher level skills or those that require a greater depth of processing" (Ertmer & Newby, 2013, p. 49).

In cognitivism**,** learning takes place through action, insight and reflection. It is often compared to a computer's information processing model. New knowledge is formed by reorganizing information either on the basis of existing knowledge structures or by adapting new ones. The learner takes an active role in the learning process by solving given tasks using appropriate

learning strategies (Johnson et al., 2016). The teacher acts as a trainer by initiating, controlling and supporting the learning processes, making prepared learning material available and giving the students continuous feedback. If necessary, the teacher actively intervenes in the learning process and supports the learners in an advisory capacity. Students develop their own problem-solving strategies, choose suitable methods, apply them in a targeted manner, evaluate their results and reflect on their learning process (Ertmer & Newby, 2013).

In contrast to behaviorism, cognitivists determine it necessary to make knowledge meaningful and help students link new information to existing information in their memory. This approach is seen as a change in knowledge, which is then stored in the memory rather than just being viewed as a change in behavior. To employ cognitivist principles, teachers should actively involve students in the learning process, focus more on the process of learning rather than the end product and emphasize how to structure, organize, and sequence information (Ertmer & Newby, 2013). Examples of cognitivism in the primary classroom include:

- Start new lessons by activating students' prior knowledge. Link new concepts to previously learned ones by asking questions or quickly reviewing the material beforehand.
- Use tools such as mind maps to help students organize information or graphic organizers to assist students in learning how to build a paragraph.
- Make educational games and puzzles available in the classroom through which students can apply the skills they learned in the lessons and practice following and understanding directions together with their peers.
- Show students how mnemonic devices can help them remember important sequences (e.g., **M**y **V**ery **E**ducated **M**other **J**ust **S**erved **U**s **N**oodles – Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune).

Constructivism is a theory which states that students learn new ideas and information based on their own prior experiences. As students move through the world, they reflect and build on their experiences and incorporate new information into their pre-existing knowledge or **schemas** (Johnson et al., 2016). The focus on constructivism in the classroom is therefore not directly imparting knowledge on students but rather providing experiences that facilitate students to construct their own knowledge. Since teachers and students work together to build (or construct) this knowledge, constructivists view learning as a collaborative process embedded within a social context. The role of the teacher is that of a learning companion who creates the conditions for self-organized learning and thus enables processes of independent knowledge and competence development (Ertmer & Newby, 2013).

Schemas allow learners to reason about unfamiliar learning situations and interpret these situations in terms of their generalized knowledge. Schemas can be learned to promote the acquisition of new knowledge and skills. (Lee & Seel, 2012, online)

To employ constructivist principles in the classroom, teachers should ensure that knowledge is not abstract but instead always linked to the context of both the environment and the individuals. When students relate information to their own experiences, beliefs and attitudes to construct knowledge, they will be able to better deal with real-life situations by becoming critical thinkers and problem solvers (Johnson et al., 2016). Examples of constructivism in the primary classroom include:

- Use **problem-based learning** to have students identify a real problem at the school or in the neighborhood and challenge them to brainstorm actionable steps to find solutions. They can present their solutions through anything from persuasive letters to multimedia presentations.
- Assign students to groups and have them research a topic, thereby becoming the class 'experts' on that topic. They can then teach the new concept to the class.
- Participate in discovery learning by going on field trips so that students can put the concepts they have learned in class into real-world contexts.

Problem-based learning (PBL) is an instructional method aimed at preparing students for real-world settings. By requiring students to solve problems, PBL enhances students' learning outcomes by

> Field trips can be as simple as walking outside and collecting leaves to study their roots or to use them in an art project.

The connectivism approach assumes that learners improve their learning processes when they are integrated into networks. Students cannot personally experience everything that they need to learn, therefore they build up a large part of their knowledge on the basis of information and experiences from connections with third parties, such as technology, organizations or social networks (Siemens, 2017).

promoting their abilities and skills in applying knowledge, solving problems, practicing higher order thinking, and self-directing their own learning. (Jonassen & Hung, 2012, online)

Learning is thus a process that is not only dependent on oneself but also on one's environment. Students who set up needs-based networks in their environment can keep their knowledge up to date. From the point of view of connectivism, the ability to acquire current knowledge through exchanges with others and to master challenges together becomes more important than the personal knowledge of the individual.

> The starting point of connectivism is the individual. Personal knowledge is comprised of a network, which feeds into organizations and institutions, which in turn feed back into the network, and then continue to provide learning to individuals. This cycle of knowledge development (personal to network to organization) allows learners to remain current in their field through the connections they have formed. (Siemens, 2017, online)

In this context, the teacher assumes the role of a mentor who supports the learner in building up experience-based knowledge through exchanges, collaborative work and connections. Students should understand that knowing where to find knowledge is just as important as the knowledge itself.

Examples of connectivism in the primary classroom include:

- Teach students how to find a variety of reputable and valid sources either online, in books or among their community. Instill the importance of fact checking.

- Illustrate to students that there is diversity in knowledge and opinions by showing them that larger networks produce greater opportunities for learning. This can be done easily online through social networks or forums, but it can also be done face-to-face with diverse members from the community. For example, in a rural community, teachers can task students with surveying ten farmers in the community on the most important tips to grow crops. Students can then demonstrate how they gained increasing amounts of information by speaking to a greater number of farmers.
- Task students with learning from their most immediate network: each other. Ask students to write down a question they have for their classmates, e.g., What book should I read next? or What types of foods do elephants eat? This can be done on a piece of paper, posterboard or online network. Classmates will do their best to answer one another's questions to show the benefit of the network as a whole.

The subject-oriented understanding of learning (or 'individual learning') defines learning as a personal development process that is based on individual reasons for learning rather than outside forces. The individuals are therefore considered the subjects who are learning, or in this case, the students. Therefore, instead of viewing learning as an activity that occurs when something is taught, the theory of subject-oriented learning argues that learning only takes place when the subject (the student) has a reason to learn. Teachers can use everything at their disposal (e.g., knowledge, tools, resources) to make the learning attractive, but students must be driven by individual and societal motivation; they must perceive a relationship of mutual exchange (Grotlüschen, 2019). Teachers should act as a supporting force and create a space for the individual development of students, to offer learners the opportunity to develop self-confidence and to experience self-efficacy. It is their pedagogical responsibility to deal with the life and learning interests of the individual subjects, which is the undeniable basis for the

justification of action through which subjects learn to understand the world. In the primary classroom, teachers can tap into students' reasons for learning by incorporating their students' motivations into their lesson plans. Examples of subject-oriented theory in the primary classroom include:

- Make connections between classroom activities and real-world situations. For example, illustrate how English fluency can provide students with various opportunities to travel or study abroad or explain how simple math skills like addition and subtraction can help students make purchases on their own at the local market.
- Set aside a period of time every week to provide students with a choice of what they learn and how they learn it. This will allow students to dive deep into their passions and understand how school can help them on their journey.

Each learning theory offers teachers a different way to frame their teaching. With the theory of behaviorism being established in the early 1900s and cognitivism in the late 1950s, neither is seen as a foundational learning theory for the 21st century. As mentioned previously, elements from these learning theories are useful, but are not at the forefront. However, today's 21st century learning process integrates the contextualized, individual and collaborative components required for a contemporary education. Therefore, constructivism, connectivism and subject-oriented learning are currently considered the most relevant educational theories due to their alignment with teaching methods that meet the needs of today's learners (e.g., high levels of interaction, student-centered learning, and technology in the classroom) and today's society (e.g., critical thinking skills, problem solving skills, and creativity) (Ertmer & Newby, 2013).

In table 1 below, the five aforementioned learning theories are summarized.

Table 1: Learning Theories

	Role of Learner	Role of Teacher
Behaviorism	Students learn through reinforcement: constant positive and negative feedback from their teacher tells them what they are doing is either right or wrong.	The teacher initiates behavior through certain input and reinforces desired behavior, i.e., through consequences and rewards. The teacher dominates the learning
Cognitivism	Students take an active role in the learning process by solving given tasks using appropriate learning strategies. Students develop their own problem-solving strategies, choose suitable methods, apply them in a targeted manner, evaluate their results and reflect on their learning process.	The teacher acts as a trainer by initiating, controlling and supporting the learning processes, making prepared learning material available and giving the students continuous feedback.
Constructivism	Students learn new ideas and information based on their own prior experiences. As students move through the world, they reflect and build on their experiences and incorporate new information into their pre-existing knowledge.	The teacher does not directly impart knowledge on students but rather provides experiences that facilitate students to construct their own knowledge. The teacher is a learning companion who creates the conditions for self-organized learning and thus enables processes of independent knowledge and competence development.
Connectivism	Students improve their learning processes by building networks. They gain information and experiences from	The teacher assumes the role of a mentor who supports the learner in building up experience-based knowledge through exchanges,

	connections with third parties.	collaborative work and connections
Subject-orientation	Students learn through their own personal motivation based on their individual reasons for learning rather than outside forces.	The teacher taps into students' reasons for learning by incorporating their intrinsic motivations into the lesson plans.

