

FORMATION OF REFLECTIVE COMPETENCE OF FUTURE SPECIALISTS IN THE EDUCATIONAL PROCESS IN HIGHER EDUCATION INSTITUTIONS

^aANTONINA KICHUK, ^bOLEKSANDRA KHALLO,
^cVALENTYNA VERTUHINA, ^dTETIANA RUDIUK,
^eLYUDMILA HALAIEVSKA, ^fOLEKSANDR VOROBETS

^a*Izmail State University of Humanities, 12, Repin Str., 68600, Izmail, Ukraine*

^b*Ivano Frankivsk National Medical University, 2, Galyska Str., 76018, Ivano-Frankivsk, Ukraine*

^c*Borys Grinchenko Kyiv Metropolitan University, 18/2, Boulevard-Kudryavskaya Str., 04053, Kyiv, Ukraine*

^d*Mykola Gogol Nizhyn State University, 104, Shevchenko Str., build. 3, ap.67, 16604, Nizhyn, Ukraine.*

^e*Institute of Pedagogy of National Academy of Sciences of Ukraine, 35/24, Kotelnikova Str., 04000, Kyiv, Ukraine*

^f*Vasyl Stefanyk Precarpathian National University, 57, Shevchenko Str., 76018, Ivano-Frankivsk, Ukraine*
 email: ^atonya.82kichuk@gmail.com, ^bLuskaiif@gmail.com,
^cvvertuhina@kubg.edu.ua, ^dSwir.id@i.ua,
^eludagala2703@ukr.net, ^foleksandr vorobec36@gmail.com

Abstract: The article presents an attempt to systematize and complement available theoretical provisions and practical developments in the field of creation of reflective environment in higher educational institutions, in order to enable effective formation of reflective competence in future specialists. Particular attention is paid to andragogy provisions and possibilities of its use in universities. The very model of reflective learning is considered based on a cycle approach. The conditions for creating a reflective learning environment are presented, as well as possible criteria for assessing reflective competence.

Keywords: reflective competence; reflective environment; reflective learning; facilitation; learning cycle.

1 Introduction

The competency-based approach is a current trend in global education, allowing resolving contradictions between program requirements, the demands of society and the individual's needs for educational results. This approach reflects the main aspects of the continuous process of modernization of education (for example, the transition from University 2.0 to University 3.0 and 4.0): updating the content of education in response to a changing socio-economic reality; as a generalized condition for a person's ability to act effectively outside of learning situations; the ability to transfer abilities to conditions different from those in which this competence originally arose, etc.

This situation in education requires a higher level of professional competence of the graduate - a creative individual who owns the latest innovative psychological and professional technologies based on developed mechanisms for analyzing professional activity, which many scientists associate with one of the components of the professional competence of the future specialist - his reflective competence [2].

In the educational process, reflection represents one of the main components of activity, and, therefore, reflective competence acts as a necessary component of professional pedagogical education. The objective reason for including reflection in the educational process is that competence is not given by the teacher, but it is acquired by the student himself in the course of learning activities, which are organized as a mental activity or sensory-experienced process of the student's awareness of his activity [20]. Based on reflective action, students not only acquire knowledge, but learn to use it directly in their activities.

The reflective competence of a future specialist is defined as an integral, dynamic, structural-level education of the individual, including: reflection of the value-semantic aspects of professional activity, reflection of professional and personal potential, reflection of professional responsibility, as well as applied reflection regarding social responsibility, civic position, etc.

From a functional point of view, the reflective competence of a future graduate is an integrative unity of its structural components, which have a level character, and individual and personal ways of implementing the subject's professional and personal experience in the form of certain types of strategies for resolving professional situations. The effectiveness of appropriate pedagogical strategies is associated with different levels of development of the structural components of the reflexive competence in the future specialist: adaptive, pragmatic, and integrative [1; 3; 18].

