

Classroom Assessment: The Psychological and Theoretical Foundations of the Formative Assessment

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Abstract: The change of the learning and teaching definitions in psychology has also changed the nature of classroom assessment implementations. One of these important changes is that the targeted skills in the classroom assessment, and item structures utilized to measure these skills have changed. Teachers have started to use items and tasks that can represent the significant knowledge and skills of subject better and provide rich information and evidence for students' development rather than utilizing items measuring only remembering the bits of knowledge or simple comprehension. The second important change has taken place in terms of why and how teachers and students use classroom assessment. Although there are a few studies on the change of targeted skills and item structures used in the classroom assessment in the related national literature, the number of studies providing information on how to apply classroom assessment in line with its recent definitions, aims and implementation is still limited. Thus, the current study aims at providing guiding information on why and how to implement classroom assessment to develop students' learning, motivation, and self-assessment skills.

1. INTRODUCTION

The studies in the field of educational sciences widely aim at revealing the classroom implications that will contribute to the students' academic achievement. The main target of the studies in this field is to provide findings for specifying the necessary developments and applications to increase students' success in all elements of the educational system. In addition, the studies in the educational sciences are closely related to psychology, and they follow the contemporary perspectives suggested in psychology. Similarly, the studies carried out in the field of educational measurement and assessment have progressed aligning with the recent developments in psychology.

1.1. How does the Psychology Affect the Classroom Assessment?

The psychological approach that has dominated both psychology and education for a long time is behaviorism. In this approach, it is accepted that learning occurs by acquiring bits of

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knowledge. The center of teaching is to teach the bits of information within a sequential and hierarchical process. Therefore, the focus of classroom assessment is to measure and evaluate to what extent students can remember the concepts and definitions of a specific subject matter rather than assessing if students can transfer their knowledge to new problems and situations. Moreover, the source of students' motivation is attributed to external factors, and it is agreed that students' motivation depends on reinforcing their small steps. In accordance with this approach to student motivation, the whole information obtained from classroom assessment is mostly used to enable students to get motivated externally instead of using the classroom assessment to contribute to students' learning and motivation. In addition, classroom assessment is regarded as a separate activity following the completion of a teaching and learning process rather than an activity integrated with the whole teaching and learning process (Shepard, 2000).

Since the 1960s, together with the development of cognitive and constructivist approaches in psychology, the definition of learning has extended by including implementing knowledge to new situations, problem-solving and other complex and higher order learning outcomes. The point of view underlying the learning has transformed to that student makes meaning of new knowledge and connects prior knowledge to new knowledge and experiences (Brookhart, 2020). The student has been accepted as a person who not only reacts to the stimulus coming from his/her environment, but also reorganizes the new information to fit it into the pre-existing cognitive schema and develop new schemas (Senemoğlu, 2015). In accordance with the new definition of learning, the approaches to students' role in the learning process have also changed. The students have been accepted as active participants and regulators of their own learning process. This transformation became clear with that the regulation has gained importance in most contemporary learning approaches (Bandura, 1977, 1993; Zimmerman, 2000; Zimmerman & Schunk, 2001).

The change of the learning and teaching definitions in psychology has also changed the nature of classroom assessment implementations. One of these important changes is that the targeted skills in the classroom assessment and item structures utilized to measure these skills have changed. Teachers have started to use items and tasks that can represent the significant knowledge and skills of the subject better and provide rich information and evidence for students' development rather than utilizing items measuring only remembering the bits of knowledge or simple comprehension. The second important change has occurred related to why and how teachers and students use classroom assessment (Brookhart, 2020; McMillan, 2020; Shepard & Penuel 2018; Shepard, 2000). Although there are a few studies on the change of targeted skills and item structures used in the classroom assessment in the related national literature (Berberoğlu, 2006; Kutlu et al., 2014), the number of studies providing information on how to apply classroom assessment in line with its recent definitions, aims and implementation is still limited. Thus, the current study aims at providing guiding information on why and how to implement classroom assessment to develop students' learning, motivation, and self-assessment skills.