2 EFFECTIVE TEACHING STRATEGIES

Understanding learning theories and establishing a well-designed educational philosophy will help teachers choose an appropriate array of teaching strategies that match their desired learning outcomes. One of the most relevant aspects in teaching effectiveness is the amount and variety of teaching and instruction delivery techniques a teacher has to offer. The idea behind today's education is to promote critical thinking among students. A lot of research has been done to find a universally applicable teaching strategy, however, not one specific strategy has been found to have the most successful outcome. Therefore, having a variety of different techniques that are adapted to the students' needs and learning preferences seems to be the optimal approach (Ku, Ho, Hau, & Lai, 2014). Ideal results are only achieved in one-on-one teaching settings. The goal is to achieve the same results in group teaching settings (Stronge, 2018). As no specific strategy by itself has proven to bring optimal results for all students, flexibility in teaching is crucial: "'We do our kids a disservice by choosing one pedagogy and using it all the time' […]". (Hoff, 2003, p. 8)

Five key teaching strategies (direct and indirect instruction, experiential learning, interactive instruction and independent study) and their associated instructional methods are presented and discussed below.

2.1 Direct Instruction

In direct instruction, the activities and tasks are highly structured and organized by the teacher (the information provider) with the goal of presenting the information clearly and systematically. This type of instruction is **teacher-centered** and includes a variety of methods:

- Lecture: One-way instruction from teacher to students through a presentation of information relating to the topic.
- Explicit Teaching: Explanation and elaboration of a subject with clear and structured examples to help students better understand and relate to the topic.
- Didactic Questioning: Asking questions to elicit responses from students using the 5Ws + 1H: who, what, where, why, when and how.
- Demonstration: The teacher demonstrates a skill to learners (e.g., How to solve an addition problem step by step on the whiteboard).
- Drill and Practice: Students repeatedly practice a topic or skill they have just been taught on their own.

(Johnson et al., 2016)

This type of instruction is often associated with teaching to a classroom full of passive students, and many educators therefore consider it insufficient for contemporary learning needs. However, negative associations are more likely to appear when teachers completely rely on direct instruction and ignore other types (Lombardi, 2017). In the primary classroom, direct instruction is best suited to explaining the main idea before having students apply their understanding through independent and small group work after the teacher-led lesson format, or for storytelling.

Teacher-centered instruction refers to instructional approaches that are structured, sequenced, and led by teachers, while the students are in a passive, receptive mode listening as the teacher teaches. (Lombardi, 2017, online)

2.2 Indirect Instruction

In indirect instruction, students are given a high degree of responsibility in deciding how to organize and complete the tasks without any overt lecturing from the teacher. This form of instruction is student-centered as it encourages a high level of student involvement, and the role of the teacher is that of a facilitator. Common instructional methods under indirect instruction include:

- Inquiry: Students develop questions to explore and apply the subject matter.
- Problem Solving: Specific real-life problems are given to students to apply problem solving techniques and generate possible solutions.
- Case Studies: Real-life scenarios related to the grade-level are used for discussions and brainstorming of potential solutions.
- Concept Formulation: Learners connect pieces of what they have learned by organizing and manipulating information in new ways.

(Johnson et al., 2016)

In the primary classroom, indirect instruction sparks the natural curiosity of young learners and encourages them to explore multiple possibilities, essentially removing the fear of giving an incorrect answer. It can be used in every lesson, but is most successfully implemented after the students understand the main idea of the lesson (Saskatchewan Education, 1991).

2.3 Experiential Learning

Experiential learning states that students learn best when they are directly engaged or in touch with the material being studied, in other words, when they experience the knowledge first hand rather than just reading, hearing or talking about it (Johnson et al., 2016). For example, after completing a lesson on plants and gardens, students are told they will start their own school community garden and the teacher guides them through the process of

planning, preparing, planting and caring for the garden as a group. Experiential learning is student-centered and activity oriented. Common instructional methods under experiential learning include:

- Simulations: Students are presented with an artificial problem or situation based on reality and put into a simulated environment, essentially combining gameplay and reality to encourage communication and promote critical thinking.
- Focused Imaging: Students are required to visualize objects, events or situations to promote open-minded exploration, creativity and imagination.
- Models: Students build physical models based on the subject content (e.g., building a bridge, constructing a small-scaled city, and building small rocket ships or race cars).
- Games: Students play games to pick up content related concepts and hone interpersonal skills (e.g., board games, online games, and puzzles).
- Field Trips: The teacher organizes a journey away from the everyday learning environment to experience classroom concepts first-hand.
- Experiments: Students work in groups on carefully designed and guided inquiry questions to collect data or make observations. They can be used to explore new ideas or previously taught topics.

(Beard & Wilson, 2018; Saskatchewan Education, 1991)

Experiential learning should be used in the primary classroom as a way to motivate students through active participation. By providing them with direct experience, teachers can greatly improve students' understanding and retention of the topic beyond what listening, reading and viewing activities can accomplish. Of course, there are limitations to this type of learning including lack of time and resources, so it can usually not be applied to all subject content in all situations. The benefits, however, do often "justify the

extra efforts this strategy may require" (Saskatchewan Education, 1991, p. 18).

2.4 Interactive Instruction

ln this type of instruction, students learn from both their peers and their teacher through discussion and sharing. Multiple types of interactions amongst the students are used by the teacher to encourage critical thinking, the development of social skills and the organization of thoughts. This type of instruction relies heavily on **cooperative learning** and **situated learning**, which place major importance on social interaction, collaboration and community. Teachers should encourage students to share their passions and ideas as a means of building relationships and acquiring knowledge together (Serrat, 2017). Common instructional methods under interactive instruction include:

- Debates: Students take different sides of a topic to examine various perspectives.
- Discussion: Students talk to each other as a class or in small groups to generate and share ideas and opinions of the topic. "Discussion should conclude with consensus, a solution, clarification of insights gained, or a summary (preferably one provided by the students)." (Gupta, 2017, p. 167)
- Problem Solving: Specific real-life issues are presented to learners to apply problem solving techniques (e.g., identifying the issue, listing possible solutions, and evaluating the options).
- Brainstorming: Students come together in groups to generate ideas.
- Peer Learning: Students teach each other or help one another acquire skills through practicing together. Use "**think, pair, share**" to engage students in communication and help them retain the information.

Cooperative learning is widely recognized as a pedagogical practice that promotes socialization and learning through students working together to achieve common goals or complete group tasks – goals and tasks that they would be unable to complete by themselves. (Gillies, 2016, p. 39)

Situated learning states that humans are socially curious beings and learn mostly through social interaction with others. Learning does not take place in an individuals' mind, it is situated in a context in which participation of individuals to the communities of practice plays a vital role on situated learning process. (Ataizi, 2012, online)

The **think, pair, share** activity

- Reflection: Students give thought or consideration to a lesson (either individually or in group) to develop their critical thinking skills and further analyze what they have learned.

(Johnson et al., 2016; Saskatchewan Education, 1991)

In the primary classroom, interactive instruction is very conducive to helping younger learners enhance their interpersonal skills, formalize discussions and encourage confidence.

2.5 Independent Study

This type of instruction refers to educational activities that are provided by the teacher to foster the development of individual student initiative, and they include little or no supervision or guidance. Common instructional methods under independent study include:

- Work Assignments: Students complete work assigned by teacher, who is away from class for an allocated amount of time.
- Research Projects: Students research topics (at home, school or the library) and present their findings through a report, presentation, art piece or other creative avenue.
- Computer-Aided Instruction: Students learn independently through computer assistance (e-Learning).

(Johnson et al., 2016)

Utilizing independent study methods in primary school is crucial because it helps students grow as independent learners both inside and outside of the school environment. While the teacher plays a small role during the independent study, it is important to ensure that students understand the knowledge and processes associated with these methods beforehand. Teachers who wish to assist students in becoming autonomous learners must support the development of their abilities and provide them with adequate learning resources (Saskatchewan Education, 1991).

first asks students to consider a question on their own, and then provides an opportunity for students to discuss it in pairs, and finally together with the whole class. This activity works ideally with questions to encourage deeper thinking, problem-solving, and/or critical analysis. The group discussions are critical as they allow students to articulate their thought processes. (Brown University, n.d. online)

3 DIFFERENT CLASSROOM FORMATS

In order to choose effective teaching strategies, teachers have to consider their specific class and its prerequisites. Depending on the size, number of students, and general composition of the class, different strategies might be necessary.

3.1 Large Group Teaching

1

A class with more than thirty to forty students is considered to be a large class. Given the size of these classes, educators tend to opt for direct instruction in the form of traditional lectures as it is a simpler teaching strategy. However, as explained before, a teacher-centered teaching style reduces the active involvement of students in class and this will have a negative effect on the learning process altogether. It also hinders the teacher in understanding their students and seeing their skills as well as understanding the best way possible to support the students. Not only does a larger group of students have an impact on the teaching style and the learning process, but it can also negatively influence the social dynamics in class. It might affect the degree of inclusivity in the classroom. When there are many students, it becomes more difficult for the teacher to include and care for all students according to their needs. (UNESCO/Booklet Three, 2015) Generally, less wealthy countries are more likely to have larger classes. However, the size of a class does not have to be a barrier to inclusive teaching or a successful learning process. It rather depends on the educator's approach whether or not the size of the class becomes an obstacle or not (UNESCO/Booklet Three, 2015).

There are interactive teaching strategies including group work that are still feasible in larger classes, such as the aforementioned "think-pair-share" activity. This method gives all students the opportunity to interact with other students, and it also takes the pressure off those students who struggle to participate in class when working in a larger group. (Sanger, 2001)

In a larger class, it is even more relevant to encourage students, even for doing a simple or small task. This is especially useful when a student finds themselves in a new school or previously unknown environment. Not only is it important to encourage the student through (positive) feedback, but the teacher can also ask for feedback from the students. In the case of larger classes, it makes more sense to ask for the feedback through a survey. The teacher may also conduct this kind of survey at the beginning of the school year in order to get a better understanding of their students' expectations (Sanger, 2001).

