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Learner-centered Teaching Methods – A Toolkit for Secondary Education Teachers

Indiana University Bloomington

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**“Education is not the filling of a pail,
but the lightning of a fire”**

- **William Butler Yeats**

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FOREWORDS

This report is the final product of my inquiry project in Fulbright Distinguished Awards in Teaching Program in Indiana University Bloomington, from August to December 2015. The main purpose of my project was to discover which learner-centered teaching methods used by the U.S. secondary education teachers have proved successful in enhancing learner motivation and engagement. It is expected that these learner-centered teaching methods also might help students with special needs and may help to decrease the number of students who drop out of education.

The report is based on my experiences of the U.S. educational system. I visited 10 different high schools and elementary schools, observed lessons in those schools, interviewed teachers and had conversations with students. I did a survey for students at a local high school and asked their experiences of their best lessons and the ways they would like to learn at school. I also audited two courses at Indiana University Bloomington and attended ASCD Conference on Educational Leadership in San Diego. I studied all these experiences in the viewpoint of literature of motivation, self-efficacy, learning and teaching methods.

As a result, I chose fourteen learner-centered teaching methods for different phases of the learning process and described them with instructions on how to use these methods in a classroom. A template, which can be easily used for describing and sharing teaching methods, is provided in this report. A protocol of a workshop for sharing teaching methods in a school, is also provided in this material.

My hope is that this report will give teachers new ideas of different learner-centered teaching methods that can be used in different phases of learning. Another

purpose of this report is to encourage teachers to describe teaching methods they use, to share these methods among other teachers in their schools and continue to try out new methods in their classrooms. Sharing, co-creation, and putting new ideas into practice is a part of teachers´ professional development. Without teachers´ development activities, it is not possible for a school to develop as a community.

I make this report freely available to any teachers, principals and curriculum developers. It can be downloaded from website http://tarjamykra.weebly.com/
A template for describing and sharing teaching methods can also be downloaded from this website.

I want to thank Dr. Bonk from Indiana University Bloomington and teacher Adam Price from Bloomington High School North for the help and advice they gave me during my project. I also want to thank IIE, CIEDR, various Fulbright teacher colleagues and all the other teachers and people I met during my stay in the U.S. These four months I spent in the U.S. made my long-term dream come true. I address the biggest thank to my loved ones, my husband Jussi and son Matti who stayed at home in Finland during my visit to the U.S. Without them all is nothing.

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Tarja Mykrä

1 INTRODUCTION: WHY DO WE NEED LEARNER-CENTERED TEACHING METHODS?

Many researches and educators (Driscoll 1994; Bandura 1997; Marzano 2007) argue that learning must be situated in the context of meaningful activity for knowledge to be used in similar situations later in life. Teachers can help students learn how to learn, nurture their willingness to solve problems, and build their capacity for hard work and persistence. Teachers can also help students to develop perseverance and motivation by supporting them in their efforts to meet expectations and in showing greater degrees of commitment. They can do this by encouraging students to regard mistakes and setbacks as learning opportunities.

It is a basic generalization that learners must be actively engaged in the processing of information and that the teaching and learning process involves an interaction among the teacher, the students, and the content (Marzano 2007, p. 31). Students all over the world have been known to acquire inert knowledge, such as definitions and formulas that they do not really know how to apply meaningfully. For that to occur, learning must involve authentic activity (Driscoll 1993, p. 162).

Elements such as a well-articulated curriculum and a safe and orderly environment constitute an effective school and learning environment. One element that surfaces as the single most influential component is the individual teachers within that school. The influence of an effective teacher has on learner achievement is relatively independent of anything else that occurs in the school. Many studies point out that the more teachers have pedagogical competence, the greater the achievement of the students is (Marzano 2007, pp. 1-2).

Today´s learners are more connected to technology than previous generations. Millennials (birth years ranging from the early 1980s to the early 2000s) are a technologically connected, diverse, and tolerant generation. They believe that their

relationship to technology is what makes their generation unique. Widespread access to mobile phones and the Internet have changed how Millennials communicate and interact with one another. They use social media more frequently and are even more likely to sleep near their mobile phone. The priority that Millennials place on creativity and innovation augurs well for future economic growth. At the same time, their unprecedented enthusiasm for technology has the potential to bring change to traditional economic institutions as well as the labor market. (15 Economic Facts about Millennials 2014.)

In addition to understanding the world where learners live, teachers have to figure out what learning is. To be able to do this, they need to comprehend a learning theory. A learning theory comprises a set of constructs linking observed changes in performance with what is thought to bring about those changes. According to Driscoll (1993, p. 9), learning theory requires defining three basic elements: 1) inputs, 2) means, 3) outcome, as shown in Figure 1.

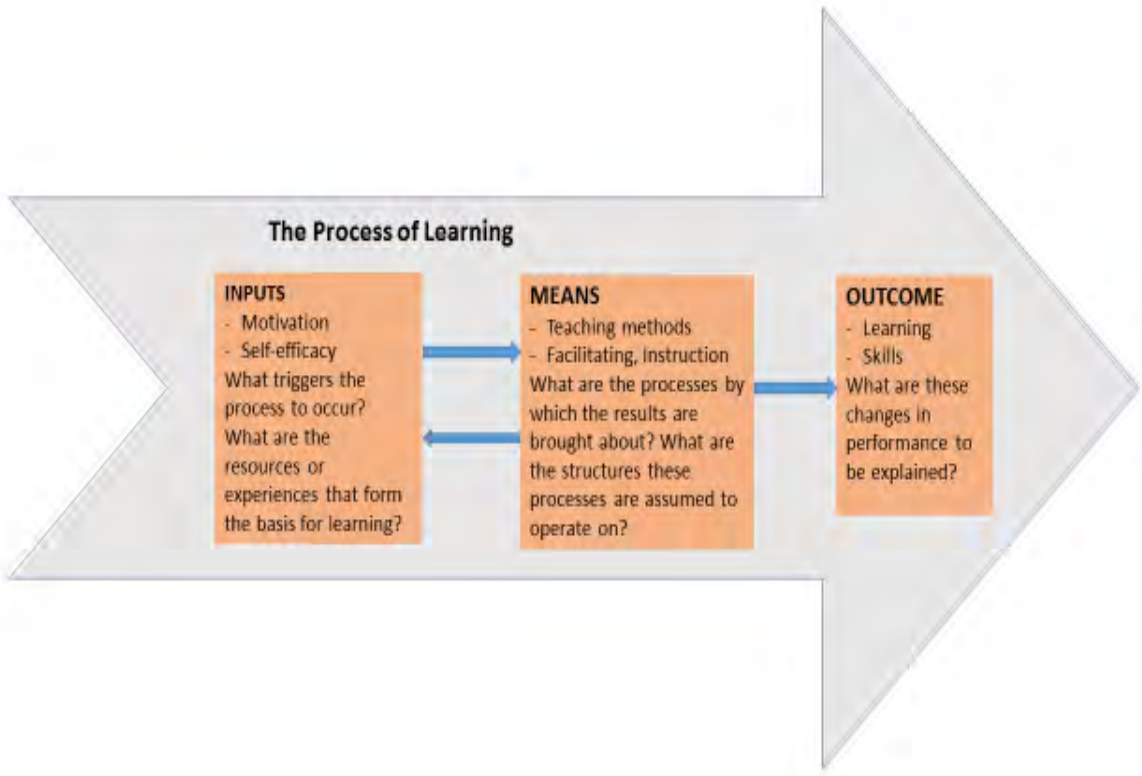


Figure 1. The Process of Learning (Driscoll 1993, p. 9)

Most likely neither research nor practice will be able to identify teaching that works with every learner in every class. According to Marzano (2007, p. 191), teaching is part art and part science. The science part of effective teaching is founded on decades of research. Research provides guidance for the general categories of behaviors that constitute effective teaching and for the specific techniques that can be employed within those general categories. The art part of teaching is founded on the dual realizations that research cannot provide answers for every situation. The same behaviors can be employed in a different order and fashion by two different teachers with equally beneficial results.

The framework of this report is presented in Figure 2. The process of learning and elements related to it are introduced in sections 2, 3, 4 and 5. Examples of learner-centered teaching methods are given in section 6. Ideas for sharing teaching methods are introduced in section 7. Conclusions of relevance and application of this report as part of teacher and school development is discussed in section 8.