The formation of reflective competence is a necessary condition for the development of a student's personality as an active subject of professional and personal development. Reflective competence allows the future professional to find own individual style, achieve adequate professional and personal self-esteem, predict and analyze the results of own work. The inclusion of reflective functions in activity puts the individual in the position of a researcher in relation to his own activity, but is not reduced to any of them. In modern approaches, reflection is considered "as the most important regulatory component of the personality, allowing it to consciously build its life activities" [9].

In modern society, labor processes in which a person is regarded in the context of intellectual and creative growth are beginning to dominate, which activates the problem of life-long education. A person begins to take on the functions of a 'controller' of the current process: he does not depend on technology, but, on the contrary, makes the functioning of technology dependent on himself. His work begins to be characterized by the presence of creative elements in any type of production. In a post-industrial society, the orientation towards expanding the production of material goods and services is being replaced by an orientation towards expanding the production of knowledge, towards the replication of information structured in a special way. As a result, changes occur in the structural elements of social production. Along with the main branches of industry, intellectual production is developing as the production of knowledge, communication means of various kinds are developing in the form of information networks, data banks, advertising structures, organizations establishing connections of interethnic interaction, etc. Machine labor is necessarily being replaced by intellectual labor, connected, on the one hand, with the use of computer technologies, and on the other hand, aimed at humans. Reflection is an integral component of such a constructivist landscape.

Reflection is especially sound in andragogy, and this is very important for the pedagogical process at a university, since andragogy provisions are increasingly used in higher education. In the andragogical model, the leading role belongs to the student himself. He is a doer, one of the equal subjects of the learning process. From an andragogical point of view, adult learners who have a deep need for independence (although in some situations they may be temporarily dependent on someone) should play a leading role in the process of their education. The teacher's task ultimately comes down to encouraging and supporting the adult's development of self-management, assisting him in determining learning parameters and searching for information. The main characteristic of the learning process is the process of independent search for knowledge, abilities, skills and qualities. In the andragogical model, continuous reflection acts as a source of learning [22]. The overall process of reflective learning is schematically depicted in Figure 1 below.

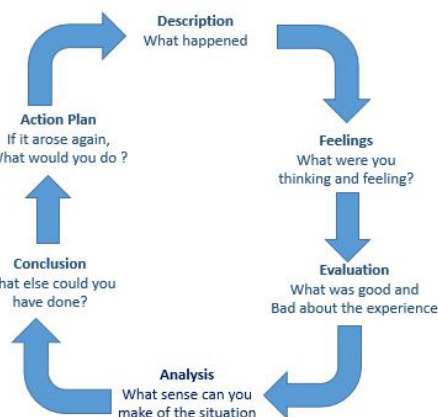


Figure 1. Model of reflective learning (based on Gibbs' model of reflection) [21]

It is natural that employers' orders are focused on graduates capable of solving professional problems that require a comprehensive vision of the problem, generating innovative ideas, and the ability to make innovative decisions. In particular, the likelihood of successfully solving complex engineering problems increases significantly if engineers have developed reflective skills that allow them to comprehend, model, and self-organize professional activities in accordance with new contexts.

Thus, the relevant scientific task is to study the pedagogical conditions for the development of the reflective component of the professional competence of future specialists.

2 Materials and Methods

The study used a combination of theoretical and experimental research methods: analysis of philosophical, psychological and pedagogical literature, curricula, manuals and methodological developments, teaching plans, as well as the study and generalization of advanced pedagogical experience.

Modern research devoted to professional competence increasingly appeals to the phenomenon of reflection, considering it both as a substantive element of the latter and as a condition for its development. This approach is taken as a philosophy of our research.

The principles of the personal-activity approach, which make it possible to identify and actualize the potential capabilities of a student in educational activities to achieve personally significant learning outcomes, as well as the principles and provisions of andragogy, served as methodological guidelines.

3 Results and Discussion

In modern studies on education and pedagogy, the term "reflection" is often used. The concept of "reflection" is entering a new – practical - period of its application in higher education. The initiation and actualization of reflective processes appears in the formation of reflective competence as one of the possible methods for achieving the set goal - professional development, personal growth, and the acquisition of reflective experience of future specialists.