Generally, it is beneficial to be in regular contact with students. However, this may be difficult in larger classes. A possibility would be to schedule group office hours. This would provide an option for the students to directly communicate with their teacher and vice versa (Sanger, 2001).

3.2 Small Group Teaching

 [1]

Teaching in a smaller class than the ones described above allows for a variety of interactive teaching strategies. Depending on the exact class size and the

[1] Picture source: Open source from pixabay.com

students' needs, the educator decides whether to put the students into pairs or groups. Possible methods for these groups are explained below.

- Jigsaw Activities: The students are put into small groups. Each group has its own task. After finishing the task, the students are again put into groups. This time a representative of each group is put into a new group. They each inform their new group members about their findings within their respective previous groups. It is possible for this activity to take up more than just one session.
- Research Exercises: Students engage in further research with other students. These pairs or small groups can be assigned for just one session or a longer period of time.
- Field Trips/Experiential Learning Activities: Going on excursions or museum visits can be an important learning experience outside the classroom that further promotes active involvement and puts developmental and individual differences into consideration. Field trips can also be a space to work in groups. It can be especially beneficial to put students from different backgrounds in the same group as it may offer an opportunity for the students to see and understand things from a different point of view.
- Problem-Based-Learning: Within a group the students are supposed to find a solution to a presented problem, which does not only have one correct solution. The students can stay in these groupings for several sessions. Problem-Based-Learning does not have to be only for one session. The same group of students can work together in this manner for a longer period of time.
- Team-Based-Learning: This method is quite similar to the previous one, but when using this technique, the teacher purposely groups students together who are different from one another e.g., in gender, skills, cultural backgrounds etc. However, the teacher has to ensure that no student will feel overpowered within their group. These groups or teams stay the same

> throughout the course or semester. Being in the same group for a longer period of time will foster trust between the students as well as support, collaboration and social interaction.
>
> (Sanger, 2001)

The motivation behind groupwork is manifold. First of all, it ensures that all students learn. Group work and group assignments thus improve the entire class' academic performance. Furthermore, working in small groups within the class as opposed to working as a whole class results in a more fruitful learning process. Group work also promotes cooperation and support between students. It further helps promote the students' ability to think more in an abstract way, find new ways to solve problems and think critically - more so if there is no competition or individual assessment. Working in groups has proven to promote an increase in students' engagement in learning. One of the reasons for that increase might be the immediate feedback students may get within their work group. Another benefit of working in groups is that students learn to collaborate and cooperate, which will be most likely important to their working lives. Not only does their work life benefit from this, but also their social life as group work promotes social skills and fosters interaction. These can be further improved if the students are given the opportunity to work independently within their group. (Ward, 1987) Another advantage of small group teaching is that it promotes the development of transferable skills such as communication skills, teamwork and problem solving.

However, teachers need to make sure that all children, regardless of their needs, receive and comprehend the same information. Additionally, when using group work, it is crucial to keep the following aspects in mind:

- Make sure to change up the groupings e.g., some groups can consist just of girls, some just of boys, some mixed groups, mixed abilities, mixed

talents, etc.; and try to change up the size of the groups e.g., have the children work in pairs or groups of three or four.

- Be flexible when grouping the children as it has proven to be beneficial for children to work with as many different classmates as possible; it helps them learn to see things from a different perspective. It also shows them their own talents as well as their classmates' talents. It also promotes patience.
- Every student should - at least once - get the chance to be in a guiding position of the group since this can help them learn and improve their leadership skills (UNESCO/Booklet Five, 2015).
- Be careful not to label the students as 'slow learners', especially those who may struggle to grasp concepts or take longer compared to others.

4 TEACHING METHODS

Just as with learning theories, teachers can adopt more than one type of teaching strategy and various instructional methods to support learning. Teaching strategies and their subsequent methods are rarely mutually exclusive.

> Direct instruction may be integrated with any number of other instructional approaches in a given course or lesson. For example, teachers may use direct instruction to prepare students for an activity in which the students work collaboratively on a group project with guidance and coaching from the teacher as needed (the group activity would not be considered a form of direct instruction). (Lombardi, 2017, online)

A method is a procedure that is applied in order to achieve a goal. In the teaching context, it is the path through which a learner is supposed to achieve their learning goals. There is however a broad variety of different learning

methods; some lean more towards the teacher-centered concept and some lean more towards the leaner-centered concept. A teacher-centered method implies that the teacher choses the method for the learner. This means the teacher uses a specifically targeted exercise that leads to the planned goal. More open methods lean towards less goal planning but more consideration for the individual learner and their skill set. (Plüskow, 2015) When speaking about methods in the teaching context, it is important to note that the learner's age plays a significant role in the choice of method as different age groups learn differently. However, it is always beneficial to use a blend of various exercises and activities regardless of the students' age (Tuomarla, 2019).

In the context of school, a teaching method needs to be as beneficial as possible to the learning outcome. Effective teaching is defined as "combining different teaching and learning approaches. This provides for children's individual needs and makes the classroom a lively, challenging, and friendly place." (UNESCO/Booklet Five, 2015, p. 18)

The learner-centered method requires activating exercises that promote the learners' active involvement as well as their motivation to study. These kinds of exercises will also help them focus better on the subject matter. Furthermore, activating methods may help the learner improve their cognitive skills such as analyzing as well as the development of competences necessary for the individual's life. Not only can active learning and activating methods support the improvement of cognitive skills but also of emotional skills, such as compassion, helpfulness, kindness, empathy etc. (Tuomarla, 2019), and practical skills.

It is crucial to note that the teaching-centered style or the traditional way of teaching is still part of the teaching process, however the majority of class time should be taught with learner-centered methods as they promote the learner's engagement, which increases the motivation to learn and is beneficial to a successful learning outcome. The idea is not to completely

avert from teacher-centered methods, but to gradually infuse them with learner-centered ones by using activating exercises. When choosing the appropriate instructional methods to aid learning, teachers should keep the following in mind:

- Match the methods to the desired learning outcomes.
- Align with the curriculum.
- Consider the students' prior experience and knowledge.
- Assess the availability of resources (e.g., time, space, funds, and equipment).
- Incorporate the students' interests and learning styles (e.g., visual, auditory, and tactile-kinaesthetic learners).
- Employ a variety of strategies throughout the year.
- Chosen methods need to be fitting to what is being taught; the teacher needs to consider the subject matter as well as the method's effectiveness in the context.
- Observe what methods have proven to work and try to analyze why they worked/what you would do differently next time.
- Reflect on other methods you may have come across during your training.
- Think about what methods you would like to add and ask yourself why you would want to add them; make sure to consider the advantages and disadvantages of each method. (Tuomarla, 2019)

The main idea is to awaken the learner's interest and design a learning environment that promotes this interest. Teachers should ask themselves:

- How interested are the students in the topic they are studying? How engaged are they in class?
- What different ways could I help the students achieve their learning goals?
- How could I promote the students' interest in a new topic?
- What do I have to do to keep the students interested in the subject matter?

5 EFFECTIVE TEACHING

Teaching skills are learned, adapted and updated continuously throughout a teacher's career and are applied constantly as part of the instructional process. Various factors influence these skills including the school environment, the curriculum requirements and the needs of the students, but teachers should be continually honing these skills in order to be effective. Several breakdowns of effective teaching skills exist, and this module will discuss five: planning, explaining and demonstrating, questioning, presenting and monitoring, and reflection and evaluation.

5.1 Planning

A teacher's ability to plan with a clear vision is important in implementing a successful lesson; it should be purposeful, focused on learning and have realistic objectives. When planning a lesson, it is crucial for teachers to ask themselves, 'What should the students have learned by the end of this lesson?'

The logical sequence of planning a lesson is thought to be: identify objectives, select teaching strategies and methods and specify how students will be assessed. According to research studies, however, experienced teachers often follow a different path.

> In general, this is indeed the way student teachers go about planning lessons (particularly as their lesson plans often have to be shown to their school mentors and university tutor). However, this three-step sequence presents too rational a description of how experienced teachers plan lessons. Research studies of how experienced teachers plan lessons, reveal that they give most attention in their planning time to thinking about the content, materials and activities that will be used to make 'a lesson', without explicitly starting with a list of objectives to be achieved. In large measure, this reflects the fact that experienced teachers have internalised

> the process of planning to such an extent that they can draw heavily upon routines and established practice without the need for much overt conscious reference to lesson objectives themselves. (Kyriacou, 2009, p. 88)

While experience is useful in planning lessons, following a structured path when planning (especially for newer teachers) can help ensure the lessons are effective. First, teachers should establish the objective of the lesson and link it to the necessary curriculum from the school, state or government. Learning objectives should be specific and can be expressed as simply as 'By the end of this lesson, the children will be able to…' (Newman University, 2018).

Secondly, teachers should consider the content they are teaching and what the students already know about the topic. Topics should be covered gradually, and teachers should build upon topics throughout the year. Planning could also be done backwards, listing what students should be capable of by the end of the year and ensuring they have the right skills and knowledge early on to reach those goals (Keeble, 2016). It may also be important to check, rather than assume, that students have the knowledge and skills necessary for the lesson. This can be done through a simple review of previous content before the new lesson begins (Kyriacou, 2009).