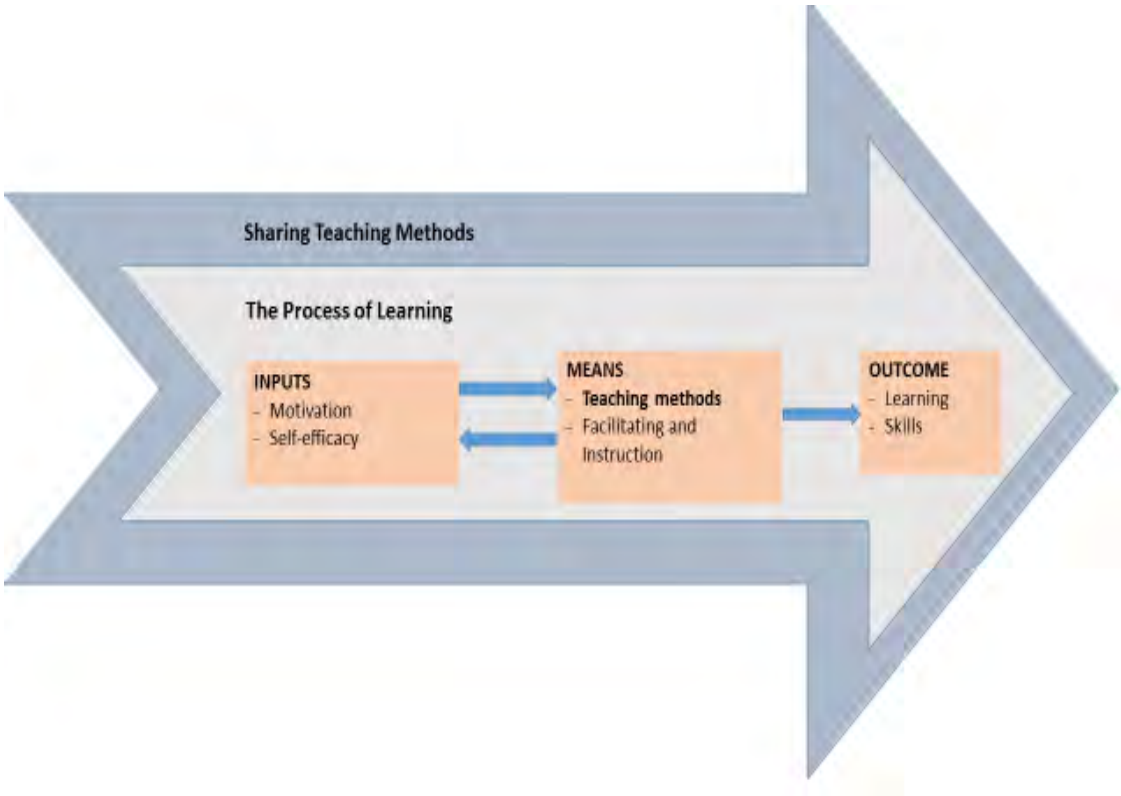


Figure 2. Framework of the Report

2 LEARNER MOTIVATION AND ENGAGEMENT

In this section, the phase of Inputs in learning process is introduced. Inputs phase answers the questions *"what triggers the learning process to occur?"* and *"what are the resources or experiences that form the basis for learning?"* Three different types of motivation are first described. After that, learner engagement in learning process is discussed.

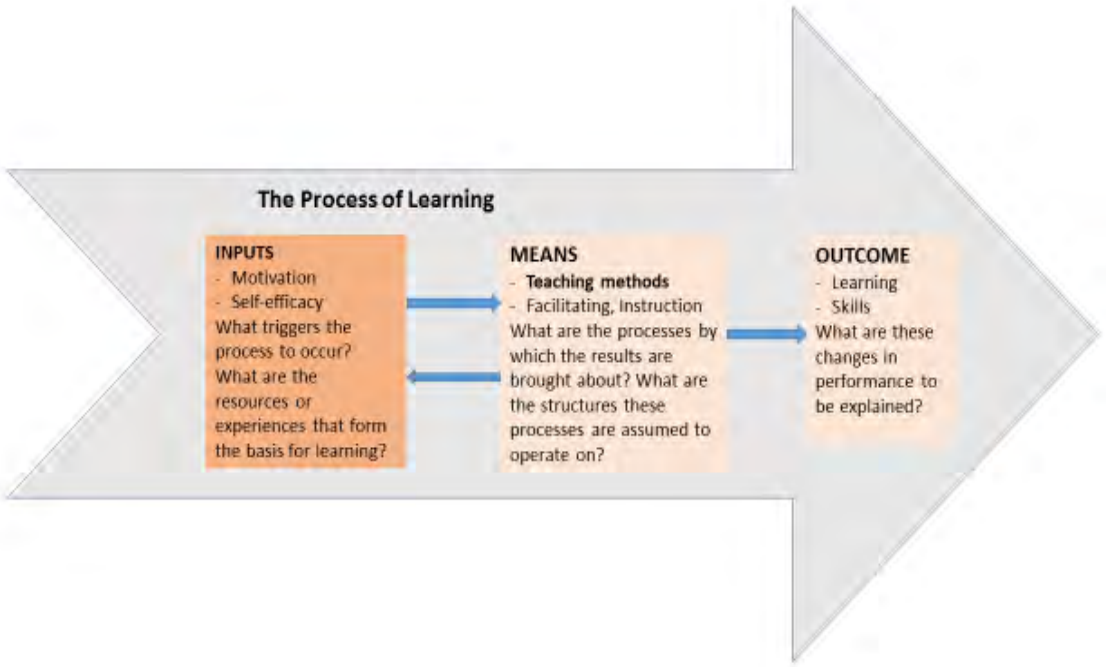


Figure 3. Inputs in the Process of Learning

The word motivation means "To be moved." Most human motivation is cognitively generated, which means that people motivate themselves and guide their actions anticipatorily through the exercise of forethought. They form beliefs about what they can do, they anticipate likely positive and negative outcomes of different pursuits, and they set goals for themselves and plan courses of action designed to realize a valued future and an avoid aversive one. Efficacy beliefs play a central role in the motivation (Bandura 1997, p. 122.). For a teacher, the question of how

to motivate learners is essential. As we know, there are different learners in one classroom, whose types of motivation also vary from learner to learner.

Deci and Ryan (2002, p. 16) distinguish three different types of motivation 1) amotivation, 2) extrinsic motivation, and 3) intrinsic motivation as shown in Figure 4.

Type of Motivation	Amotivation	Extrinsic Motivation				Intrinsic Motivation
Type of Regulation	Non-regulation	External Regulation	Introjected Regulation	Identified Regulation	Integrated Regulation	Intrinsic Regulation
Quality of Behavior	Nonself-determined					Self-determined

Figure 4. Different Types of Motivation (Deci & Ryan 2002)

2.1. Amotivation

Amotivation is the state of lacking the intention to act. When learners are amotivated, either they do not act at all or they act passively. They go through the motions with no sense of intending to do what they are doing. Amotivation results from feeling either that they are unable to achieve desired outcomes because of a lack of contingency or a lack of perceived competence, or that they do not value the activity or the outcomes it would yield. (Deci & Ryan 2002, p. 17.)

Amotivation is a construct similar in many ways to learned helplessness, mostly because amotivated students feel incompetent and act like they have little or no control (Deci & Ryan 2002, p. 17). Their behaviors are perceived to be caused by

forces outside themselves. They begin to feel helpless and may start to question the usefulness of engaging in the activity in the first place. A highly probable consequence of amotivation is to quit the activity toward which the individual is amotivated. (Deci & Ryan 2002, p. 17.) It is a real challenge for a teacher to teach learners who do not show any motivation in a classroom. If a learner cannot determine what staying in school will bring to his/her future, s(he) may decide to drop out.

2.2. Extrinsic Motivation

According to Deci and Ryan (2002) learners, who are extrinsically motivated, are characterized by four types of regulation according:

1. *External regulation* is the least autonomous form of extrinsic motivation and includes that learner is motivated only to obtain rewards (high grades, praise) and avoid punishment (parent´s complaints, low grades).
2. *Introjected regulation* involves an external regulation that have been internalized but the learner accepts it as his/her own.
3. *Regulation through identification* is a learner that values behavioral goal or regulations consciously. In this process external regulation transforms into true self-regulation.
4. *Integrated regulation* provides the most autonomous form of extrinsically motivated learner´s behavior. Integrated regulation shares many qualities with intrinsic motivation, but it is still considered extrinsic because learner tries to attain personally important outcomes rather than for his/her inherent interest and enjoyment.

2.3. Intrinsic Motivation

Intrinsic motivation is the state when a learner is doing an activity out of interest and inherent satisfaction. It is a prototype of autonomous or self-determined behavior. If a learner has intrinsic motivation, (s)he seeks and engages challenges, attempting to actualize his/her potentialities, capacities and sensibilities. Social environments can either facilitate the individual´s synthetic tendencies, or alternatively wither, block, or overwhelm them (Deci & Ryan 2002, pp. 8-9.).

Learners with intrinsic motivation are usually high achieving students, who need extra challenges in learning. If they are not challenged, they might lose their motivation. They are willing to work hard, when they are working out of interest. Learner-centered teaching methods can provide differentiating and challenging assignments for them to accomplish and develop their knowledge and skills.