1.2. How does the Cognitive Approach Define the Classroom Assessment?

According to the behavioristic approach to educational measurement, the most important aim of the classroom assessment is to measure and evaluate students' degree of learning at the end of a specific teaching unit or process. However, the new perspectives on learning and teaching processes in cognitive approach define the primary aim of the classroom assessment as contributing to the development of students' learning, motivation, and self-regulation. Under this contemporary point of view, the one of the most comprehensive definitions of classroom assessment has been made by McMillan (2013). In this definition, the classroom assessment is regarded as a process in which teachers and students attain, use, and evaluate the information

and evidence of students' learning for various purposes. These purposes include specifying students' strengths and weaknesses, monitoring their learning processes and providing feedback for their development and grading. The classroom assessment is a tool utilized by teachers to attain necessary information to make inferences supported by the evidence regarding what students can know, understand, and do. This tool can also develop students' learning and motivation if it can be used effectively.

There are two important points emphasized in the classroom assessment definition made by McMillan (2013). One of these points is that it becomes possible to make inferences regarding students' learning based on the information and evidence attained from the classroom assessment implementations. Another point is to utilize the information and evidence obtained from assessments to develop students learning and motivation. Accordingly, the fundamental aim of the classroom assessment is to use the information to adjust students' learning. The term "formative assessment" emphasizes this primary aim of the classroom assessment. A more recent term, which is "assessment for learning", is another concept used to put an emphasis on this aim of the classroom assessment. In the current study, formative assessment (FA) is preferred to emphasize the formative purposes of classroom assessment.

1.3. What is the Formative Assessment?

One of the common points emphasized in the FA definitions is that the results obtained from the assessments with formative purposes provide evidences informing the decisions teachers and students must make during the teaching and learning processes (Black & William; 1998; Panadero et al., 2018). Another significant feature of the FA is that its general goal is to develop students' learning. As stated by Wilson (2016), the primary function of the FA is to collect detailed information that can be used to improve teaching and student learning. The FA not only provides the necessary information and evidence regarding student learning but also improves instruction and learning by enabling students and teachers to decide what to do in the next steps based on that information (McMillan, 2020; Panadero et al., 2018; William, 2010).

In order to achieve the two goals mentioned, which provide information and adjusting teaching and learning, the FA must be integrated with the whole teaching and learning process. This is another feature of the FA commonly emphasized by the researchers (Brookhart & Helena, 2003; Nitko & Brookhart, 2014). Education researchers state that the actions taken by the teachers and students to develop student learning are at the center of the FA. The classroom assessment with formative purposes requires teachers and students to take actions based on the information provided by the assessments (Ferrara et al., 2020). Therefore, teachers and students should reach the necessary information and evidence in time to take an action with the students who generated the results (Chappuis, 2009; Chappuis et al., 2013). To call assessment as formative, the results provided by the assessments should be able to inform decisions made by students and teachers (Moss & Brookhart, 2009, 2015). Lastly, the FA should be a well-planned process so that it can develop student learning by providing momentary and daily information regarding the teaching and learning process.

To sum up, there are four keys commonly emphasized in the FA definitions: it provides information and evidence for student learning, its primary aim is to develop student learning, it proceeds in an integrated way with the teaching process, and it is planned in detail before the instruction starts. A comprehensive definition involving the four keys has been made by Popham (2011). According to that definition, the FA is a planned process in which the information and evidence obtained from assessments are used by teachers and students to improve instruction and learning.

The comprehensive definition of the FA also clarifies some misconceptions regarding classroom implementations of the FA. For example, the FA is not a unit test or a type of test,

that is conducted on students to measure their learnings at the end of a specific unit. Instead, it is a planned process that proceeds in an integrated way with the teaching. Therefore, it includes the assessments conducted on students while they are still in the process of learning in the related unit. To call an assessment as formative, the information and evidence provided by the assessment should be used to develop current students' learning or instruction given to the current students. If students do not have any chances to use the information attained from the assessment, or that information is only used to adjust instruction for the future students, then, these assessments cannot be considered as parts of the FA process. In addition, the FA comprises all assessments providing information that can be primarily used to develop student learning. Therefore, it differs from the assessments that are primarily used for accountability, ranking or assessment of learning purposes (Ferrara, 2020; Moss & Brookhart, 2015; Popham, 2011). The FA definition also clarifies its characteristics and keys that should be considered when implementing the FA in the classroom.