Next, teachers can select the teaching strategies, e.g., indirect, direct, interactive, and the instructional methods they want to employ, e.g., debates, case studies, games, reflections, and ensure they link up to the objectives. These methods should not only keep students occupied but should also be engaging and support student-centered and active learning (Newman University, 2018).

Additionally, leaving opportunities for flexibility throughout the lesson is important. Teachers and students should have realistic demands placed on them and leave the room for breaks and 'mental breathers.' Once teachers get

more established in their classrooms, drawing from routines and past experience will help ease the process (Kyriacou, 2009).

Lastly, when planning lessons, teachers must take the differences between the students into consideration. Everything from differences in learning styles, special needs, pace of learning and the motivation to learn to social class, gender, religion and race all need to be considered.

Central questions that can help guide lesson planning have been adapted from Kyriacou (2009) and outlined below:

- What range of ability is there in the class and what levels of motivation can I expect?
- Do any of the students have special educational needs?
- How much do the students already know about the subject/topic?
- What exactly do I want the students to learn in this lesson: cognitively (knowledge, understanding, intellectual skills), affectively (interest, attitudes, self-confidence) and motorically (perception, response, adaptation)?
- How does this lesson relate to their present feelings, interests and needs?
- How does this lesson relate to the course as a whole?
- What constraints need to be considered (e.g., time, number of students, classroom layout, teacher's skills, and resources)?
- Has this lesson been successful with a similar class? Or in the past?
- Which instructional method(s) will best meet the desired objective (while considering the constraints outlined above)?
- Which level of difficulty and what pace will be best in maintaining the students' attention, understanding and motivation to meet the desired objective?
- How will the degree of success (meeting the objective) be determined (e.g., questioning of students, group discussions, written work, and follow-up quizzes)?

- What preparation is necessary before the lesson?
- What problems might arise?

The *Tree Model* is a guideline for planning an effective learning/teaching experience. It is divided into the teacher's perspective – what do I as a teacher need to prepare and consider when designing my lesson – and the students' perspective – what do students need during the learning/teaching process. This model thus examines the teacher as well as the learner and how they are intertwined in the learning/teaching experience.

Table 2: The Tree Model

TEACHER / TEACHING	LEARNER / LEARNING
ROOTS In this first step, you look at the roots of your learning environment. It is an analysis of all its components in its current condition. <u>Ask the following questions:</u> - Who are my learners? What is their individual learning starting point? What is their prior knowledge and competences? - What does my physical learning environment look like? How is the furniture arranged? What resources are available? How long is one lesson? - How is diversity represented in my classroom?	**ROOTS** In this first step, students physically arrive in the learning environment. They are mentally introduced to what is going to happen in the lesson. Their individual learning starting point, including prior knowledge and competences, should be evaluated. <u>Ideas:</u> ☐ Rituals, Icebreaker games, Presenting learning objectives ☐ Brainstorming, Repetition of previous lessons ☐ Linking the lesson to the personal lives of students, Illustrating the relevance of the lesson, Presenting a problem
GROWTH In the second step, you consider in which direction your teaching/learning process is meant	**GROWTH** In the second step, new competences are acquired by the students. This happens with the

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to grow. It is an analysis of a future state. Ask the following questions: - What is the desired outcome of the lesson? Which competences should all students acquire? Which competences can be offered optionally? - What do students need to develop these competences? Which methods will support the students' development of essential competences? Which material/media will support the students' development of essential competences? - How can I, as a teacher, maximally support the individual learning processes of each student? How can I offer flexible support? What kind of feedback do students need from me as a teacher?	help of demonstrating methods as well as participative methods. Ideas: ☐ Demonstration, Lecture, Guest speaker, Presentation ☐ Fieldtrips, Play, Projects
BLOSSOMING In the third step, the previously made considerations are implemented: • Description of learning objectives • Development of concrete content • Structuring of content • Embedding the content into the curriculum • Development of flexible alternative content/strategies	**BLOSSOMING** In order for students to fully grasp the competences seen in a lesson, they need time to process them. In the third step, the competences of a lesson will therefore be consolidated, repeated and practiced. No new competences are introduced at this point. Ideas: ☐ Classroom discussions, Role playing, Case studies, Book reports

• Development of criteria and strategies to monitor and measure the achievement of learning progress/set learning objectives	☐ Summarizing, Informal quizzes, Flash cards, Memory, Think-pair-share
RENEWAL After the three previous steps have been fulfilled, you reflect upon their success and what needs to be changed/adapted in order to provide the students with a successful learning experience.	**RENEWAL** After the three previous steps have been fulfilled, students reflect on what they have learnt in the lesson and what they need additionally to progress in their learning. Ideas: ☐ Informal/formal quizzes, Students summarize

5.2 Explaining and Demonstrating

Much of the time a teacher spends in the classroom is used to demonstrate or explain concepts or rules to the class, therefore it is important to hone these skills. Both methods can be useful, for example, when students have a hard time connecting concepts to actual practice or when students are unable to understand the applications of concepts.

In order to give good explanations that help students acquire or deepen their knowledge of a concept, teachers must thoroughly understand the subject matter themselves and provide clear and accurate information. Explanations are useful in helping teachers illustrate concepts and ideas, cause and effect relationships and processes. When explaining new concepts and ideas to students, teachers should focus on including labels and names, listing key attributes and providing rules and examples (Saskatchewan Education, 1991).

Building on teacher explanations with demonstrations can provide the link between ‘knowing about’ and ‘being able to do’. Demonstrations can encourage student interest and attention, improve their motivation and create

a real-life learning situation in the classroom. Demonstrations work best when they accurately display the concept, when learners can clearly see and hear what is occurring and when brief explanations and discussions occur intermittently. To demonstrate successfully, teachers can use visuals like photos or videos, examine real-life subjects (e.g. plants, insects, and animals) or perform experiments as a class or in small groups (Saskatchewan Education, 1991).

When demonstrating and explaining concepts and ideas in the primary classroom, teachers should continually check in with students as they move through both processes. Checking to ensure all students can understand and that everyone is involved in the process can greatly add to the success of these skills.

5.3 Questioning

Good questioning is an extremely important skill for teachers to exhibit. It can increase student participation, promote understanding, stimulate students' critical thinking and foster creativity. Effective teachers ask a lot of questions and follow a particular approach:

> Most of the questions used in classrooms are relatively simple, procedural or 'closed' – such as "is this a square?" Whereas effective teachers also ask carefully chosen questions that require pupil explanation and so require pupils to think or reason in their answer. For example, "can you put this word into context?"; and "how are X and Y alike?" Purposefully choosing a mixture of question types to suit lesson content prompts pupils to think harder about the content or subject and therefore learn more. It also helps teachers understand pupils' progress and informs their feedback. Choosing the right 'level' of questioning to suit the desired learning seems key to getting this right. Asking questions frequently during class discussions can help pupils learn facts, but asking too many higher questions when pupils

> are being taught complex new material may have no effect - or even hinder pupil understanding. (Keeble, 2016, p. 24)

How the questions are being asked should also be considered. Teachers should choose questions that invite students to think freely, make mistakes and find their own solutions to problems.

> Effective teachers consider ways to get all pupils to do the thinking - such as asking all pupils to write their answers down or expecting pupils to briefly discuss answers in pairs, before selecting pupils to feedback. Effective teachers provide enough time for pupils to think about their answer whilst maintaining attention and engagement. (Keeble, 2016, p. 25)

Teachers should give students a couple of seconds to answer simple questions and longer periods of time for more complex questions in order to encourage engagement. Additionally, simply calling on volunteers can also prove to be ineffective. This may encourage extrovert students to be even more outgoing, but at the same time it might discourage introvert students and make them engage even less in academic conversation or simply be left out (Walsh & Sattes, 2016).

Teachers also must consider that questioning will not always lead to students being able to answer. If students are struggling with the question, rephrasing it could help or trying to determine which aspect of the question is difficult for the student. In this case, teachers may need to review prior knowledge or ask a different question to bridge the gap and assist students in finding the solution (Sockalingam, 2011).

Questions can be used in a variety of ways to help guide students through the learning process. They can be simple and quick to check if students are paying attention or be more complex to launch a discussion about the topic. Before applying questioning in the classroom, teachers should consider the intent of their question, how it links to the learning objective(s) and what they will do

if students cannot answer it and whenever possible, teachers should employ more open-ended questions that contribute to student-centered and active learning. Effective teachers support their students' thought processes by guiding them through how to solve problems to promote their reasoning and understanding skills (Keeble, 2016).

Table 3: Different Levels of Questioning [2]

Level of Questioning	Keywords for Questioning
NAME & DEFINE	identify, recall, list, recount, summarize
DESCRIBE	describe, demonstrate, distinguish, classify
EXPLAIN	explain, clarify, predict, construct, demonstrate, summarize
ANALYSE	apply, calculate, compare, distinguish, examine
CIRITCALLY ANALYZE	compare, contrast, discuss, recommend
EVALUATE	evaluate, justify, predict, propose, recommend

5.4 Monitoring

Monitoring is a skill required by teachers in order to assess the progress of both the lesson and the students' understanding of the content. Through proper monitoring, teachers should be able to determine (among other things) if the students are still interested, the lesson is too difficult, students are working at the same pace, the materials are adequate and whether or not the

[2] Adapted from Costello (2020, online).

lesson was well planned. Of course, as mentioned previously, thoroughly planning each lesson and establishing learning objectives will make monitoring easier for the teacher (Kyriacou, 2009).