2.4. Learner Engagement

Keeping learners engaged during the learning process is one of the most important considerations for the teacher. According to Marzano (2007), the importance of engagement to academic achievements is almost self-evident and has been commented on by a number of researchers and theorists. The dynamics of what causes or encourages learners to engage in classroom behavior are very complex. The teacher must be ready to employ different action steps at any moment when (s)he notices decline of engagement in a classroom. Variety is an important aspect; the more different teaching methods and techniques a teacher has, the better chances (s)he has to maintain and enhance learner engagement.

There are several ways for a teacher to engage and reengage learners. One way to enhance learner involvement in an instructional unit´s subject matter is to identify something that interests them beyond the teacher-identified goals. Personal applications might not seem obvious to a learner at first, but a little guidance can go a long way in demonstrating to a learner that (s)he can relate his/her own interests to the content addressed in class (Marzano 2007, p. 23).

Marzano (2007, p. 149) also points out the importance of the teacher-learner relationship in enhancing learner motivation and engagement. There are two complementary dynamics that constitute an effective teacher-learner relationship. At first, teachers must somehow communicate the message *"you can count on me to provide clear direction in terms of your learning and in terms of behavior. I take responsibility for these issues."* Another dynamic is the extent to which the teacher provides a sense that teacher and learner are a team devoted to the well-being of

all participants. In addition to these dynamics, teachers can use different learner-centered teaching methods and instructional strategies to enhance learner motivation and engagement.

3 SELF-EFFICACY AND EFFICACY BELIEFS

Self-efficacy and efficacy beliefs are closely connected to motivation. In this section self-efficacy is explained and the differences to self-esteem are described. After that efficacy beliefs are defined and their relationship to outcome expectancies is presented. It is essential for a teacher to understand the dynamics between motivation, self-efficacy and efficacy beliefs to be able to enhance each learner´s commitment to learning.

Self-efficacy expectations are rooted in questions such as *"can I cope well with the task at hand?"* and *"if things start to go wrong during my performance, do I have the personal resources within me to cope well and turn things around for the better?"* (Reeve & Lee 2012).

3.1. Differentiating Self-efficacy from Self-esteem

Perceived self-efficacy refers to beliefs in one´s capabilities to organize and execute the courses of action required to produce given attainment (Bandura 1997, p. 3). For a teacher, it is important to differentiate self-efficacy from self-esteem. Self-efficacy is concerned with judgments of personal capability, self-esteem is concerned with judgments of self-worth. Learners need much more than high self-esteem to do well in school (Bandura 1997, p. 11). According to Bandura (1997), many achievers are harsh on themselves because they adapt standards that are not easily fulfilled. Other learners may enjoy high self-esteem because they do not demand much of themselves.

3.2. Efficacy Beliefs

Bandura (1997) points out that unless learners believe they can produce desired effects by their action, they have little incentive to act. Efficacy beliefs, therefore, are a major basis of action in learning. Learners´ beliefs in their efficacy have diverse effects. Such beliefs influence the courses of action learners choose to pursue, how much effort they put forth in given endeavors and how long they will persevere in the face of obstacles and failures. Their beliefs also can influence their

resilience of adversity, whether their thought patterns are self-hindering or self-aiding, how much stress and depression they experience in coping with demands, and the level of accomplishment they realize.

Success builds a robust belief in one´s personal efficacy. That is why teachers should encourage every individual learner and give praise and positive feedback even for small accomplishments. Failures undermine personal efficacy, especially if failures occur before a sense of efficacy is firmly established. Also, if learners experience only easy successes, they come to expect quick results and are easily discouraged by failure. A resilient sense of efficacy requires experiences in over-coming obstacles through perseverant effort (Bandura 1997,p. 80).

3.3. Efficacy Believes and Outcome Expectancies

Perceived self-efficacy is a product of efficacy believes and outcome expectancies, as seen in Figure 5.

Figure 5. The Conditional Relationships between Efficacy Beliefs and Outcome Expectations (Bandura 1997, p. 22)

In a learning process self-efficacy plays role as a mediator for performance and achievement. A learner who feels efficacious about learning should engage in thoughts and actions that improve his/her learning, such as setting goals and cre-ating effective environments for learning. In turn, self-efficacy is influenced by the outcomes of one´s behaviors (Bandura 19997, p. 22). Figure 6 shows behavioral

choices that are based on the connections between efficacy beliefs and outcome expectancies. These behavioral alternatives are familiar for most teachers. How can teachers respond to behaviors of resignation, apathy, self-devaluation or despondency, which are present in a classroom?

		OUTCOME EXPECTANCIES	
		-	+
EFFICACY BELIEFS	+	Protest Grievance Social activism Milieu change	Productive engagement Aspiration Personal satisfaction
	-	Resignation Apathy	Self-devaluation Despondency

Figure 6. Efficacy Beliefs and Outcome Expectancies (Bandura 1997, p. 20)

Helping learners to develop the skills related to self-efficacy is one of the most important things teachers can do. The relative power of guided enactive mastery to create and strengthen efficacy beliefs has been compared with other modes of influence such as modeling strategies, cognitive simulations of successful performances, and tutorial instruction (Bandura 1997). Learner-centered teaching methods can also help students to gain experiences of how to build one's skills related to self-efficacy.

4 LEARNING

In this section, learning is defined shortly and a figure of different learning theories in timeline is presented. It is worthwhile for a teacher every now and then to stop for reflection on his/her own concept of learning, and think about what learning theories different elements of his/her teaching represent. It is considered an important part of teachers´ professional development.

Learning can be defined as *"more or less permanent change in behavior that can be detected by observing students over a period of time."* School is a place where learners can develop the cognitive competencies and acquire the knowledge and problem-solving skills essential for participating effectively in society. During the learning process their knowledge and thinking skills are continually tested, evaluated, and socially compared. The goal of learning is to enable learning outcomes or skills. Teachers are preparing learners for the real world, where they can use skills they have learned at school and outside of school. These skills can be intellectual skills, cognitive strategies, attitudes or motor skills (Gagné & Driscoll 1988).

Self-efficacy, which was discussed in an earlier section, has an important role in learning. When learning, learners gradually develop the sense of their self-efficacy. Besides the school, development of a sense of self-efficacy is also effected by other informal environments, but school has a specific role in enhancing self-efficacy and motivation related to learning. According to Bandura (1997, p. 175) the stronger the learner´s self-instructional efficacy, the more learning (s)he engages in on his/her own outside the school. That said, teachers have powerful impact on each learner´s whole life and future.

4.1. Different Theories of Learning

There are numerous theories of learning. Each theory provides a particular picture of learning that highlights some aspects and obscure others. Because learning is such a complex matter, it is perhaps impossible to conceive of a single theory broad enough to encompass all important aspects of learning. *"Like the blind men, each touching a different part of the elephant, we must evaluate each separate theory for what it illuminates about learning and for how it can guide the development of effective teaching" (Driscoll 1993, p. 379).*

Figure 7. Timeline of Learning Theories

Contemporary learning theories define learning as anything but a step-by-step linear process. Instead, it is highly individualized, very complex, and difficult to measure or control. There are instructional design principles for teachers derived from constructivist learning theory, such as:

- Teachers cannot force or map their own interpretations of the world onto learners who do not share a set of common experiences and interpretations.
- Learners should be the most active people in a lesson because they must actively engage in completing tasks or solving problems, make mistakes, reflect, and then try again for meaningful learning to occur.
- Learning is derived from trying to solve complex, challenging problems rather than passively attending to messages transmitted by a teacher.

- Knowledge and skills should be learned in contexts as much like the real-world situations in which the knowledge and skills will eventually be applied if the learning is not to be inert.
- Transfer of learning from one content to another is very difficult and, therefore, learners must be given ample opportunities to apply their knowledge and skills in multiple contexts and domains
  (Reeves & Reeves 2015, p. 472).

4.2. Learning as a Process

It is essential for teachers to know how learning happens as a process before it is possible to choose effective teaching methods. While teaching, it is important for teachers to use various teaching methods that support different phases of learning and different learning styles. In Table 1 the events of teaching and teaching methods connected to them are presented.

Event of Teaching	Teaching method
1. Gaining attention	Attention
2. Informing the learner of the objective	Expectancy
3. Stimulating recall of prior learning	Retrieval to working memory
4. Presenting the stimulus	Pattern recognition; selective perception
5. Providing learner guidance	Chunking, rehearsal, encoding
6. Eliciting performance	Retrieval, responding
7. Providing feedback	Reinforcement, error correction
8. Assessing performance	Responding, retention
9. Enhancing retention and transfer	Retention, retrieval, generalization

Table 1. Elements of Teaching Methods Supporting Learning Processes (Gagné & Driscoll 1988)

Gagné and Driscoll (1988) present nine events of instruction together with the internal processes that they support during learning. Although they believe that most lessons should follow the sequence of events as shown, they recognize that this order is not absolute. Moreover, the manner in which teacher implements the events may vary greatly depending upon the instructional delivery system the teacher chooses.