In order for the process of forming the reflective competence of future graduates to be carried out at a high technological level, it is important to comply with the following requirements: target orientation towards the formation of reflective competence of students; interconnectedness of educational and methodological work; search and implementation of new rational forms and methods, means of educational activities that create the opportunity for reflective self-realization; the structured nature of the pedagogical process, which makes it possible to design the sequence of the process of forming the reflective competence of future specialists; reflective transmission of educational material by the teacher; mandatory reflection of reflective activities in

classes (lectures, seminars, workshops, business games, various projects, etc.).

Important requirements for organizing reflective learning are, among others, the following:

1. The choice of methods and technologies of training and education that promote the personal involvement of students, giving them a dominant role. Construction of the learning process taking into account students' expectations regarding the content and methodology of learning.
2. Implementation of the principle of learning implying the relationship between theory and practice, integrating new competencies into the field of experience and the base of practical knowledge of students. Updating professional and personal experience through the use of different organizational forms of training.
3. Facilitation of an active subject position through inclusion in research learning.
4. Providing practice in mastering new skills, allowing to immediately see the results and feasibility of training. Use of a complex of visual materials and interactive technologies.
5. Using the inductive method in presenting the material, constructing an explanation while deriving from particular practical problems to general theoretical principles.
6. Taking into account problems associated with the implementation of the student's educational process: psychological, financial, social nature. Creation of acceptable training and self-study formats.
7. Use of tutors, creation of a "smart learning environment" with the ability to support an individual educational route.

Also, reflective learning involves 'living' key values in learning. Ensuring this provision implies modeling of educational situations that provide a motivated student with conditions for living specific values. Such experiences are associated with deep understanding and emotional reflection of the personal significance of the profession, fulfillment of duty, participation in socially significant activities, living a civic position, etc. In order to enrich the palette of activities of the subject of education, it is necessary to live a new experience and connect it with his past valuable life practice [7].

One should also note the priority of active forms of learning. To achieve awareness of learning, motivation, and demonstration of the effectiveness of individual innovative methods and technological approaches, it is necessary to include students in practice-oriented activities through active and interactive educational technologies, especially group forms of work - in particular, study groups, project groups, problem-solving groups, writing groups, discussion groups, debate or Socratic circle groups, peer editing groups, role-playing groups [19]. In recent years, group work methods within the curriculum have been transformed into collaborative work methods (see Figure 2).

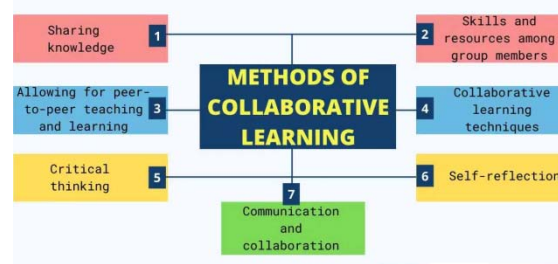


Figure 2. Collaborative learning paradigm [8]

Collaborative learning allows students to learn in an enjoyable and effective way. It also helps students develop indispensable

skills like communication and problem-solving [5]. Collaborative learning has the following benefits:

1. Enhances problem-solving skills. Collaborative learning projects sometimes call for groups to complete a task or address an issue. For tasks like this, students must debate and examine many ideas in order to identify the best answer. Working through a topic or project in a group helps students build their own critical thinking abilities [5], while also encouraging active participation.

2. Raises the level of communication, confidence, encourages social interaction and engagement. Collaborative learning relies on good communication to complete a task, which requires students to exchange ideas, clarify concepts, and offer clear and succinct feedback [5]. Students must engage as a group via eye contact, verbal communication, and social cues (while keeping in mind varied cultural contexts). Members of varied personality types learn to share and listen while working toward a shared objective. Throughout the process, kids learn and improve their social skills such as active listening, empathy, and respect. Another important aspect to consider is that the social skills gained via cooperation will assist students in developing and maintaining strong personal and professional connections in the workplace.