Kyriacou (2009) lists two integral skills underpinning the teacher's ability to monitor effectively. Firstly, teachers must be able to assess students' progress. Since there are often too many students in the classroom to assess them individually, teachers need to create strategies to monitor large groups. For example, teachers can move around the room at the same level as their students (rather than looking down at them), using a chair with wheels to move from group to group. Teachers can also ask students to write their questions down as they move through the activity, that way questions will not be forgotten when the teacher is with a different student or group.

The second monitoring skill Kyriacou (2009) lists is "the ability to deal with a number of matters and concerns at the same time" (p. 94).

> This may mean being able to listen to one pupil reading aloud, whilst checking whether another pupil has successfully completed a different task and is ready to move on, and signalling to a third pupil that some further resources are needed for the task in hand. Over and above all this, the teacher may also be considering whether it is time for pupils to start packing away, whether the noise level is too high, and whether there is a need to circulate around the room to check all is generally well. Problems may occur if the organisation of the lesson and activities leads to too many demands being made on the teacher, which therefore cannot be met. This may result in long queues for help and assessment at the teacher's desk or in pupils being able to get away with very little work without being noticed. Effective teaching requires a lesson organisation that can be adequately monitored. (Kyriacou, 2009, p. 93f.)

As emphasized above, planning a well-organized lesson that does not overwhelm either the teachers or the students will help ensure that monitoring runs smoothly.

An additional, and essential, part of monitoring is giving students effective feedback. This can be done individually, collectively as a class or by having students mark their own work with the provided answers (if the activity allows). It can be executed in the form of marking, done verbally, nonverbally or peer to peer. Effective feedback focuses on the task at hand and is provided regularly as a part of all learning processes, whether the student is excelling or having difficulties. If a learning difficulty has arisen, constructive feedback should be given immediately. Above all, teachers should make sure the classroom is an environment where students are comfortable making mistakes and seeing errors as a path to future learning. If students feel embarrassed or ashamed when errors are made, they are more likely to reject feedback and less likely to engage in future learning (Kyriacou, 2009).

5.5 Reflection and Evaluation

Reflection and evaluation are teaching skills that are central to the continual development of educators. Teachers should reflect and evaluate often, e.g., after each lesson, unit or at the end of each day, to establish whether they have been successful in reaching their teaching objectives and to record the progress of the students. Teachers who reflect and evaluate on their own teaching will more likely have better results with their students. Hazel Pulley, a headteacher at a Parkfield Community School, a primary school in England, states:

> If pupils are to make rapid progress, they need teachers with excellent up-to date subject knowledge and an understanding of the teaching quality required. We have totally moved away from formal lesson observations. Instead, coaching partnerships have been developed using video

> technology, regular pop-in opportunities in classrooms and focused work scrutiny to provide bespoke professional development. Evaluation is a key aspect of all our CPD (**continuing professional development**); checking for impact is seen as an imperative. (Keeble, 2016, p. 14)

As mentioned in the above quote, evaluation can come from an outside party, but teachers can also practice self-reflection and evaluation for their own professional development as well. In *Effective Teaching* (Ko, Sammons, & Bakkum, 2016, p. 21), tips are provided for teachers to implement self-evaluation techniques. To begin self-evaluation, teachers should ask, 'As a teacher, do I':

- have detailed, up-to-date knowledge of the subject(s) I teach?
- maintain my enthusiasm for the subject by being a learner as well as a teacher, both within the classroom and beyond it, and can I use that subject enthusiasm to motivate and inspire pupils?
- regularly offer my pupils models of good performance in all aspects of the subject, to clarify my expectations and raise their aspirations?
- plan lessons and units of work to ensure continuity in learning and steady progress for pupils in the required knowledge, skills and understanding by building new work onto what has gone before and balancing new material or ideas with reinforcement?
- plan lessons that are varied, starting in ways that engage pupils' interest, intellect or creativity and using a range of groupings, activities and appropriate resources to maintain that interest?
- make clear the intended learning in my lessons? Do I match it to pupils' prior attainment and assessed aptitude, and both communicate these intentions to pupils and review with them the extent of their learning?
- wherever feasible, look for opportunities for pupils to undertake investigations, solve problems or analyze and evaluate ideas? Do I

Continuing professional development refers to the professional obligation of the teachers (and their schools) to develop their professional skills and be informed of new developments in education. (Keeble, 2016)

encourage pupils to be exploratory and critical, rather than passive recipients of information?

- use questioning skillfully to probe and extend pupils' thinking in ways well matched to their level of attainment in the subject?
- give pupils sufficient time for reflection, thought and even puzzlement?
- recognize 'practical' work as integral to learning for pupils of all abilities, but ensure that it is linked to analysis and evaluation?
- mark and assess pupils' work as helpfully as is practicable, offering informative feedback? Do I use criteria, marks or grades that are understood by pupils? Do I provide a clear indication of what has been done well and where improvement is needed?

While the above questions promote self-reflection and evaluation in a more general sense, teachers can also focus more specifically on one lesson to understand whether or not the lesson's objectives were achieved and if the lesson was successfully organized and implemented.

- Did the lesson go well?
- Were the learning activities successfully implemented based on the lesson plan?
- What did the students learn in the lesson and how can I be sure that learning occurred?
- Did the lesson and learning reflect my intended goals?
- Did any student or group of students fail to benefit from the lesson? If so, why and could this have been avoided? How?
- What changes and improvements can I make before giving a similar lesson to this class or another class?
- What have I learned about this class, or particular students, that might influence future lessons?
- What have I learned about this topic or subject matter that might influence future lessons?

- Are there any immediate actions I should take following this lesson?
- Am I satisfied with how I planned, presented and monitored this lesson?
- Did the lesson keep the students' attention and interest?
- Did any problems occur in the lesson that I should take note of?
- How can I incorporate the content learned in this lesson to future lessons?
- How did this lesson fit in with the goals of the department, school and curriculum? (Kyriacou, 2009, p. 96)

Teachers who regularly practice and improve their reflection and evaluation skills (using devices like the questions above), will be better able to recognize their strengths, weaknesses and challenges in an honest and personalized way. Then teachers can move forward with ways to improve their teaching by trying out new instructional methods and strategies or by enlisting outside help, e.g., from a fellow teacher, mentor or the school principal.

Figure 1, below, summarizes the aforementioned theories, strategies and skills that can be practiced, studied and improved over time and can benefit both teachers and their students.

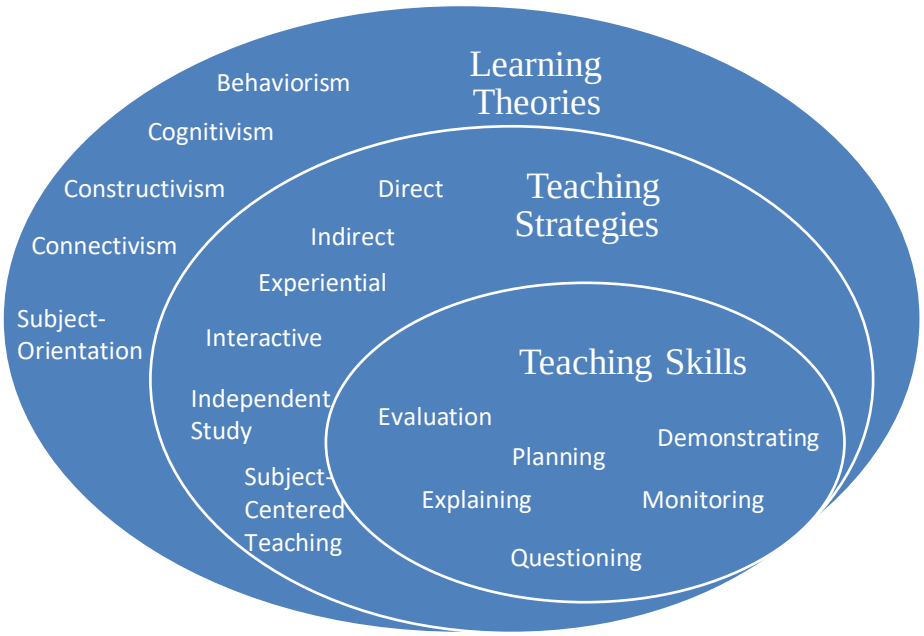

Figure 1: Theories, Strategies and Skills

6 KEY POINTS

- ✓ Understanding how students learn is crucial to understanding how to successfully teach them.
- ✓ Effective teachers employ deep learning in the classrooms, when a student can understand, evaluate and analyze concepts and apply that knowledge to different problems and ideas.
- ✓ Learning theories provide the foundation for the needs of students and guide teaching strategies that could be employed to meet them. Once teachers become more aware of learning theories, they can help make more educated decisions about how to teach.
- ✓ In behaviorism, students learn through reinforcement: constant positive and negative feedback from their teacher tells them what they are doing is either right or wrong.
- ✓ In cognitivism, learning takes place through action, insight and reflection. The learner takes an active role by solving given tasks using appropriate learning strategies and the teacher acts as a trainer by initiating, controlling and supporting the learning processes.
- ✓ Constructivism states that students learn new ideas and information based on their own prior experiences. Teachers provide experiences that facilitate students to construct their own knowledge.
- ✓ Connectivism assumes that students improve their learning processes when they are integrated into networks. They build up a large part of their knowledge on the basis of information and experiences from connections with third parties, such as technology, organizations or social networks.
- ✓ The subject-oriented understanding of learning (or 'individual learning') defines learning as personal development process that is based on individual reasons for learning rather than outside forces, therefore

learning only takes place when the subject (the student) has a reason to learn.