5 TEACHING METHODS

In this section, the role of teaching methods in a learning process is discussed. Questions like *"what are the processes by which the results/outcomes are brought about?"* and *"what are the structures these processes are assumed to operate on?"* are connected to means in a learning process. Simply, means refer to teaching methods and facilitation used during learning in order to achieve outcomes.

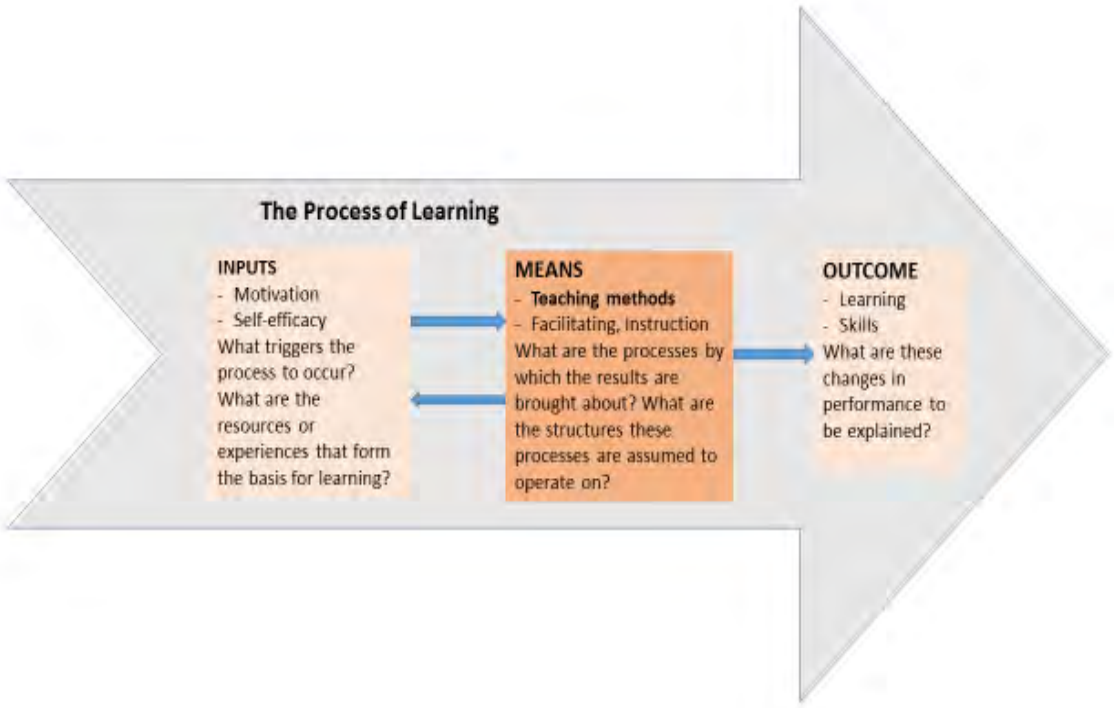


Figure 7. Means in the Process of Learning

In Figure 7, the two-way arrows go from inputs to means and back again. I want to emphasize the flexible way in which learning at its´ best happens. Teaching is not just about content, it is also about strengthening learner´s self-efficacy, motivation and engagement. It is very common that teachers have to re-motivate students and support their self-efficacy several times during the learning process.

5.1. Teaching Methods as a Tool to Strengthen Motivation and Self-efficacy

Teaching is a process of facilitating learning. Effective teaching is a complex endeavor involving many interacting components. Facilitation during learning is believed to help create and strengthen efficacy beliefs. Complex performancies are organized and controlled by cognitive and other self-regulative subskills during the learning process. Building a sense of personal efficacy through mastery experiences is not a matter of programming ready-made behavior. It involves acquiring the cognitive, behavioral, and self-regulatory tools for creating and executing effective courses of action to manage ever-changing life circumstances (Bandura 1997, p. 80).

According to Marzano (2007, p. 57), considering the question *"what will I do to help students effectively interact with new knowledge?"* is key for the teacher to identify actions to input experiences. In other words, teachers can choose and use different teaching methods to help their learners to learn. Also the level of activation is important issue in student engagement.

5.2. Level of Activation

Bandura (1997) points out that as a general rule, moderate levels of arousal heighten attentiveness and facilitate deployment of skills, whereas high arousal disrupts the quality of functioning. The optimum level of activation will depend on the complexity of the activity. Simple activities and those that are overlearned are not easily disruptable. On the other hand, performance of complex activities that requires intricate organization and precise execution are more vulnerable to impairment.

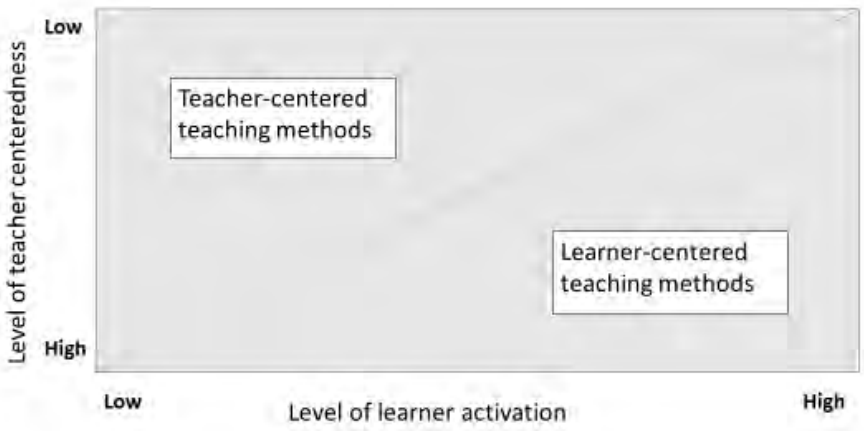


Figure 8. Level of Activation in Teacher-centered and Learner-centered Teaching Methods

Figure 8 shows how the use of learner-centered teaching methods increases the level of learner activation. The more the teaching is teacher-centered, the lower the level of learner activation. When a teacher adopts the role of a facilitator during the learning process, the level of learner activation grows.

Paying attention during the learning requires learners to have a certain activation level. Teachers can boost this activation during lessons. Physical activity is one of those ways. According to Marzano (2007), pacing of instruction appears to be another activity that effects energy in the classroom. Pacing is particularly important during transition from activity to another. Slow transitions from activity to activity provide no stimulus that might capture learner´s attention. He also points out that teacher enthusiasm and intensity also appear to affect learner´s activation level and enhance engagement. Use of learner-centered teaching methods means high level of activation among learners.

6 LEARNER-CENTERED TEACHING METHODS

In this section, 14 learner-centered teaching methods that represent the different phases of learning, are introduced. The aim of this section is to provide some examples of methods that teachers can use in their classrooms. I have chosen these methods based on my observations and experiences of the teaching methods used by the U.S. secondary education teachers. Most of the methods described are easy to use and don´t require extensive preparations beforehand.

In a learning process information undergoes a series of transformations as it passes through the stages of memory, and finally becomes knowledge and skills as outcome of learning. Because learning takes place only when different processes are activated, the goal of learner-centered teaching methods should facilitate this activation. During the process of learning, teachers must be ready to employ any of the action steps at any moment. Students may need re-motivation, re-engagement and re-evaluation, or re-summaries while they are learning.

In Table 2, events of teaching presented by Gagné and Driscoll (1988) in section 4, are modified and examples of learner-centered teaching methods connected to each event of teaching are provided. In each phase of the learning process, there are numerous methods teachers can use. Even with these few methods provided here, teachers can increase learner-centered teaching in their classrooms.

Event of Teaching	Examples of Teaching Methods
1. Gaining attention	• Have you ever? • Forming Lines
2. Informing the learner of the objective	• Knows - Need to Know • Scavanger Hunt
3. Stimulating recall of prior learning	• Mind Map • Use of Videos in Flipped Classroom
4. Presenting the stimulus	• Jigsaw • Learning Stations
5. Providing learner guidance and eliciting performance	• Demonstration and Visualization • Muddiest Point Paper
6. Providing feedback	• Critical Friends • Bingo Review
7. Assessing performance, enhancing retention and transfer	• Brainstorming • Gallery Walk

Table 2. Events of Teaching and Examples of Learner-centered Teaching Methods. Modified from Gagné & Driscoll 1988.

6.1. Gaining Attention

Teaching methods connected to the phase of gaining attention in learning work well in the beginning of a new unit or lesson as warm-ups. Teachers can also use them during the lesson, if the level of activation among learners is getting low. If learners don´t know each other well, the use of these methods help learners to get to know each other better. That helps their co-operation during learning. "Have You Ever" and "Forming Lines" are described as learner-centered teaching methods for gaining attention.