1.4. What are the Characteristics of the Formative Assessment?

There are six important components of the FA process enabling it to develop student learning and instruction when implemented effectively: 1) defining the learning outcomes, learning progression and performance criteria clearly, 2) sharing the outcomes and performance criteria with students in a student-friendly language and by using samples, 3) attaining information and evidence showing students' current state of learning, 4) giving formative feedback to students based on the information and evidences, 5) students' self-assessment of their own learnings based on the performance criteria and information attained from the assessments, 6) creating a classroom assessment climate enabling assessments to improve learning (Chappuis et al., 2013; Moss & Brookhart, 2009; Panadero et al., 2018). Those components are the most effective characteristics of the FA in developing students learning, motivation and self-regulation.

Defining performance criteria and sharing them with the students: The first two components of the FA is the basis of planning and implementing the FA. Researchers consider that the FA is especially effective in developing and monitoring the skills that take a long time to develop and needed by the students during their whole life (Popham, 2011). Therefore, teachers should specify those kinds of information and skills and related sub-skills at the beginning of the FA process. In addition, they should also define the possible learning progressions followed by the students when they acquire those skills and success criteria that will be used to determine if students acquired the targeted skills. Sharing plans and definitions with the students in a student-friendly language have the equal importance with the planning. Researchers suggest teachers to use tasks embodying the learning outcomes to help students discover and develop conceptions of the learning outcomes and success criteria (Moss & Brookhart, 2009). It is necessary to share good and weak examples of work with students and make a discussion with them on the features that make those works good or weak. The examples of work and discussions on those examples enable students to transform learning outcomes from abstract outcomes to more concrete success criteria to be met to accomplish the task.

Attaining information and evidence for student learning: Defining the targeted learning outcomes, learning progression and success criteria also reveal at which points of the learning progression teachers should attain information to monitor student learning. The students should work on the tasks embodying the learning outcomes first with the guidance of teacher, and then independently. Based on the information and evidence attained from assessments, it is necessary to specify the strengths and weaknesses of students' performance by comparing students' performance with the success criteria (Moss & Brookhart, 2015; Popham 2011). The tasks used in the assessments during the learning progression should be able to provide rich information for the development of students' learning and the success criteria of the task should be defined clearly (Brookhart & Helena, 2003; Shepard & Penuel, 2018).

Formative feedback: Teachers should give feedback to the students so that the results obtained from the assessment can be used to develop students' learning. The findings of the studies reveal that the quality of feedback matters, and all kinds of feedback do not develop student learning (Black & William, 1998; Kluger & DeNisi, 1996; Shepard, 2020). The related studies revealed that the feedback that is task dependent, compares student performance with the success criteria of the task, not only informs the strengths and weaknesses of the performance but also includes some suggestions for the next steps that should be taken to develop performance, helps students develop their learning (Brookhart, 2008, 2020; Sadler, 1989). Thus, teachers should give feedback to the students in which they define what to develop in student learning and suggest some strategies and methods that can be used by the students to develop their learning. In fact, it can be stated that the key point enabling the FA process to develop student learning is the formative feedback given by the teachers to the students.

Self-assessment: In the FA, it is very important that students are in an active role, and they monitor and take the responsibility for their own learning process (Popham, 2011). It requires students to use their self-assessment and goal setting skills to use the information and evidence for their learning obtained from the assessments (Chappuis et al., 2013). Self-assessment is defined as a student-centered activity in which students evaluate their own performance on the assessment task (McMillan, 2020). Self-assessment includes the three steps that should be taken by the students. Firstly, students should clearly understand the success criteria of the task to be able to evaluate their own learning or performance. This puts an emphasis on sharing the targeted learning outcomes and success criteria with the students in a clear language one more time. Secondly, students should monitor their own performance and specify inadequacies of their performance by comparing their performance with the success criteria of the task. Lastly, they should set related, short-date and clear goals for themselves by defining the future steps to overcome inadequacies based on the evaluations they made in the second step (Brookhart & Helena, 2003; Wylie & Lyon, 2020).