- ✓ Constructivism, connectivism and subject-oriented learning are currently considered the most relevant educational theories due to their alignment with teaching methods that meet the needs of today's learners and today's society.
- ✓ Teachers should employ various teaching strategies that match their desired learning outcomes including direct instruction (e.g., lectures, demonstration), indirection instruction (e.g., problem solving, case studies), experiential learning (e.g., simulations, games), interactive instruction (e.g., debates, discussion) and independent study (e.g., research projects, work assignments).
- ✓ When planning, teachers should identify objectives, select teaching strategies and methods and specify how students will be assessed.
- ✓ When explaining new concepts and ideas to students, teachers should focus on including labels and names, listing key attributes and providing rules and examples.
- ✓ Demonstrations work best when they accurately display the concept, when learners can clearly see and hear what is occurring and when brief explanations and discussions occur intermittently.
- ✓ Before applying questioning in the classroom, teachers should consider the intent of their question, how it links to the learning objective(s) and what they will do if students cannot answer it and whenever possible, teachers should employ more open-ended questions that contribute to student-centered and active learning.

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- ✓ Effective feedback focuses on the task at hand and is provided regularly as a part of all learning processes, whether the student is excelling or having difficulties.
- ✓ Teachers should reflect and evaluate often, e.g., after each lesson, unit or at the end of each day, to establish whether they have been successful in reaching their teaching objectives and to record the progress of the students.

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STEP 1 PRACTICE EXERCISES

A Drag and drop the learning theory to the definition that it best fits:

behaviorism – cognitivism – constructivism – connectivism – subject-orientation

_____: Learning takes place through action, insight and reflection. The learner takes an active role by solving given tasks using appropriate learning strategies and the teacher acts as a trainer by initiating, controlling and supporting the learning processes.

_____: Learning is a personal development process that is based on individual reasons for learning rather than outside forces, therefore learning only takes place when the subject (the student) has a reason to learn.

_____: Students improve their learning processes when they are integrated into networks. They build up a large part of their knowledge on the basis of information and experiences from connections with third parties, such as technology, organizations or social networks.

_____: Students learn through reinforcement: constant positive and negative feedback from their teacher tells them what they are doing is either right or wrong.

_____: Students learn new ideas and information based on their own prior experiences. Teachers provide experiences that facilitate students to construct their own knowledge.

B Fill in the chart by dragging and dropping the below terms into the right category:

Tap into students' reasons for learning[1] – Use consequences and rewards[2] – Take the role of a mentor[3] – Accept reinforcement and feedback[4] – Act as a learning companion[5] – Utilize active problem-solving techniques[6] – Connect to one's own prior experiences[7] – Utilize social networks[8] – Derive personal motivation[9] – Act as a trainer[10]

	Role of Learner	Role of Teacher
Behaviorism		
Cognitivism		
Constructivism		

Connectivism		
Subject-orientation		

C Teaching & Learning Strategies and Methods. Fill in the blanks with the teaching strategies from the box to match their definitions:

Direct instruction – Indirect instruction – Interactive instruction – Experiential learning – Independent study

1. _____

Students learn from both their peers and their teacher through discussion and sharing.

2. _____

Educational activities are provided by the teacher to foster the development of individual student initiative, and they include little or no supervision or guidance.

3. _____

Students are given a high degree of responsibility in deciding how to organize and complete the tasks without any overt lecturing from the teacher.

4. _____

The activities and tasks are highly structured and organized by the teacher (the information provider) with the goal of presenting the information clearly and systematically.

5. _____

Students learn best when they are directly engaged or in touch with the material being studied, in other words, when they experience the knowledge firsthand rather than just reading, hearing or talking about it

D Definition-Method-Strategy Matching. Fill in the chart by dragging and dropping the below terms into the right category. Terms related to strategy can be assigned MULTIPLE times:

Concept formulation[1] – Simulations[2] – Field trips[3] – Indirect instruction[4] – Interactive instruction[5] – Debates[6] – Case studies[7] – Experiential learning[8] – Research Projects[9] – Peer learning[10] – Brainstorming[11] – Independent study[12] – Inquiry[13] – Computer-aided instruction[14]

#	Definition	Method	Strategy
1	Learners are asked to develop questions to explore and apply the subject matter.		
2	The teacher organizes a journey away from the everyday learning environment to experience classroom concepts first-hand.		
3	Students take different sides of a topic to examine various perspectives.		
4	Real-life scenarios related to the grade-level are used for discussions and brainstorming of potential solutions.		
5	Students learn independently through computer assistance (e-Learning).		
6	Students teach each other or help one another acquire skills through practicing together. Use “think, pair, share” to engage students in communication and help them retain the information.		
7	Learners connect pieces of what they have learned by organizing and manipulating information in new ways.		
8	Students are presented with an artificial problem or situation based on reality and put into a simulated environment, essentially combining gameplay and reality to encourage communication and promote critical thinking.		
9	Students research topics (at home, school or the library) and present their findings through a report, presentation, art piece or other creative avenue.		
10	Students come together in groups to generate ideas.		

E Answer the following multiple-choice questions about effective teaching skills. There can only be ONE correct answer:

1. Which of the following is NOT an important step when planning a lesson?
   a) Establish the objective of the lesson and link it to the curriculum.
   b) Consider what the students already know about the topic.
   c) Plan each minute of the lesson so that students remain continuously occupied.
   d) Take the differences between the students into consideration.

2. When explaining new concepts and ideas to students, teachers should
   a) never use videos or technology.
   b) check in with students throughout the process to make sure they understand.
   c) always perform experiments.
   d) assume students have understood as long as they do not have any questions.

3. According to the text, which of the following is an example of a question that fosters creativity and stimulates critical thinking?
   a) Is a whale a mammal?
   b) Does 5 plus 10 equal 15?
   c) Do you think the person in this photo is happy or sad?
   d) How did the ending of the story make you feel?

4. If students feel embarrassed or ashamed when errors are made, they are more likely to engage in future learning.
   a) True
   b) False

5. Teachers asking themselves the question, “Am I satisfied with how I planned, presented and monitored this lesson?” is an example of:
   a) Demonstrating
   b) Explaining
   c) Monitoring
   d) Evaluation

STEP 1 PRACTICE EXERCISES - SOLUTIONS

A Drag and drop the learning theory to the definition that it best fits:

Behaviorism – Cognitivism – Constructivism – Connectivism – Subject-orientation

Cognitivism: Learning takes place through action, insight and reflection. The learner takes an active role by solving given tasks using appropriate learning strategies and the teacher acts as a trainer by initiating, controlling and supporting the learning processes.

Subject-orientation: Learning is a personal development process that is based on individual reasons for learning rather than outside forces, therefore learning only takes place when the subject (the student) has a reason to learn.

Connectivism: Students improve their learning processes when they are integrated into networks. They build up a large part of their knowledge on the basis of information and experiences from connections with third parties, such as technology, organizations or social networks.

Behaviorism: Students learn through reinforcement: constant positive and negative feedback from their teacher tells them what they are doing is either right or wrong.

Constructivism: Students learn new ideas and information based on their own prior experiences. Teachers provide experiences that facilitate students to construct their own knowledge.

B Fill in the chart by dragging and dropping the below terms into the right category.

Tap into students' reasons for learning[1] – Use consequences and rewards[2] – Take the role of a mentor[3] – Accept reinforcement and feedback[4] – Act as a learning companion[5] – Utilize active problem-solving techniques[6] – Connect to one's own prior experiences[7] – Utilize social networks[8] – Derive personal motivation[9] – Act as a trainer[10]

	Role of Learner	Role of Teacher
Behaviorism	**4**	**2**
Cognitivism	**6**	**10**
Constructivism	**7**	**5**

Connectivism	**8**	**3**
Subject-orientation	**9**	**1**

C Teaching & Learning Strategies and Methods. Fill in the blanks with the teaching strategies from the box to match their definitions:

Direct instruction – Indirect instruction – Interactive instruction – Experiential learning – Independent study

1. Interactive instruction

Students learn from both their peers and their teacher through discussion and sharing.

2. Independent study

Educational activities are provided by the teacher to foster the development of individual student initiative, and they include little or no supervision or guidance.

3. Indirect instruction

Students are given a high degree of responsibility in deciding how to organize and complete the tasks without any overt lecturing from the teacher.

4. Direct instruction

The activities and tasks are highly structured and organized by the teacher (the information provider) with the goal of presenting the information clearly and systematically.