6.1.1. Have You Ever?

Element of Teaching: Gaining Attention	**Teaching Method:** **Have You Ever?**
Time Needed	• 5 – 7 minutes
Materials / Devices Needed	• 2 pieces of paper or sticky notes of different colors (red, green) for each learner
Classroom Arrangements / Other Preparations Needed	• Not needed

Procedures	• Give each learner one red and one green paper or sticky note
	• Ask learners to raise green paper if they have done the thing you are asking, or red paper, if they haven´t
	• Start asking questions: "Have you ever …?"
	• Questions can be connected to the subject you are teaching, like:
	  ○ Have you ever been to Germany? (Geography)
	  ○ Have you ever seen a bear? (Biology)
	  ○ Have you ever bought shares? (Business) etc.
	• Questions can be connected to anything that might interest your learners and give information that help them to learn something from each other, like:
	  ○ Have you ever ridden a motorbike?
	  ○ Have you ever been in a big concert?
	  ○ Have you ever been a babysitter? etc.

Tips and Guidelines	• You can ask your learners to ask "Have you ever…?" from other learners. You get a lot of information about their interests and it makes this method even more learner-centered.

6.1.2. Forming Lines

Element of Teaching: Gaining Attention	Teaching Method: Forming Lines
Time Needed	• 5 – 7 minutes
Materials / Devices Needed	• Not needed
Classroom Arrangements / Other Preparations Needed	• Make sure that there is some free space in a classroom for this method
Procedures	• Ask learners to form lines based on different questions: ○ In which month were you born? ○ From how far do you come to school? ○ On a scale from 1 to 10, what is your number when it comes to … ○ You can take examples from your own subject area, like: "When it comes to a difficulty of a grammar, when it comes to remembering the historical events, when it comes to…" ○ Guide learners to form lines: "Those who are born in January, start forming line here.", "Those who think they are number 1 on line, start forming line there." ○ Guide your learners that they have to talk to each other to be able to form lines ○ When lines are formed, ask some questions: "Who were born in January?", "Who is number 7? Why did you end up in number 7? Could you explain what does it mean?" etc.
Tips and Guidelines	• If there is little space in the classroom or it is difficult to move the tables, you can also use the corners of the room. "Those, who think that …. go to that corner of the room. And those who think that… go to that corner of the room."

6.2. Informing the Learner of the Objective

Objectives define the outcome of learning and are connected to the content. In a school objectives are derived from standards, which every teacher has to know. Because learning is goal-oriented, the teacher has to present and inform learners of the objectives before learning. The better learners understand the objectives and their connection to real world, the more motivation is expected to awaken during the process of learning. “Knows – Need to Know ” and “Scavanger Hunt” are described as examples of learner-centered teaching methods for informing the learner of the objective.

6.2.1. Knows – Need to Know

Element of Teaching: Informing the Learner of the Objective	**Teaching Method:** **Knows – Need to Know**
Time Needed	• 20 - 45 minutes
Materials / Devices Needed	• Standards/objectives and rubric • Whiteboard markers • Computer
Classroom Arrangements / Other Preparations Needed	• Get familiar with the objectives and rubric beforehand • Take hardcopies of objectives and rubric, if they are not available for learners in learning environment.
Procedures	• Write on a whiteboard two columns: Knows and Need to Know • Go through standards/objectives and rubric step by step in order to make clearer for learners what are the expectations in this unit • After each step ask students what they already know and what they need to know • Write down their comments on a whiteboard • Discuss with the learners about Need to Know answers: What do they think is easy to learn, for what they need more time to learn, which of the matters Need to Know are interesting to them, how do the matters they are learning are connected to real world etc. • Save the answers to be able to return to them later ○ you can take a picture of the whiteboard and save it on the learning environment
Tips and Guidelines	• You save time if you write down answers to a computer and save answers to a learning environment. • You can activate learners more by asking them to write down their answers to the whiteboard.

6.2.2. Scavanger Hunt

Element of Teaching: **Informing the Learner of the Objective**	**Teaching Method:** **Scavanger Hunt**
Time Needed	• 45 – 60 minutes
Materials / Devices Needed	• Standards/objectives and rubric • Computer • Paper for each group
Classroom Arrangements / Other Preparations Needed	▪ Access to computer and Internet
Procedures	▪ Divide learners into groups of 4 – 6 make sure they have access to a computer and internet ▪ Share them the objectives and the rubric ▪ Bring up some key concepts they have to learn ▪ Explain the idea of Scavanger Hunt: o In Scavanger Hunt learners try to find information from internet based on the key concepts or words you give to them o They have to figure out how they can use this information in their lives and write it down on a paper ▪ Give groups 10 – 15 minutes for Scavanger Hunt ▪ Ask each group to present the ideas they found
Tips and Guidelines	▪ You can divide your learners into groups: o randomly o learners may choose their group ▪ You can allow students to use their own smartphones for finding information (BYOD)
Additional Information	**Scavanger Hunt** ▪ http://www.educationworld.com/a_curr/curr113.shtml ▪ http://www.edudemic.com/the-teachers-quick-guide-to-digital-scavenger-hunts/ ▪ http://www.teachingdegree.org/2013/01/07/web-scavenger-hunts/ **BYOD** ▪ http://elearningindustry.com/6-benefits-byod-classroom ▪ http://www.edutopia.org/blog/the-epic-byod-toolchest-vicki-davis

6.3. Stimulating Recall or Prior Learning

Contemporary perspectives on learning includes the idea that new knowledge is built on previously constructed concepts and mental models. Learners are not "blank slates" upon which learning can be scrawled by teachers. Teachers can use different learner-centered methods to find out what previous knowledge learners have. "Mind Mapping " and "Use of Videos in Flipped Classroom" are described as examples of learner-centered teaching methods for stimulating recall or prior learning.

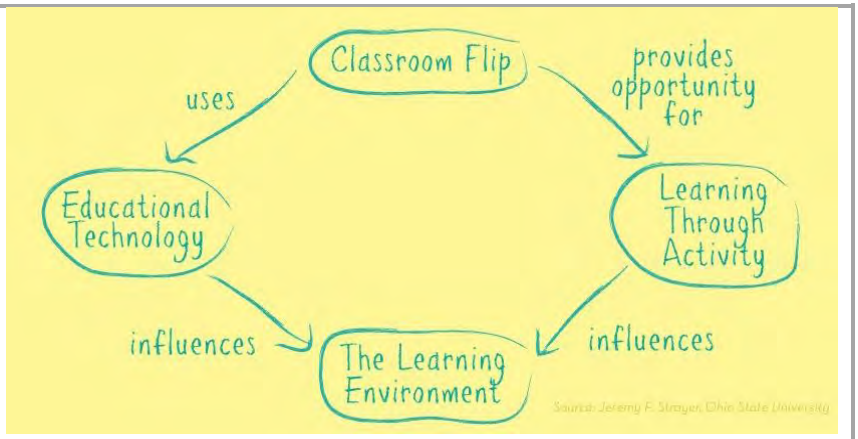
6.3.1. Mind Mapping

Element of Teaching: Stimulating Re-call or Prior Learning	**Teaching Method:** **Mind Mapping**
Time Needed	• 20 – 45 minutes, depending on the task
Materials / Devi-ces Needed	• Whiteboard markers • Computer
Classroom Ar-rangements / Other Prepara-tions Needed	• Not needed
Procedures	• Think what is the central concept or subject you want to mind map and write it in the middle of the whiteboard • Ask learners what they know about the subject and build subtopics as branches around mind map • Ask learners more questions concerning each subtopic

	 Example of a mind map Source: http://www.techhanger.in/2015/01/mind-mapping-is-one-of-best-ways-to.html
Tips and Guide-lines	• If you are doing mind mapping with computer, there are several free applications available. • You can have several mind maps in a classroom, when learners move from one mind map to another and add things they know about the topic • The advantage of mind mapping is that it allows learners to make connections they might not normally see in a traditional outline by allowing them to see the big picture
Additional Information	Applications for Mind Mapping: • **Coggle** (free) https://coggle.it/ • **More free applications:** http://www.lifehack.org/articles/featured/11-free-mind-mapping-applications-web-services.html • **MindNote / iThoughtsX** (from the Mac App Store) • **MindManager** (Windows) https://www.mindjet.com/mindmanager/

6.3.2. Use of Videos in Flipped Classroom

Element of Teaching: **Stimulating Recall or Prior Learning**	**Teaching Method:** **Use of Videos in Flipped Classroom**
Time Needed	▪ 10 - 15 minutes the day before face-to-face lesson
Materials / Devices Needed	▪ Computer and access to internet ▪ Learning platform
Classroom Arrangements / Other Preparations Needed	▪ Choosing the video or making the video yourself. ▪ Planning the survey for learners
Procedures	• Choose (or make yourself) the video from your subject area • Plan the survey for learners: o Learner´s name o What questions do you have from the content of the video o Assess your level of knowledge after you have watched the video: ▪ Advanced: I understood almost everything about the topic ▪ Intermediate: I understood partly what it was about on the video, but there were some points that was not clear to me ▪ Novice: I had difficulties understanding anything about the topic • Download video or add link to the video on the learning platform • Add your survey on the learning platform • Present the assignment for students in the end of the previous lesson: o watch the video before the next lesson o fill in the survey and send it to the platform the night before the next lesson (11:59:59 pm) o show them where they find materials • Go through the results of the survey before your lesson • Plan your lesson based on the results of the survey