Similarly, collaborative projects urge passive students to become more involved in the project or conversation since the team expects their contributions.

In the works of psychologists who study personality, reflexivity as a personal quality is correlated with self-awareness as the ability to correctly assess oneself and one's place in the world [4]. According to a number of scientists, reflection blocks activity according to old patterns and opens up new paths for thinking and action when there is a deviation from the pattern-norm of human activity and dissatisfaction with own activities or pattern is realized. The manifestation of reflection occurs in the so-called normal duality of consciousness, when an individual, in relation to himself, simultaneously acts as an object of reflection (I am the performer) and as its subject (I am the controller), who regulates his actions [10].

Researchers have found that the leading cognitive function of reflection is implemented as awareness of the means of solving assigned problems through determining the ways to find them [12]. Reflective activity as a general phenomenon is characterized by the essential properties of activity: purposefulness, objectivity, meaningfulness, transformative nature, and the interconnection of all its structural components. The process of reflection acts as a complex mental ability for constant analysis and evaluation of each stage of professional activity, as an important prerequisite for effective activity, its deep awareness, critical analysis and constructive improvement.

The concept of reflection is widely used in acmeology when considering the concepts of professionalism and competence. In most psychological and pedagogical studies, reflection acts as one of the elements of competence or a factor in its development, but in acmeology it is considered procedurally. It is no coincidence that scientists, characterizing professionalism as the ability to solve standard professional tasks, identify the following levels of professional activity [13]:

- Formation of activity;
- Successful implementation of a fixed norm;
- Fulfillment of the norm with adequate reflection;
- Reflexive support of actions with fixation of the problem and correction of the norm;
- Complete reflective self-organization.

Namely in acmeology, the concept of reflective competence was formed, which is considered here from methodological grounds and from the position of reflective psychology as meta-competence, that, through knowledge and mastery of the mechanism of reflection, contributes to the adequate development of all other types of professional competence [13].

In the methodology, reflection is understood as a procedure that includes analysis of thinking or activity, a critical attitude towards them and the search for a new norm, which allows a person to make decisions independently. In reflective psychology, reflective competence is presented as a complex formation consisting of various types of reflection: cooperative, built on knowledge of the role structure and positional organization of collective interaction; communicative, based on ideas about the inner world of another person and the reasons for his actions; personal, which is based on actions, behavior, and images of one's own "Self"; intellectual, which operates with knowledge about the object and methods of action with it. Reflective competence is considered as "a professional quality of an individual that allows the most effective and adequate implementation of reflective processes, the implementation of reflective ability, which ensures development and self-development, promotes a creative approach to professional activity, achieving maximum efficiency and effectiveness" [2].

The figure below shows typical universal criteria for assessing reflective competence used by leading universities.

Not acceptable descriptive	Acceptable analytical	Excellent (in addition to the acceptable column) evaluative
INFORMATION PROVIDED Entirely descriptive e.g. lists of learning events/certificates of attendance with no evidence of reflection.	Limited use of other sources of information to put the event in context.	Uses range of sources to clarify thoughts and feelings.
SELF-AWARENESS No self-awareness.	Some self-awareness demonstrating openness and honesty about performance and some consideration of feelings generated.	Shows insight, seeing performance in relation to what might be expected of doctors. Consideration of the thoughts and feelings of others as well as him/herself.
CRITICAL ANALYSIS No evidence of analysis (i.e. an attempt to make sense of thoughts, perceptions and emotions).	Some evidence of critical thinking and analysis, describing own thought processes.	Demonstrates well-developed analysis and critical thinking e.g. using the evidence base to justify or change behaviour.
EVIDENCE OF LEARNING No evidence of learning (i.e. clarification of what needs to be learned and why).	Some evidence of learning, appropriately describing what needs to be learned, why and how.	Good evidence of learning, with critical assessment, prioritisation and planning of learning.