5. Experiential learning

Students learn best when they are directly engaged or in touch with the material being studied, in other words, when they experience the knowledge firsthand rather than just reading, hearing or talking about it

D Definition-Method-Strategy Matching. Fill in the chart by dragging and dropping the below terms into the right category. Terms related to strategy can be assigned MULTIPLE times:

Concept formulation[1] – Simulations[2] – Field trips[3] – Indirect instruction[4] – Interactive instruction[5] – Debates[6] – Case studies[7] – Experiential learning[8] – Research Projects[9] – Peer learning[10] – Brainstorming[11] – Independent study[12] – Inquiry[13] – Computer-aided instruction[14]

#	Definition	Method	Strategy
1	Learners are asked to develop questions to explore and apply the subject matter.	**13**	**4**
2	The teacher organizes a journey away from the everyday learning environment to experience classroom concepts first-hand.	**3**	**8**
3	Students take different sides of a topic to examine various perspectives.	**6**	**5**
4	Real-life scenarios related to the grade-level are used for discussions and brainstorming of potential solutions.	**7**	**4**
5	Students learn independently through computer assistance (e-Learning).	**14**	**12**
6	Students teach each other or help one another acquire skills through practicing together. Use “think, pair, share” to engage students in communication and help them retain the information.	**10**	**5**
7	Learners connect pieces of what they have learned by organizing and manipulating information in new ways.	**1**	**4**
8	Students are presented with an artificial problem or situation based on reality and put into a simulated environment, essentially combining gameplay and reality to encourage communication and promote critical thinking.	**2**	**8**
9	Students research topics (at home, school or the library) and present their findings through a report, presentation, art piece or other creative avenue.	**9**	**12**
10	Students come together in groups to generate ideas.	**11**	**5**

E Answer the following multiple-choice questions about effective teaching skills. There can only be ONE correct answer:

1. Which of the following is NOT an important step when planning a lesson?

a) Establish the objective of the lesson and link it to the curriculum.

b) Consider what the students already know about the topic.

c) Plan each minute of the lesson so that students remain continuously occupied.

d) Take the differences between the students into consideration.

2. When explaining new concepts and ideas to students, teachers should

a) never use videos or technology.

b) check in with students throughout the process to make sure they understand.

c) always perform experiments.

d) assume students have understood as long as they don't have any questions.

3. According to the text, which of the following is an example of a question that fosters creativity and stimulates critical thinking?

a) Is a whale a mammal?

b) Does 5 plus 10 equal 15?

c) Do you think the person in this photo is happy or sad?

d) How did the ending of the story make you feel?

4. If students feel embarrassed or ashamed when errors are made, they are more likely to engage in future learning.

a) True

b) False (Correct Answer: If students feel embarrassed or ashamed when errors are made, they are more likely to reject feedback and less likely to engage in future learning.)

5. Teachers asking themselves the question, "Am I satisfied with how I planned, presented and monitored this lesson?" is an example of:

a) Demonstrating

b) Explaining

c) Monitoring

d) Evaluation

STEP 2 PRACTICE EXERCISES

A Read the following classroom examples. Match them to the learning theory they best fit:

Behaviorism – Cognitivism – Constructivism – Connectivism – Subject-orientation

1. Ms. B's students are learning about maps and directions and she wants them to label a map of their own. She labels her map on the board with the four main directions: North, East, South and West. She tells her students that sometimes it is difficult for her to remember what goes where, so she has created a sentence to help her remember: **N**ever **E**at **S**our **W**atermelon. She asks her students if they can come up with their own sentences to help them remember the four directions. This is an example of _____.

2. Ms. B's students have just started a unit on insects. She shows them a photo of the insects they are going to talk about (e.g., ants, ladybugs, bees, dragonflies) and says, "I bet many of you already know tons of information about these insects!" She puts them into groups of three and asks them to work together to write down as much as they know about the insects (e.g., All insects have two antennae or Bees make honey). After 10 minutes, they merge all their information as a class. This is an example of _____.

3. When students enter Ms. B's class, they know just what to do. Each student hangs up their jacket and goes to their personalized folder and removes their morning task. They begin working on their task, some in pairs on the floor and some alone at their desks. At 8:15, Ms. B begins to play music and the students walk to their desks and stay standing. Once everyone is at their desk, Ms. B changes the music to the "Good Morning" song. After singing the song as a class, the students sit down. This is an example of _____.

4. After lunch, Ms. B goes to her desk and picks up a small box labeled "Problem Solving Box." Students have been invited to anonymously place their problems (from school or home) in the box, and once a week Ms. B reads a problem aloud and asks the class to help solve it. Today Ms. B reads, "My big brother doesn't want to play with me when his friends are around. He only plays with me when we are alone, and that makes me sad." Ms. B splits the class into small groups and asks them to brainstorm solutions to this student's problem using a template they are familiar with. After 15 minutes, they come back together and review their ideas. This is an example of _____.

5. In math class, Ms. B's students have been learning how to tell time. At the end of the unit, Ms. B gives them a "Math Menu" with several different options on it. She tells students they can each choose two options on the menu (e.g., Design your own clock and ask a classmate what time it is or Write down your daily schedule including the times you do each of the activities) and spend the rest of the class period doing them. This is an example of _____.

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B Look at the pictures below and match the image to the instruction method it best represents:

Simulation[1] – Field Trip[2] – Lecture[3] – Models[4] – Work Assignment[5] – Brainstorming[6]

 [3]	 [3]	 [3]
 [4]	 [4]	 [3]

[3] Picture Source: Own Pictures
[4] Picture Source: Open Source from pixabay.com

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C Look at the structure of the example lesson plan below and drag and drop the titles in the box below to the appropriate space in the lesson plan.

Think, pair, share – Monitor – Link to curriculum – Teacher feedback – Previous knowledge – Learning objective – Explicit teaching – Teaching strategies – Brainstorm session – Work assignment – Simulation – Student feedback – Questioning – Self reflection

Science Class Lesson Plan

Class: 1st Grade
Topic: Animal Habitats

_____: By the end of this lesson, children will be able to list the five major animal habitats and categorize the animals that live in them.

_____: Life processes and living things

_____: In the previous unit, students studied animal groups and in geography class, they studied different parts of the world.

Introduction

_____: Write "What do animals need to live?" on the board and encourage students to think about the similarities between people and animals. Write their responses on the board.

_____: Have students partner up and sit together in the classroom (they can choose where), they should think about the question "What do animals need to live?", discuss it together and then share it with the class. Write all the answers on the board.

_____: Explain that all animals need to live in something called a habitat where they can get all the things they need to survive. Different animals live in different habitats and there are five major types. In the reading corner, read "Habitats" by William B. Rice.

_____: Each time a new habitat is mentioned in the book, students should put their thumbs up. Choose one student each time to write the label on the board.

Guided Practice

_____: Break students into small groups and assign each one of the five habitats. Tell them they are scientists, and they have to build the habitat they were given. They should work together to write down the names of all the animals they think they will need to live in their habitat. They should write the names on sticky notes and place them under their habitat title on the board. Encourage students to communicate by providing the sentence frame: I agree that a____ could survive in the ____ because _____."

_____: Walk around to each of the groups and ensure that the students are staying on task. Are they completing the task as instructed? Are they communicating using the sentence frame? Are they applying critical thinking skills? Are they listening to one another?

Closing

_____: Bring the class back together and ask them to review the sticky notes on the board. Tell students they did a great job of coming up with lots of animals and ask if anyone has more to add or would change any of the groups the animals are currently in.

_____: If there are any animals in the wrong habitat that the students haven't noticed, say, for example, "I noticed that we have the polar bear here in the dessert. Can anyone think of a better habitat for this animal to live in?" If no one answers, ask them to think about it together with their partner for a moment. If a student answers and says the correct answer, follow up by asking them why the polar regions are the best habitat for the polar bears.

_____: Tell the students that they are going to be explorers after school and task them with finding an animal in its habitat near the school or their home. They should draw a picture of the animal and list out five things the animal has in its habitat (e.g., grass, water, dirt, plants).

_____: When the lesson is over, ask yourself whether the students seemed interested and engaged and make notes on things that worked well and things you would like to improve upon. Be specific. If you use this lesson plan next year, what would you change and why?[5]

[5] Adapted from education.com

D Watch this teacher talk about lesson planning and methodological skills. (Video File 1.2.1; audio transcriptions can be found in the appendix of this document). Indicate if the following statements are true or false:

1. The teacher needs to consider the kind of learners in the classroom when choosing an appropriate teaching technique? T/F
2. The observation method lets students first observe a picture, for example, and then describe or comment on it. T/F
3. The observation method does not develop critical thinking skills in students. T/F

E Watch this teacher talk about lesson planning and methodological skills. (Video File 1.2.2; audio transcriptions can be found in the appendix of this document). Answer the following multiple-choice questions. There can be MULTIPLE correct answers:

1. How does this teacher prepare his teaching?
   a) He does not prepare his teaching.
   b) He always prepares a lesson plan.
   c) He prepares a rough outline of what he is going to teach.
2. Which elements does his lesson preparation include?
   a) Objectives of the lesson
   b) Use of material (e.g., textbook)
   c) Context of the lesson
3. How does he describe his lesson preparation?
   a) As a map of processing learning outcomes.
   b) As a map of the class including each individual student.
   c) As a map of the learning environment.
4. What kinds of methods does he use?
   a) The “Think-Pair-Share” method
   b) The “Round Table” method
   c) The “Jigsaw” method

STEP 2 PRACTICE EXERCISES - SOLUTIONS

A Read the following classroom examples. Match them to the learning theory they best fit:

Behaviorism – Cognitivism – Constructivism – Connectivism – Subject-orientation

1. Ms. B's students are learning about maps and directions and she wants them to label a map of their own. She labels her map on the board with the four main directions: North, East, South and West. She tells her students that sometimes it is difficult for her to remember what goes where, so she has created a sentence to help her remember: **N**ever **E**at **S**our **W**atermelon. She asks her students if they can come up with their own sentences to help them remember the four directions. This is an example of cognitivism.