	 Framework for Flipped Classroom: instruction is delivered online outside of class and homework is moved to classroom. Source: https://www.knewton.com/infographics/flipped-classroom/
Tips and Guidelines	▪ If there is not a survey tool available in your learning platform, you can use free survey tools like Google Forms, SurveyMonkey, Surveyplanet ▪ When you start using Flipped Classroom, be prepared to use more time for planning in the beginning – especially if you are making your own videos ▪ If you cannot use a learning platform, you can ask learners to send the survey to you by e-mail
Additional Information	**Survey Tools**: ▪ https://www.surveymonkey.com/ ▪ https://surveyplanet.com/ ▪ https://www.google.com/forms/about/ **Flipped Classroom:** ▪ http://flippedclassroom.org/ ▪ https://net.educause.edu/ir/library/pdf/ELI7081.pdf ▪ https://learningsciences.utexas.edu/teaching/flipping-a-class

6.4. Presenting the Stimulus

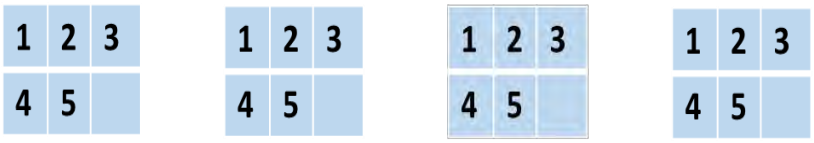
Active learner participation in responding to instructional stimulus is more effective than passive observation of instruction. Information should be presented in small amounts so that responses to questions about the information can be reinforced frequently. “Jigsaw” and “Learning Stations” are described as examples of learner-centered teaching methods for presenting the stimulus.

6.4.1. Jigsaw

Element of Teaching: **Presenting the Stimulus**	**Teaching Method:** **Jigsaw**
Time Needed	▪ 60 – 90 minutes
Materials / Devices Needed	▪ Handouts of the material ▪ Questions of the material ▪ Paper
Classroom Arrangements / Other Preparations Needed	▪ Arrange tables in groups for 4 – 6 learners ▪ Take hardcopies of materials, questions and quiz for each learner.
Procedures	▪ Divide your lesson into 5 – 6 segments and prepare materials for these segments o For example in history “Mesopotamian Trade Routes and Resources”: ▪ Resources in Mesopotamia ▪ Trading Partners ▪ Trade Goods ▪ Preparation of Trade Goods ▪ Transportation of Trade Goods ▪ Prepare your questions for every segment; what do learners need to know? Build connections to realworld situations ▪ Present the procedure of jigsaw method for your learners. Emphasize the responsibility of each member of the group: everyone must be able to present answers to the questions from stage 1 in a new group in stage 2. Ask learners to make notes on the questions sheet that has been giving to them ▪ Divide learners into 5 jigsaw groups and ask them to be seated on their tables (Stage 1) ▪ Give each group the material and questions of their segment ▪ Ask learners to read over the material before they start discussion ▪ Set time limit, 15 – 20 minutes, for this group work

<table>
<tr><td></td><td>
Groups in Stage 1


▪ After stage 1 is finished, divide your learners into new groups (Stage 2) and ask them to move to new tables. Now in these new groups is a member of each group from stage 1.

Groups in Stage 2


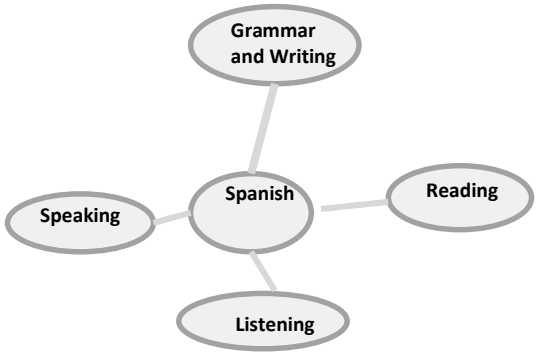
▪ Share materials and questions of the whole material for new groups
▪ Ask learners in these new groups to give a presentation (2 – 3 minutes each) of their segment. Ask number 1 to start, then number 2, etc.
▪ Ask learners to make notes during the presentations
▪ Ask learners to return to the stage 1 group

Groups in Stage 3


▪ Give groups a piece of paper and ask them to summarize what they learned from this lesson
</td></tr>
<tr><td>Tips and Guidelines</td><td>
▪ You can divide your learners into jigsaw groups in stage 1:
  ○ randomly
  ○ learners may choose
▪ Number the tables with a piece of paper or sticky note. It helps learners to find their table and to avoid disorder in a classroom
</td></tr>
<tr><td>Additional Information</td><td>
▪ https://www.jigsaw.org/
▪ http://www.educationworld.com/a_curr/strategy/strategy036.shtml
▪ https://www.teachingchannel.org/videos/jigsaw-method
▪ http://serc.carleton.edu/sp/library/jigsaws/index.html
</td></tr>
</table>

6.4.2. Learning Stations

Element of Teaching: **Presenting the Stimulus**	**Teaching Method:** **Learning Stations**
Time Needed	• 45 – 90 minutes
Materials / Devices Needed	• Hardcopies of material or materials on the learning environment • Computers if needed
Classroom Arrangements / Other Preparations Needed	• Arrange tables in groups for 4 – 6 learners • Plan assignment for each station • Plan how learners will return the assignments they are working on: do they download them on the learning environment or do they return an answer sheet • Plan when learners will return the assignments: after every station or after they have completed the assignment • Take hardcopies of materials for each learner

Procedures	• Plan for how many stations learners can attend during their period
	• The amount of the stations depends on the length of the period:
	  ○ 45 minutes: 2 stations/20 minutes each
	  ○ 60 minutes: 3 stations/18 minutes each
	  ○ 85 minutes: 4 stations/20 minutes each
	  ○ 90 minutes: 4 stations/20 minutes each
	• Decide what are the stations
	  ○ For example in foreign language teaching, stations during 90 minute period could be:
	  ▪ Reading
	  ▪ Listening
	  ▪ Grammar and Writing
	  ▪ Speaking
	 

	• Prepare materials and assignment for each station • Start the period telling learners the goals and procedure of the period (5 minutes) • Divide learners into groups of 4 - 6 and ask them to be seated on their stations and to start working • Facilitate learners while they are working on stations • When there are 2 minutes left in stations, say aloud: "Two minute warning." It means learners have two minutes time to finish what they are doing and move to another station • Repeat as many times as you have time on your period (2 – 4) • In the end of the period, be sure learners have returned all the needed assignments
Tips and Guidelines	• If you use similar stations regularly, you can prepare laminated cards, where instructions what to do in each station, are provided.
Additional Information	• http://www.teachhub.com/differentiated-instruction-strategies-using-learning-stations • https://www.plt.org/stuff/content-mgr/files/1/f26780586853ffd4098b51607b02c290/files/whatarelearningstations.pdf

6.5. Providing Learner Guidance and Eliciting Performance

Teachers cannot teach learners directly, they can only facilitate their learning. By facilitating learning teachers can help learners to increase their motivation and engagement through curiosity. Teachers should also scaffold learners as they construct new knowledge. Scaffolding involves providing learners with just enough help that may be needed in a new context and then gradually removing the support as the learners make progress. "Demonstration and Visualization" and "Muddiest Point Paper" are described as examples of learner-centered teaching methods for providing learner guidance and eliciting performance.