Figure 3. Levels of reflection in assessing reflective skills [11]

It is obvious that, in general, the complex of organizational and pedagogical conditions should provide the opportunity to organize the educational process to develop the reflective competence of students at a university. Organizational conditions include: 1) development of theoretical foundations for the formation of reflective competence; 2) creation of a scientific, methodological, didactic, psychological process for the formation of students' reflective competence; 3) creation of a reflective environment in an educational institution; 4) purposeful management of the process of developing students' reflective competence. Pedagogical conditions include: 1) reliance on personal-activity and reflective approaches; 2) readiness to demonstrate the reflective competence of the teacher and students; 3) the presence of diagnosable learning goals; 4) integrated use of reflective-oriented forms of conducting lectures and seminars; 5) organization and provision of monitoring of the educational process of reflective competence formation.

The need for a reflective environment at a university should be especially emphasized. The reflexive approach involves stimulating the internal efforts of the individual: his self-development, the desire for personal and professional growth. This approach is associated with the internal conditions of the reflective environment, under which a person realizes the meaning of his actions.

The reflective environment in the system of professional training of a future specialist includes the following postulates [16]:

- Uncertainty, stimulating a person to search for own guidelines, creating the need to find and establish own 'content';
- Free choice associated with variability and providing students with the opportunity to find their own creative solutions;

- Information and activity orientation of the content and forms of presentation of educational material, which ensures a high level of independence of educational and cognitive activity;
- Dialogicality, which allows directing the knowledge and establishing of own Self in the right direction;
- Time factor associated with the process of organizing reflection in the classroom (long reflection becomes burdensome for participants, causes a feeling of uselessness, a waste of time; insufficient use of time for reflection reduces the effectiveness of perception and comprehension).

The concept of “reflective educational environment” in pedagogy is new and insufficiently studied. A number of scientists understand the reflective environment as a system of conditions for the development of an individual, which opens up the possibility of self-research and self-correction of socio-psychological and professional resources [17]. Researchers call the main function of this kind of environment to contribute to the emergence of a person’s need for reflection, and this is true. The reflective educational environment is formed by integrating the reflective sphere of activity and the educational environment of the university, and the higher the degree of interpenetration of these areas, the larger the space of the reflective educational environment.

The reflective educational environment presupposes the organization of the activities of its participants, which cannot be reduced only to a social order that meets the needs and requirements of the current state of society. The teacher and student are focused primarily on themselves, on their personal growth. The emergence of reflection is determined by the needs of the student, because subject to the harmonious development of the individual, the unity of the main functional levels (individual, personality, individuality), the unity of internal determinants of behavior (needs, capabilities and internal position), completeness of expression and unity with the social and natural environment, the need for reflection absent. Hence the following properties of the reflective educational environment:

- It necessarily contains an internal contradiction or subjective difficulty (associated with the educational activity of the subject himself);
- It is culturally appropriate, since namely in it, it is possible to rethink old and create new cultural norms in the process of education;
- The reflective educational environment is variable. The student and teacher have the opportunity to build an educational environment based on their needs and in accordance with their direction of development. Therefore, the reflective educational environment is not characterized by the presence of externally imposed and strictly regulated methods of work and programs;
- A reflective educational environment involves the choice of teaching methods in which the emphasis is made not on content, but on the methods of activity of the teacher and student;
- Any activity of its subjects is creative and research-like;
- The reflective educational environment is aimed at the formation of all types of reflection in its subjects and the development of all of its levels.

The identified essential characteristics and features of reflection make it possible to define the reflective educational environment as a space of individual’ activity, determined by his reflective and educational spheres, which are integrated in the process of sociocultural self-determination of the future specialist into a single area under the influence of certain conditions, factors, and mechanisms. This is a set of external and internal pedagogical conditions in which the opportunity arises for an individual to choose goals, content, and methods of self-education and self-improvement, and a change in ideas about oneself as an individual and a professional occurs.