Classroom assessment climate: The FA requires teachers to embrace an appropriate classroom assessment approach and create a classroom assessment climate so that the FA process can develop students learning, motivation and self-regulation. The social and emotional dimensions of the classroom are closely related to how students are going to use the information and feedback provided by the assessments and teacher. Students are more willing to monitor and evaluate their own learning in a classroom characterized by interpersonal trust and in which mistakes are accepted as natural components of the learning process (Chappuis et al., 2013; Leighton, 2020; Shepard & Penuel, 2018). When teachers can create this assessment climate in their classrooms, students are not punished or rewarded for their wrong or correct answers. On the contrary, they are inside of a learning process during which their strengths and weaknesses are revealed thanks to continuous and personalized feedback. They are allowed to reach deeper and sophisticated learning by using feedback. Within this assessment climate, it is possible for students to focus on mastering targeted skills without feeling any anxiety to perform better than the others or being punished because of mistakes (Kutlu & Kula-Kartal, 2018).

The mentioned characteristics of the FA enable teachers and students to answer the three questions they ask themselves momentarily, daily, weekly, and monthly in the classroom: "Where am I going?" "Where am I now?" "What should I do to close the gap between my current and targeted status?" (Chappuis et al., 2013; Moss & Brookhart, 2009; Sadler, 1989). Defining the learning outcomes, success criteria and sharing them with the students make the learning targets more concrete and clearer both for teachers and students. The results attained from formative assessments provide information for the current levels of student learning. The formative feedback, self-assessment and goal setting enables both teachers and students to specify the necessary future steps to develop current performance. Thanks to those

characteristics, the FA both provide answers to the three critical questions which adjust students' learning process and develop students' learning, motivation, and self-regulation.

1.5. Why does the Formative Assessment Develop Learning, Motivation and Self-Regulation?

The FA, when it is implemented effectively, increases students' academic achievement by changing their interactions with classroom assessments (Black & William, 1998; Chappuis et al., 2013). Students take the feedback given to them by the teacher more seriously and concentrate on assessment tasks more effectively when they perceive that the assessment is related to and consistent with learning outcomes, learning progression and success criteria. In addition, the FA enables students to develop their performances by providing them continuous feedback regarding the inadequacies of the performance that need to be developed and future steps should be taken to develop them (Brown et al., 2009; McMillan, 2018).

Students can evaluate their own competencies realistically thanks to the clearly defined and shared success criteria, teacher's formative feedback and their self-assessments. When students set goals consistent with the learning outcomes and their competencies, they can believe that they can accomplish those goals and trust their competencies more. If students can understand where they are going, in other words what the targeted learning outcomes are, their possibility of believing that they are going to accomplish those goals also increases. That increased self-efficacy enables them to put more efforts into the tasks (McMillan, 2020). In addition, students have a clearer picture of the future steps that should be taken to develop learning thanks to assessments, feedback, and self-assessment. This information enables them to perceive the development under their control and to get motivated to take the necessary steps to develop learning (Brookhart & Moss, 2015).

The FA increases students' self-awareness of their thinking and enables them to use this awareness to adjust their own thinking processes. During the FA process, students evaluate their works by using the success criteria. They can define the inadequacies in their works when they have a clear picture of what a superior work looks like. This gives the responsibility back to the students and enables them to self-regulate their learning. In addition, teacher's formative feedback develops students' self-assessment skills by guiding them on how to evaluate their performances by using the success criteria (Moss & Brookhart, 2009; Panedero et al., 2018; Shepard & Penuel, 2018).

1.6. How is the Formative Assessment Implemented in the Classroom?

The implementation of the FA in the classroom is guided by the three questions mentioned in the previous sections. The question that should be addressed at the beginning of the FA process is "Where am I going?". At the beginning of the process, teachers must decide which skills and sub-skills they are going to teach, which learning progression students may follow while they are acquiring those skills, when and how they are going to attain the information and evidence showing students' current levels of learning and with which success criteria they are going to compare students' performance. According to researchers, these plans are necessary to define the process called learning progression (Popham, 2011). For example, if the targeted learning outcome is writing a compare-contrast essay, then, teachers should define the related skills to this outcome and plan in what order and how they are going to teach these skills. To do this, teachers must consider and note down the features and qualities of a superior compare-contrast essay. These qualities make clear both the related skills that should be developed in students and the success criteria that will be used to determine students' current levels in terms of those skills. The teacher may specify the qualities such as comparing and contrasting the given topic, situation or entities, supporting the thinking with appropriate samples and evidence, organizing an essay including an introduction, body and conclusion parts.