6.5.1. Demonstration and Visualization

Element of Teaching: **Providing Learner Guidance and Eliciting Performance**	**Teaching Method:** **Demonstration and Visualization**
Time Needed	▪ 2 – 5 minutes or more, depending on the nature of the demonstration or visualization
Materials / Devices Needed	▪ Different goods, articles and things related to the content you are teaching
Classroom Arrangements / Other Preparations Needed	▪ Depending on the nature of demonstration and visualization
Procedures	▪ To provide learner guidance and to elicit learners´ performance, you can use demonstration and visualization for the whole group or for individual learners ▪ Demonstrate or visualize the content which learners are learning ▪ Ask question during your demonstration or visualization. Good questions begin with words: What, When, Why, Where, Who ▪ Examples of demonstration and visualization: o in chemistry demonstrating different chemical representations o in science demonstrating for example "potential" and "kinetic" energy o in language learning visualizing words with different things o in history and geography visualizing with timelines, maps, artefacts etc. o in English and arts visualizing with books, paintings, poems etc. o in Mathematics demonstrating and visualizing equations and calculations with legos

Tips and Guidelines	▪ Use your imagination: think what can you make demonstrate and visualize in your own teaching ▪ Let learners try demonstration themselves whenever it is possible
Additional Information	▪ **Articles of Demonstration in Chemistry and Visulization in Mathematics** http://onlinelibrary.wiley.com/doi/10.1002/tea.1033/epdf http://www.ams.org/notices/199906/fea-palais.pdf

6.5.2. Muddiest Point Paper

Element of Teaching: **Providing Learner Guidance and Eliciting Performance**	**Teaching Method:** **Muddiest Point Paper**
Time Needed	• 2 – 4 minutes
Materials / Devices Needed	• Piece of paper or a sticky note for each learner
Classroom Arrangements / Other Preparations Needed	• Not needed
Procedures	▪ Ask any time during the lesson learners to sum up briefly what is unclear to them, what are the ”Muddiest Points” ▪ Explain to learners that the term “muddiest” means “most unclear” or “most confusing.” ▪ Give them 2 – 4 minutes to finish their papers ▪ Collect papers/stickers and go through them ▪ Based on these muddiest points papers, provide more guidance for the whole group or for individual learners during the rest of the lesson or during other lessons
Tips and Guidelines	▪ If learners can write their Muddiest Point Papers annonymously, you may get answers that are true and you will be able to provide learner guidance to these authentic muddiest points. ▪ This method is also suitable for reflection.
Additional Information	▪ http://www.unl.edu/gradstudies/current/teaching/muddy ▪ http://www.austincc.edu/adnfac/collaborative/onsite_writing.htm ▪ https://cft.vanderbilt.edu/guides-sub-pages/cats/

6.6. Providing Feedback

Providing feedback of learning is one of the most important phases of learning. Success builds a strong belief in the learner´s self-efficacy, which in turn is connected to motivation. Positive learning experiences are expected to enhance learner motivation and engagement. "Critical Friends" and "Bingo Review" are described as examples of learner-centered teaching methods for providing feedback.

6.6.1. Critical Friends

Element of Teaching: **Providing Feedback**	**Teaching Method:** **Critical Friends**
Time Needed	• 30 minutes or more, depending on the task
Materials / Devices Needed	• Feedback sheets for each learner

Classroom Arrangements / Other Preparations Needed	• Decide when you want to use Critical Friend Method
	  ○ after presentations in a classroom
	  ○ after learners have completed assignment or project
	  ○ other
	• Prepare feedback sheet and decide what the feedback is about; how it is connected to standards and rubric
	  ○ keep feedback sheet short enough to be completed in a short time
	  ○ you can add both grading and open ended questions to the feedback sheet
	  ▪ for example PMI for open ended questions:
	  • Plusses
	  • Minuses
	  • Interesting
	• Decide how you collect feedback sheets
	  ○ do you collect feedback sheets for yourself first?
	  ○ do you let learners see feedback sheets first?
	• Decide how you use Critical Friends feedback in your assessment

Procedures	• Present the idea and procedures of Critical Friend for learners ○ remind learners what are the characteristics of good feedback • Ask learners to complete feedback sheet after every presentation/project/assignment that is on hand • Collect feedback sheets and tell how they are going to be used

Tips and Guidelines	• Learners might be interested to get the Critical Friends feedback as soon as possible
Additional Information	• http://www.emeraldinsight.com/doi/pdfplus/10.1108/09513549410069185 • http://www.stritch.luc.edu/lumen/MedEd/IPM/Ipm2/MS4TeachingElective/teaching10.pdf • http://www.tandfonline.com/doi/pdf/10.1080/14703290903525911

6.6.2. Bingo Review

<table>
<tr><td>Element of Teaching:

Providing Feed-back</td><td>Teaching Method:

Bingo Review</td></tr>
<tr><td>Time Needed</td><td>• 30 – 45 minutes</td></tr>
<tr><td>Materials / Devi-ces Needed</td><td>• Calling sheet
• Bingo card for every learner</td></tr>
<tr><td>Classroom Arran-gements / Other Preparations Nee-ded</td><td>• Prepare 35 questions for Bingo Review (calling sheet)
○ for example in History: Where the Civil war begun? Become president after Lincoln´s death? What southern soldiers called peanuts etc.
○ Number the questions: B1 – B7, I8 – I14, N15 – N21, G22 – G28, O29 – O35
▪ for example in Mathematics:
▪ B/1: 6 + (-4)= ?
▪ B/2: -16 – 12= ?
▪ B/3 3 [4(8-2)+5]= ?
▪ etc.
• Prepare a Bingo card and print it for every learner

<table><tr><th></th><th>B
(1 – 7)</th><th>I
(8 – 14)</th><th>N
(15 – 21)</th><th>G
(22 – 28)</th><th>O
(29 - 35)</th></tr><tr><td>1</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td>FREE</td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>Procedures</td><td>• Hand out a Bingo card for every learner
• Ask them to number their Bingo cards, using numbers on the BINGO col-umn (in column B choose numbers 1 – 7 and add them to rows 1 – 5, in column I choose numbers 8 – 14 and add them to rows 1 – 5 etc.)</td></tr>
</table>

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<td>

Start Bingo Review at any number of your calling sheet and ask questions

B/2 question: ….
G/24 question:…
O/30 question:…

When a learner has the number you are calling, (s)he can crisscross it and add his/her answer to the Bingo card

<table>
<tr><th></th><th>B
(1 – 7)</th><th>I
(8 – 14)</th><th>N
(15 – 21)</th><th>G
(22 – 28)</th><th>O
(29 - 35)</th></tr>
<tr><td>1</td><td>2
Answer:</td><td>14</td><td></td><td></td><td></td></tr>
<tr><td>2</td><td>4</td><td>12</td><td></td><td></td><td></td></tr>
<tr><td>3</td><td>7</td><td>10</td><td>FREE</td><td></td><td></td></tr>
<tr><td>4</td><td>3</td><td>11</td><td></td><td></td><td></td></tr>
<tr><td>5</td><td>5</td><td>8</td><td></td><td></td><td></td></tr>
</table>

Go on asking questions from your calling sheet in any order you like
Learners shout BINGO whenever they get five crosses in a row (horizontally, vertically or diagonally
First learner to get bingo wins if (s)he can recite the definitions in his/her bingo terms
If a learner fails to give correct definitions, the game continues

</td>
</tr>
<tr>
<td>Tips and Guidelines</td>
<td>

Bingo can be played individually, in pairs or in small groups
Planning Bingo review is easy with templates you find in internet
Decide what is a reward for the winner!

</td>
</tr>
<tr>
<td>Additional Information</td>
<td>A set of 25 different bingo cards will be automatically generated along the calling sheet:

http://www.teachforever.com/2008/11/create-custom-bingo-review-game-easily.html

Bingo game and other review games

http://www.kimskorner4teachertalk.com/classmanagement/review-games.html

</td>
</tr>
</table>

6.7. Assessing Performance, Enhancing Retention and Transfer

Knowledge and skills should be learned in contexts much like the real-world situations. Transfer of learning from one context to another is not easy and that is why it is important help learners to assess how knowledge and skills they have learnt will eventually be applied. “Brainstorming ” and “Gallery Walk” are described as examples of learner-centered teaching methods for assessing performance, enhancing retention and transfer.

6.7.1. Brainstorming

Element of Teaching: **Assessing Performance, Enhancing Retention and Transfer**	**Teaching Method:** **Brainstorming**
Time Needed	• 30 – 45 minutes
Materials / Devices Needed	• Standards and rubric • Paper or sticky notes for each group
Classroom Arrangements / Other Preparations Needed	▪ Arrange tables in groups for 4 – 6 learners

Procedures	• Divide learners into groups of 4 – 6 and ask them to be seated on their tables
	• Give each group a hardcopy of standards and rubric
	• Explain to learners the goal of the session and the basic ideas of brainstorming:
	  ○ Express no negative evaluation of any idea presented
	  ○ Work for quantity, not quality--the longer the list of ideas, the better
	  ○ Expand on each others' ideas, piggyback, hitch on, elaborate whenever possible
	  ○ Encourage zany, far-out ideas
	  ○ Record each idea, at least by a key word or phrase
	• Ask groups a question: How can we use the knowledge and skills you have learned during this term/period? Ask them to use handouts of standards and rubric.
	• Ask groups to record each idea on a paper/sticker (one idea/sticker)

	• Set a time limit of 10 minutes • After 10 minutes ask groups to evaluate their answers and come up to 3 ideas. Set a time limit of 5 minutes • After 5 minutes ask groups to share the ideas with the class • Elicit conversation in a classroom
Tips and Guidelines	• If you use stickers, you can ask groups to place their stickers to a whiteboard • You can ask each group to give stars for the best ideas on the whiteboard. Each group has for example three stars, which they can give to three different ideas.
Additional Information	• http://www2.maxwell.syr.edu/plegal/crit3/a12.html • http://www.cirtl.net/node/2600 • http://specialed.about.com/od/teacherstrategies/a/brainstorm.htm