A reflective educational environment can be considered as a system if it has three mandatory signs of consistency: subordination of the entire organization to a specific goal (integrity); structure (presence of elements, parts); interconnectedness of elements (self-organization, controllability in the process of functioning).

Azwani Masuwai proposes the following vision of reflective education environment (see Figure 4 below).

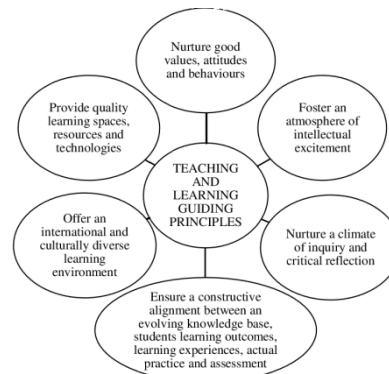


Figure 4 . Reflective environment for teaching and learning [13]

The main goal of organizing a reflective educational environment is to “introduce” the student into culture, teach him to comprehend cultural norms and patterns, and create new ones based on their processing.

Let us turn to the structure of the reflective educational environment. Like any environment, it is a combination of the following components: informational-semantic, social, material, technological, activity-based, and emotional-regulatory.

The information-semantic component reflects professionally and personally significant information. It consists, in turn, of certain elements - the content of general professional and subject disciplines, elective courses, curricula and programs.

The social component reflects, organizes social relationships, introduces certain experiences of these relationships, helps to acquire this experience, including in contact with external society, in the process of interaction with other students, teachers, representatives of elective university services, student government bodies, social services in university and beyond. Important ones here are both the professional and personal qualities of the subjects, as well as the nature of their relationships.

The material component of a reflective educational environment includes: design, image of the institution, architecture of premises, etc.; filling the premises with equipment, information and subject equipment (for example, appropriate software, equipment for working with augmented, virtual, and mixed reality). Each of the elements carries certain information, fully or partially structured.

The technological component represents various concepts and projects for organizing educational activities of students and teachers, aimed at building individual trajectories of professional and personal development.

As for the activity component of the reflective environment, an important characteristic of this component is the students’ independent organization of their activities; it is also about the presence of a variable part in the educational activities of students in the selection, reflection and assimilation of professionally significant information, participation of students in various forms of activity: project, predictive, reflective, heuristic, search, productive, creative, classroom and extracurricular. Here one should also mention the use of various methods, forms, types of activities, amateur performances, which allows overcoming students’ alienation from the activity,

ensures the satisfaction of the professional and personal needs of each student, the formation of cultural self-determination and general culture [23; 24].

The emotional-regulatory component presupposes the presence of a certain atmosphere of trust, cooperation, co-creation, and empathy.

At the same time, the complexity of modeling the reflective environment of a university is due to the need to comply with a number of conditions. Speaking about the conditions for the formation of a reflective environment, we understand those internal characteristics of the personal and external factors that together determine the process of formation of reflective competence.

In the conditions of functioning of a reflective educational environment, it seems appropriate to conduct a qualitative (for example, based on expert assessments) analysis of students' reflective competence based on the following descriptors.

1. Personal aspect of reflective competence:

- Competence in personality assessment;
- Reflective self-control;
- Desire for self-development;
- Level of self-esteem.

2. Interpersonal aspect of reflective competence:

- Ability to influence others;
- Assessment of self-control in communication;
- Reflective listening;
- Ability to cooperate.

3. Subject-functional aspect of reflexive competence:

- Competence in assessing one's professional activities;
- Tactical and practical thinking;
- Creative thinking in solving problem situations;
- Feedback in the educational process.

4. Methodological aspect of reflective competence:

- Sensitivity to scientific issues;
- Ability to conduct research work;
- Methodological culture;
- Professional self-education.