After planning the FA process, teachers must share this plan with students by using work examples embodying the learning outcomes and success criteria. Teachers should use good or weak examples of compare-contrast essays to provide students with a clearer picture of what a good compare-contrast essay looks like. Teachers and students should have a discussion on what features make the essay a good or a weak example of compare-contrast essay, and teachers should help students to discover those features by themselves by using strategical questioning. Thus, teachers can model their students how to evaluate their essays based on the defined success criteria. After modelling, students can examine and evaluate a good and a weak compare-contrast essay example by using the success criteria. When students complete their evaluations, teachers can start a discussion in which they attract students' attention to the features of the sample essays mentioned by the students when they are sharing their evaluations with the teacher. This step is crucial both for students and teachers to give a clear and concrete answer to the question of "where am I going?". Using good and weak examples of compare-contrast essay and evaluating them by comparing them with the features of a good essay (success criteria) help students to have a clear picture of what a good compare-contrast essay looks like.

It is important for teachers and students to answer the question of "where am I now?" in the learning process. To answer that question, teachers should assess students' current writing skills. The teacher can use a performance task in which students can write an essay based on their prior knowledge and experiences without making any research. For example, students may be asked to compare and contrast living in an apartment with living in a house with a garden. Students should assess their essays by comparing them with the performance criteria of the task. Teachers must also provide feedback including the information for the weak parts of the essay that need be improved and suggestions how to improve those parts. Students should have a second chance to work on their essays again to be able to use self-assessment and teacher's feedback to develop their essays. If teachers find it necessary, the same process should repeat with a different performance task. When teachers decide that students are competent enough in writing compare-contrast essay, they can implement the main performance task in which they can ask students to write a compare-contrast essay on a topic that will require them to make some research.

The FA process requires teachers and students to answer the question "what should we do to close the gap between the current and targeted learning?". At this point, the information attained from assessments guides teachers and students on what to do to develop the writing skills. Teachers and students should specify the weak parts of their essays by using the performance criteria. For example, if majority of the students mention only differences in their essays or they are not competent in writing the topic sentence yet, then, the teacher should adjust the instruction to address those deficiencies. Students also review and edit their essays based on their self-assessment and teacher's feedback. Similar to that example, The FA is an iterative process including goal setting, attaining information and evidence, self-assessment and formative feedback, and this process proceeds until students become competent in the targeted skills.

Declaration of Conflicting Interests and Ethics

The author declares no conflict of interest. This research study complies with research publishing ethics. The scientific and legal responsibility for manuscripts published in IJATE belongs to the author.