2. Ms. B's students have just started a unit on insects. She shows them a photo of the insects they are going to talk about (e.g., ants, ladybugs, bees, dragonflies) and says, "I bet many of you already know tons of information about these insects!" She puts them into groups of three and asks them to work together to write down as much as they know about the insects (e.g., All insects have two antennae or Bees make honey). After 10 minutes, they merge all their information as a class. This is an example of connectivism.

3. When students enter Ms. B's class, they know just what to do. Each student hangs up their jacket and goes to their personalized folder and removes their morning task. They begin working on their task, some in pairs on the floor and some alone at their desks. At 8:15, Ms. B begins to play music and the students walk to their desks and stay standing. Once everyone is at their desk, Ms. B changes the music to the "Good Morning" song. After singing the song as a class, the students sit down. This is an example of behaviorism.

4. After lunch, Ms. B goes to her desk and picks up a small box labeled "Problem Solving Box." Students have been invited to anonymously place their problems (from school or home) in the box, and once a week Ms. B reads a problem aloud and asks the class to help solve it. Today Ms. B reads, "My big brother doesn't want to play with me when his friends are around. He only plays with me when we are alone, and that makes me sad." Ms. B splits the class into small groups and asks them to brainstorm solutions to this student's problem using a template they are familiar with. After 15 minutes, they come back together and review their ideas. This is an example of constructivism.

5. In math class, Ms. B's students have been learning how to tell time. At the end of the unit, Ms. B gives them a "Math Menu" with several different options on it. She tells students they can each choose two options on the menu (e.g., Design your own clock and ask a classmate what time it is or Write down your daily schedule including the times you do each of the activities) and spend the rest of the class period doing them. This is an example of subject-orientation.

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B Look at the pictures below and match the image to the instruction method it best represents:

Simulation[1] – Field Trip[2] – Lecture[3] – Models[4] – Work Assignment[5] – Brainstorming[6]

 3	 3	 3
3	**4**	**1**
 4	 4	 3
2	**6**	**5**

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C Look at the structure of the example lesson plan below and drag and drop the titles in the box below to the appropriate space in the lesson plan.

Think, pair, share – Monitor – Link to curriculum – Teacher feedback – Previous knowledge – Learning objective – Explicit teaching – Teaching strategies – Brainstorm session – Work assignment – Simulation – Student feedback – Questioning – Self reflection

Science Class Lesson Plan

Class: 1st Grade
Topic: Animal Habitats

_____ **Learning objective** _____**:** By the end of this lesson, children will be able to list the five major animal habitats and categorize the animals that live in them.

____ **Link to curriculum** _____**:** Life processes and living things

____ **Previous knowledge** _____**:** In the previous unit, students studied animal groups and in geography class, they studied different parts of the world.

Introduction

_____ **Brainstorm session** _____**:** Write "What do animals need to live?" on the board and encourage students to think about the similarities between people and animals. Write their responses on the board.

___ **Think, pair, share** _____**:** Have students partner up and sit together in the classroom (they can choose where), they should think about the question "What do animals need to live?", discuss it together and then share it with the class. Write all the answers on the board.

____ **Explicit teaching** _____**:** Explain that all animals need to live in something called a habitat where they can get all the things they need to survive. Different animals live in different habitats and there are five major types. In the reading corner, read "Habitats" by William B. Rice.

___ **Student feedback** _____**:** Each time a new habitat is mentioned in the book, students should put their thumbs up. Choose one student each time to write the label on the board.

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Guided Practice

_____ **Simulation**_____**:** Break students into small groups and assign each one of the five habitats. Tell them they are scientists, and they have to build the habitat they were given. They should work together to write down the names of all the animals they think they will need to live in their habitat. They should write the names on sticky notes and place them under their habitat title on the board. Encourage students to communicate by providing the sentence frame: I agree that a____ could survive in the ____ because _____."

_____ **Monitor**_____: Walk around to each of the groups and ensure that the students are staying on task. Are they completing the task as instructed? Are they communicating using the sentence frame? Are they applying critical thinking skills? Are they listening to one another?

Closing

___ **Teacher feedback** _____**:** Bring the class back together and ask them to review the sticky notes on the board. Tell students they did a great job of coming up with lots of animals and ask if anyone has more to add or would change any of the groups the animals are currently in.

____ **Questioning**_____**:** If there are any animals in the wrong habitat that the students haven't noticed, say, for example, "I noticed that we have the polar bear here in the dessert. Can anyone think of a better habitat for this animal to live in?" If no one answers, ask them to think about it together with their partner for a moment. If a student answers and says the correct answer, follow up by asking them why the polar regions are the best habitat for the polar bears.

____ **Work assignment**_____**:** Tell the students that they are going to be explorers after school and task them with finding an animal in its habitat near the school or their home. They should draw a picture of the animal and list out five things the animal has in its habitat (e.g., grass, water, dirt, plants).

_____ **Self reflection** _____**:** When the lesson is over, ask yourself whether the students seemed interested and engaged and make notes on things that worked well and things you would like to improve upon. Be specific. If you use this lesson plan next year, what would you change and why?[5]

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D Watch this teacher talk about lesson planning and methodological skills. (Video File 1.2.1; audio transcriptions can be found in the appendix of this document). Indicate if the following statements are true or false:

1. The teacher needs to consider the kind of learners in the classroom when choosing an appropriate teaching technique? T/F
2. The observation method lets students first observe a picture, for example, and then describe or comment on it. T/F
3. The observation method does not develop critical thinking skills in students. T/F (Correct Answer: The observation method does develop critical thinking skills in students.)

E Watch this teacher talk about lesson planning and methodological skills. (Video File 1.2.2; audio transcriptions can be found in the appendix of this document). Answer the following multiple-choice questions. There can be MULTIPLE correct answers:

1. How does this teacher prepare his teaching?
   a) He does not prepare his teaching.
   b) He always prepares a lesson plan.
   c) He prepares a rough outline of what he is going to teach.
2. Which elements does his lesson preparation include?
   a) Objectives of the lesson
   b) Use of material (e.g., textbook)
   c) Context of the lesson
3. How does he describe his lesson preparation?
   a) As a map of processing learning outcomes.
   b) As a map of the class including each individual student.
   c) As a map of the learning environment.
4. What kinds of methods does he use?
   a) The “Think-Pair-Share” method
   b) The “Round Table” method
   c) The “Jigsaw” method

STEP 3 PORTFOLIO TASK – SELF-REFLECTION QUESTIONS

Write an essay answer to the following self-reflection question. Your answer should be approximately 300-500 words long and answered in a coherent text with full sentences. THIS ESSAY ANSWER GOES INTO YOUR PERSONAL PORTFOLIO!

1. What is your experience with the different teaching strategies described in this module? What have you experienced during your years as a student? Was it helpful, or what else would you have needed to have felt maximally supported in your learning process?

STEP 4 PORTFOLIO TASK – TEACHING PROJECT

Create your own personal teaching project. Define learning outcomes for the lesson you have chosen in Module 1.1. This portfolio task should be approximately 800-1000 words long. THE TEACHING PROJECT GOES INTO YOUR PERSONAL PORTFOLIO!

On the basis of your previously defined learning outcomes, try to come up with strategies, methods and essential steps for a learner-oriented conceptualization of your didactic design. Use the 'Growth' section from the *Planning Tree* (Module 1.2) to help you in your considerations.

APPENDIX

Transcript: Video File 1.2.1

Teacher A: How do teachers prepare for a class? There are many techniques for teachers to choose from for their class. It depends on the teacher and the students in each class. What kind of learners are they: introverted or extroverted learners, for example? Teachers need to know in order to understand the student behavior and to find the right techniques for the students. Concerning methodology, teachers can choose any suitable method. I, personally, like the observation method. It means that I let the students observe a picture, for example, and they can then describe it. The teacher wants the students to observe the picture and then students give answers. The teacher lets them say what they see and think. The students will observe what they see and say it out loud. That is the method that I use when I teach pictures. Because it is easy for them to remember and it develops critical thinking skills. Teachers can add more methods to each lesson.

Transcript: Video File 1.2.2

Interviewer: How do you prepare your teaching?

Teacher B: What I always prepare before teaching is a lesson plan. It means that the teacher prepares the lesson, the objectives of the lesson, the use of the textbook and context of the lesson. It is a map of processing learning outcomes. If you do not prepare a lesson plan, you will get lost during teaching. I set the goal of the student assessment: What do the students get from the lesson. If you do not set goals, you will lose student outcome. The textbook and teaching material because it is useful for the teacher to prepare the objective of the lesson. In addition, it can help students in developing their critical thinking and observational skills.

Interviewer: Thank you. You talk a lot about methods. What kind of methods do you use for your teaching?

Teacher B: Personally, I prefer two methods to teach in real class. The first is called “round table”. It has three steps. Step 1: Students work in groups and discuss with each other to find an answer. Step 2: They set a goal and roles. Step 3: They share with the class what they have done. The second method is called “Jigsaw”. There are 4 Steps. Step 1: Create groups by letting the students count (groups of four people = count from 1-4). Step 2: Create new groups with the same number (1, 1, 1, 1). Step 3: Read and think about a given text. Step 4: Students go back to their first group and share what they have read in their text.

Successful educators understand how to incorporate the key elements of high-quality teaching into their classroom. This module serves as a foundation for effective teaching practice to ensure that the core components of primary school teaching are considered when planning, conducting and evaluating learning and teaching processes. Through various cornerstone topics including 21st century teaching and learning, lesson planning, and learning environments, you will be asked to reflect on the interdependent process of teaching and learning to successfully achieve the targeted outcomes.

Enjoy!