One of the effective means of determining the level of reflexive competence development is the case method, which is a complex formation characterized by problem, conflict, role, event, activity, and time aspects [22]. At its core, it is closest to game methods and problem-based learning, because it involves an active search by students for a solution to the proposed problem, followed by a discussion of the process and result of the joint actions of all participants. The outcome of a lesson conducted using case technology is summed up by assessing criteria that reflect the level of development of reflective competence. These criteria include: possession of analytical and critical thinking skills; the ability to practically consolidate theoretical knowledge; willingness to collectively identify and solve problems; willingness to solve complex problems in conditions of uncertainty; possession of communication skills; possession of presentation skills; self-confidence in arguing and defending own opinion, independence; the ability to take into account, discuss, accept other people's opinions, willingness to compromise. Using the case method, it is possible to develop all components of reflective competence and track weaknesses, as a result of which it becomes achievable to make timely adjustments in the process of formation and development of reflective competence.

It also seems expedient to apply the methods used in andragogy-framed teaching according to the Kolb cycle method - all these methods and evaluation criteria have great reflective value.

The main challenge in teaching according to Kolb and McCarthy is to help students learn to answer the questions "What?", "How?", "What if?", "Why" on their own (Figures 5, 6). To do

this, a theory is needed that explains the different learning activities addressed by different learning styles and the student's progression through the learning cycle.

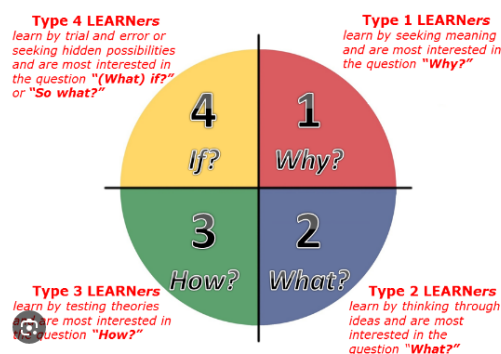


Figure 5. McCarthy model of learning [15]



Figure 6. SMAT model (combined Kolb' and McCarthy' model) [6]

Kolb and McCarthy's learning theory is based on the hypothesis that learning occurs best when a student moves through all four quadrants of Kolb's learning cycle. In this cycle, at the stage of "concrete experience" (CE), when answering the question "Why?" a learning need is created that requires "reflective observation" of experience. "Reflective Observation" (RO) is accompanied by the question "What?" and processing concepts so as to integrate direct experience with what learners already know. After integration, "abstract conceptualization" (AC) arises, which is used using the question "How?" to move to the "active experiment" (AE) for verification. This is followed by the "What if?" question, preparing the transition to a new "concrete experience" (CE). Its results are involved in new events, and the cycle repeats again. Thus, movement through the cycle of cognition can be associated with answers to interrelated questions: "Why?", "What?", "How?" and "What if?" Movement through the learning cycle can be guided by selecting suggested activities that relate to four different learning styles. The needs of all students are best addressed through a variety of actions identified across all four sectors.

Thus, the formation of reflective competence is possible on the basis of a student-centered approach, where special attention is paid to the cycle of cognition and reflection. At the same time, the teacher must create a reflective environment, that is, create situations where students become subjects of reflective action and organize their own reflective activity. With the help of the latest information technologies (in particular, AR, VR, and MR), such a reflective environment turns into a real smart learning environment.

Literature:

1. Al-Sheeb, B. A., Hamouda, A. M., & Abdella, G. M. (2019). Modeling of student academic achievement in engineering education using cognitive and non-cognitive factors. *Journal of Applied Research in Higher Education*, 11(2), 178-198
2. Feliu, J. (2020). *Reflective learning in higher education*. MDPI AG.