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REFERENCES

- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change *Psychological Review*, 84(2), 191-215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28(2), 117-148. https://doi.org/10.1207/s15326985ep2802_3
- Berberoğlu, G. (2006). Sınıf içi ölçme değerlendirme teknikleri. Morpa Kültür Yayınları.
- Black, P., & William, D. (1998). Assessment and Classroom Learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7-74. <https://doi.org/10.1080/0969595980050102>
- Brookhart, S. M (2020). *Feedback and measurement*. S. M. Brookhart & J. H. McMillan (Eds.), Classroom assessment and educational measurement. (p. 63-78). Taylor & Francis.
- Brookhart, S.M. (2008). *How to give effective feedback to your students*. ASCD.
- Brookhart, S.M. & Helena, M. T. (2003). Developing measurement theory for classroom assessment purposes and uses. *Educational Measurement: Issues and Practice*, 22(4), 5-12. <https://doi.org/10.1111/j.1745-3992.2003.tb00139.x>
- Brookhart, S.M., & McMillan, J.H. (2020). *Classroom assessment and educational measurement*. Taylor & Francis.
- Brown, G.T.L., Irving, S.E., Peterson, E.R., & Hirschfeld, G.H.F. (2009). Use of interactive informal assessment practices: New Zealand secondary students' conceptions of assessment. *Learning and Instruction*, 19(2), 97-111. <https://doi.org/10.1016/j.learninstruc.2008.02.003>
- Chappuis, J. (2009). *Seven strategies of assessment for learning*. Pearson Education.
- Chappuis, J., Stiggins, R., Chappuis, S., & Arter, J.A. (2013). *Classroom assessment for student learning*. Pearson Education.
- Ferrara, S., Maxey-Moore, K., & Brookhart, S.M. (2020). *Guidance in the standards for classroom assessment: useful or irrelevant?* S.M. Brookhart & J.H. McMillan (Eds.), Classroom assessment and educational measurement. (p. 97-119). Taylor & Francis.
- Kluger, A.N., & DeNisi, A. (1996). The effect of feedback interventions on performance: a historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, 119, 254-284. <https://doi.org/10.1037/0033-2909.119.2.254>
- Kutlu, Ö., & Kula-Kartal, S. (2018). The prominent student competences of the 21st century education and the transformation of classroom assessment. *International Journal of Progressive Education*, 14(6), 70-82. <https://doi.org/10.29329/ijpe.2018.179.6>
- Kutlu, Ö., Doğan, C.D., & Karakaya, İ. (2014). *Ölçme ve değerlendirme: performans ve portfolyaya dayalı durum belirleme [Measurement and evaluation: Performance and portfolio assessment]*. Pegem Akademi.
- Leighton, J.P. (2020). *Cognitive diagnosis is not enough: the challenge of measuring learning with classroom assessments*. S.M. Brookhart & J.H. McMillan (Eds.), Classroom assessment and educational measurement. (p. 170-191). Taylor & Francis.
- McMillan, J.H. (2013). *Why we need research on classroom assessment?* J.H. McMillan (Ed.). SAGE handbook of research on classroom assessment. (p. 3-16). SAGE.
- McMillan, J.H. (2018). *Classroom assessment principles and practice that enhance student learning and motivation*. Pearson Education, Inc.
- McMillan, J.H. (2020). *Assessment information in context*. S. M. Brookhart & J. H. McMillan (Eds.), Classroom assessment and educational measurement. (p. 79-94). Taylor & Francis.
- Moss, C.M., & Brookhart, S. (2009). *Advancing formative assessment in every classroom*. ASCD.
- Moss, C.M., & Brookhart, S. M. (2015). *Formative classroom walkthroughs*. ASCD.
- Nitko, A.J., & Brookhart, S.M. (2014). *Educational assessment of students*. Pearson.

- Panadero, E., Andrade, H., & Brookhart, S.M. (2018). Fusing self-regulated learning and formative assessment: a roadmap of where we are, how we got here, and where we are going. *The Australian Educational Researcher*, 45, 13-31. <https://doi.org/10.1007/s13384-018-0258-y>
- Popham, W.J. (2011). *Classroom assessment: What teachers need to know*. Pearson.
- Sadler, D.R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*, 18, 119-144. <https://doi.org/10.1007/BF00117714>
- Senemoğlu, N. (2015). *Gelişim, öğrenme ve öğretim: kuramdan uygulamaya [Development, learning and teaching: from theory to practice]*. Yargı Yayınevi.
- Shepard, L.A. (2000). The role of assessment in a learning culture. *Educational Researcher*, 29(7), 4-14. <https://doi.org/10.3102/0013189X029007004>
- Shepard, L.A. & Penuel, W.R. (2018). Using learning and motivation theories to coherently link formative assessment, grading practices, and large-scale assessment. *Educational Measurement: Issues and Practice*, 37(1), 21-34. <https://doi.org/10.1111/emip.12189>
- Shepard, L.A. (2020). *Discussion of part II: Should “measurement” have a role in teacher learning about classroom assessment?* S.M. Brookhart & J.H. McMillan (Eds.), *Classroom assessment and educational measurement*. (p. 192-206). Taylor & Francis.
- Wilson, M. (2016). The importance of classroom assessment. *NCME Newsletter*, 24(2), 2-3.
- William, D. (2010). *An integrative summary of the research literature and implications for a new theory of formative assessment*. H.L. Andrade & G.J. Cizek (Eds.). *Handbook of formative assessment*. (p. 18-40). Taylor & Francis.
- Wylie, E.C., & Lyon, C.J. (2020). *The role of technology-enhanced self- and peer assessment in formative assessment*. S. M. Brookhart & J. H. McMillan (Eds.), *Classroom assessment and educational measurement*. (p. 27-45). Taylor & Francis.
- Zimmerman, B.J. (2000). Self-efficacy: an essential motive to learn. *Contemporary Educational Psychology*, 25, 82-91. <https://doi.org/10.1006/ceps.1999.1016>
- Zimmerman, B.J., & Schunk, D.H. (2001). *Self-Regulated learning and academic achievement*. Routledge.