6.7.2. Gallery Walk

Element of Teaching: **Assessing Performance, Enhancing Retention and Transfer**	**Teaching Method:** **Gallery Walk**
Time Needed	• 45 - 60 minutes
Materials / Devices Needed	• Chart papers • Markers for each group • Tape

Classroom Arrangements / Other Preparations Needed	• Make sure that you can hang chart papers on the walls
	• Make sure that there is room for learners to move from one chart paper to another
	• Create 6 questions of the topics you want your learners to discuss
	  ○ pay attention to the element of teaching, especially to enhancing retention and transfer
	  ○ write each question on a piece of chart paper

Procedures	• Hang chart papers in various places around the classroom to create six stations. • Group learners into 6 groups of 4 – 5 learners, depending on the size of the class • Each group begins from different stations, ask them to go to their station • At their first station, groups will read what is posted and one recorder should write the group's responses, thoughts, and comments on the chart paper • After three to five minutes, have the groups rotate to the next station. Learners read and discuss the previous group's response and add content of their own. Repeat until all groups have visited each station • As the teacher, it is important to monitor the stations while the students participate. You may also need to clarify or provide hints if learners don't understand or misinterpret what is posted at their station. • Have groups go back to their first station to read all that was added to their first response. Bring the class back together to discuss what was learned and make final conclusions about what they saw and discussed
Tips and Guidelines	• To involve all group members, you can have groups switch recorders at each station
Additional Information	• http://www.theteachertoolkit.com/index.php/tool/gallery-walk • https://www.facinghistory.org/for-educators/educator-resources/teaching-strategies/gallery-walk-teaching-strateg • http://serc.carleton.edu/introgeo/gallerywalk/what.html

7 SHARING TEACHING METHODS

In the previous section, examples of learner-centered teaching methods were given. In this section, ideas for sharing teaching methods among teachers are provided. Sharing as a part of teachers´ professional competence is discussed. After that ideas for sharing teaching methods among teachers are provided. A template which teachers can use for describing and sharing their teaching methods, is introduced. A protocol of a workshop for sharing teaching methods in a school is also provided.

7.1. Sharing as a Part of Professional Competence

Cheetham and Chivers (2005, p. 77) define professional competence as "*the possession of the range of attributes necessary for effective performance within a profession, and the ability to marshal these consistently to produce the desired overall results."* Viitala (2005, p. 116) demonstrates professional competence with a pyramid comprising layers starting from personal preparedness for the job at the bottom, towards qualifications of competence in the specific job at the peak of the pyramid. She describes personal preparedness, i.e. personality, self-development and meta-competence, as the basis of the professional competence.

Cheetham and Chivers (1996, 1998, 2005) introduce a Professional Competence Model, which explains meta-competencies as high level competencies, such as communication, creativity, problem solving, learning, self-development, mental agility, analysis, adoption of changes, forecasting learning, and reflection. Sharing ideas and co-creation with other professionals can be seen as a part of professional competence.

Sometimes sharing is challenging for teachers because the traditional culture of schools is highly individual. Usually knowledge sharing between teachers has hap-

pened informally. Teachers have shared lesson plans, pointers to web sites, worksheet templates for peer mentoring activities, grading policies, and also tangible resources (Carroll et al. 2005).

Knowledge sharing can take place more formally in Professional Learning Communities (PLC). The popularity of Professional Learning Communities in schools has grown rapidly in recent years. In Professional Learning Communities, collaboration represents a systematic process in which teachers work together interdependently in order to impact their classroom practice in ways that will lead to better results for their students, for their team, and for their school. Professional Learning Communities offer a great platform for knowledge sharing and teacher development in a school.

7.2. A template for Describing and Sharing Teaching Methods

With a template I provide in this report, I want to encourage teachers to start describing the teaching methods they use in their classrooms and to share them with their colleagues in a school. The template can be downloaded in Word –format from the website http://tarjamykra.weebly.com/materiaalit.html

Element of Teaching: Describe for what purpose this teaching method is for	**Teaching Method:** Name your teaching method
Time Needed	Describe how much time is needed to carry out this teaching method
Materials / Devices Needed	Describe all the materials and devices you need to carry out this teaching method
Classroom Arrangements / Other Preparations Needed	Describe how you have to arrange classroom (you can draw a picture). Describe also all other preparations you have to do beforehand
Procedures	Describe step by step how you carry out this teaching method
Tips and Guidelines	Give tips if there is something you have to take into account. Describe also if there are any other applications you can do with this method
Additional Information	List any useful information and links here: websites, books, articles, videos etc.

Template 1. A Template for Describing and Sharing Teaching Methods

7.3. Share Fair Workshop for Sharing Teaching Methods

Sharing teaching methods can also happen in Share Fair Workshops. Once or twice a year school management can arrange workshops, where teaching methods can be shared. An example of an one-hour workshop for sharing teaching methods in a school is provided in this section. The template presented in the previous page is used for describing the process of the workshop. In this example, seven new teaching methods are described and shared among teachers. With two one-hour workshops a year, teachers get 14 new teaching methods into their teaching toolkit each year. It is an easy way to enhance teacher development, which is important part of school development.

The Purpose of Teaching Method: Sharing teaching methods among teachers	**Share Fair Workshop for Sharing Teaching Methods**
Time Needed	• 60 minutes
Materials / Devices Needed	• Template for describing teaching methods • Laptops/computer • Projector
Classroom Arrangements / Other Preparations Needed	• Ask teachers to bring their own computer to the workshop • Send them the template by e-mail or ask them to download the template before the workshop on their computer • Arrange tables in 7 groups

Procedures	**Presenting the aim of the workshop (5 min)**
	• Present the procedure of workshop for teachers
	• Ask them to form 7 groups and to be seated on their tables
	  ○ the aim is to describe 7 new methods to each phase of learning process as described on page 27 in this report:
	  ▪ Gaining Attention
	  ▪ Informing the learner of the objective
	  ▪ Stimulating recall of prior learning
	  ▪ Presenting the stimulus
	  ▪ Providing learner guidance and eliciting performance
	  ▪ Providing feedback
	  ▪ Assessing performance, enhancing retention and transfer
	• If there are less than 14 teachers (2 teachers for each group), decide what are the phases of learning you choose for this wokshop
	
	Describing teaching methods (20 min)
	• Ask each group to describe one new teaching method using the template
	
	Presentation of new teaching methods (35 min)
	• Each group has 5 minutes to present the teaching method they have described
	
	Be sure that all teaching methods are downloaded to the learning environment or other place every teacher has access to.

Tips and Guidelines	• If there is more time to spend for the workshop, choose one or two of the teaching methods and try them with the group • Encourage teachers to use their imagination to create new methods that enhance student motivation and engagement
Additional Information	• With 2 workshops a year, every teacher has 28 teaching methods more in their toolkits in two years. This is one of the easiest way to enhance teacher collaboration and sharing, not forgetting teacher development!

Table 3: Share Fair Workshop for Sharing Teaching Methods

8 CONCLUSIONS

In this report, 14 different learner-centered teaching methods were described as examples that can be used in a classroom. These teaching methods represented different phases of the learning, but they can also be used in other phases of the learning process. The teaching methods I chose as examples to this report are easy to use and do not need extensive preparation from a teacher.

An individual teacher can start collecting his/her "teaching toolkit" with using the template, which is provided in this material. (S)he can share the teaching methods with other teachers using that template. The more formal way is to use Professional Learning Communities as platforms for sharing teaching methods. If schools want to develop as communities, Professional Learning Communities cannot be something informal which teachers can attend if they like. Professional Learning Communities must be managed, structured and organized as part of the everyday school management.

Attending Professional Learning Communities must be seen as an essential part of teachers´ work and also important element of their professional development. The management of the school must address clearly to teachers, what are the goals of the Professional Learning Communities, how often are they meeting, how the meetings are structured, and how it is expected PLC members to report to the school management of what they have been doing.

Another formal platform for sharing teaching methods is Share Fair Workshops, which were discussed in previous section. These Workshops can be seen as essential part of teacher and school development. It is not possible for a school to develop as a community without teachers´ development. That said, school management has to encourage teachers to develop in their profession continually.

Sharing teaching methods without a database where they can be saved for a common use, is difficult. IT -systems in schools are complicated and consist of many

different tools for knowledge storing and retrieval. In this report it is not possible to give any exact ideas for school management what is the place in the IT –system, where the shared teaching methods should be downloaded. I want to point out that it is important to decide what the place is, and provide every teacher easy access to this place, even from home. Contemporary learning platforms provide many tools for this and they are developing all the time.

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