3. Guzonova, V., Jakúbek, P., Tytarenko, O., Dekhtiarenko, Yu., Kononenko, I. (2022). Management of effective eco-education: Problems and prospects. *Ad Alta: Journal of Interdisciplinary Research*, 12(2), XXIX, 67-72.
4. Hafız, A., Senturk, E., Teker, C., Sarikaya, O. (2023). Factors affecting the level of reflective thinking and clinical decision-making skills in medical faculty students. *Medical Bulletin of Sisli Etfal Hospital*, 57(4), 543-551.
5. Herrity, J. (2023). 11 benefits of collaborative learning (plus tips to use it). *Indeed*. <https://www.indeed.com/career-advice/career-development/benefits-of-collaborative-learning>.
6. Istanbul, A., Universitesi, M., Fakultesi, B., Ve, T. (2021). The effects of language learning strategies instruction based on learning styles on reading comprehension. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, 21, 697-714.
7. Karnieli-Miller, O. (2020). Reflective practice in the teaching of communication skills. *Patient Education Counseling*, 103, 2166-2172.
8. Keramati, A., Reza, M., & Arefian, M. (2024). Students' reflection on the effect of collaborative learning on the learning environment and academic achievement in online reflective platforms. *Reflective Practice*. DOI: 10.1080/14623943.2024.2305868
9. Kori, K., Pedaste, M., Leijen, A., & Maeots, M. (2014). Supporting reflection in technology-enhanced learning. *Educational Research Review*, 11, 45-55.
10. Lane, A.S., & Orde, S.R. (2017). Intermediate level training: a paradigm requiring reflective competence. *Journal of the Intensive Care Society*, 18(1), 52-56.
11. Lichtenberger-Majzikne, K., & Fischer, A. (2017). The role of feedback in developing reflective competence. *Practice and Theory in Systems of Education*, 12(3), 119-127.
12. MacCallum, J., & Campbell Casey, S. (2017). Enhancing skills development and reflective practice in students during their programme of study. *New Directions in the Teaching of Physical Sciences*, 12(1), 1-10.
13. Masuwai, A. (2018). Climate of inquiry and critical reflection element in teaching and learning in higher education institutions. *Sains Humanika*, 10(3), 55-61.
14. Moon, J. (2004). *A handbook of reflective and experiential learning*. Routledge.
15. Morris, T.H. (2019). Experiential learning – a systematic review and revision of Kolb's model. *Interactive Learning Environments*. doi: 10.1080/10494820.2019.1570279
16. O'Reilly, sh., & Milner, J. (2015). Transitions in reflective practice: Exploring student development and preferred methods of engagement. *Nutrition & Dietetics*, 72(2), 150-155.
17. Rust, C. (2016). Shifting the focus from skills to "graduateness". *Phoenix*, 148, 8-10.
18. Ryan, M. (2015). *Teaching reflective learning in higher Education: A systematic approach using pedagogic patterns*. Springer.
19. Schrempf, S., Herrigel, L., Pohlmann, J., Griewatz, J., Lammerding-Köppel, M. (2022). Everybody is able to reflect, or aren't they? Evaluating the development of medical professionalism via a longitudinal portfolio mentoring program from a student perspective. *GMS Journal of Medical Education*, 39(1), Doc12.
20. Tight, M. (2022). Reflection: an assessment and critique of a pervasive trend in higher education. *European Journal of Higher Education*. <https://doi.org/10.1080/21568235.2023.2193345>
21. Tolar, T. (2023). Value of reflective learning for nursing students: case studies of critical reflection within applied Gibbs' model of reflection. *Journal of Learning Development in Higher Education*, 29. doi: 10.47408/jldhe.vi29.1082.
22. Vince, R. (2022). Reflections on "Behind and Beyond Kolb's Learning Cycle". *Journal of Management Education*, 46(6), 983-989.
23. Yadav, D., & Bhatia, D. (2022). Effect of reflective practices on student learning in higher education - A real life approach. *International Journal of Educational Reform*, 1, 1-15.
24. Zhou, Q., Suraworachet, W., & Cukurova, M. (2021). Different modality, different design, different results: Exploring self-regulated learner clusters' engagement behaviours at individual, group and cohort activities. <https://doi.org/10.35542/osf.io/u3g4n>

Primary Paper Section: A

Secondary Paper Section: AM