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Using the techniques of critical thinking development technology while studying economic disciplines

The article analyzes the definition of the term «critical thinking» and specifications of the development of this type of thinking. Discusses the stages of the lesson when the technology of critical thinking development and selected strategies at some stage. At all three stages (call, understanding or realization of meaning, reflection or meditation) well-built class allows you to either increase the motivation of students to learn, or to build up their skills of independent work. All the questions posed to the students at the stage of the challenge was aimed not only at updating existing knowledge and increasing motivation for learning, including techniques of independent work. At the stage of reflection solved the main task: to teach students the ability to work independently with the scientific text. The task of the stage of reflection to integrate new knowledge into the system the available information on the subject, to develop the attitude and, if necessary, identify ways of further search on the topic. Features discussed in the article technology of critical thinking lies in the relative simplicity of its implementation in the learning process of students of economic disciplines. The practical application of the techniques of the technology of critical thinking at the lessons of economic subjects shows the development of various abilities of students.

Keywords: Critical Thinking Technology, characteristics and strategies of Critical Thinking, to think critically, critical thinking abilities, the process of thinking, economic disciplines.

Successful career starts with a good education - it is a recognized fact. The labor market is extremely variable today, so those are in demand who are able to change the profession, to be ready for self-education, self-development. The purpose of education today is to prepare a competitive personality, demanded in the labor market, to develop the students' need for self-improvement, self-education [1]. Instead of simple transfer of knowledge and skills from teacher to student, priorities for education are the development of the student's ability to independently set learning goals, design ways to implement them, monitor and evaluate their own achievements, work with various information sources, evaluate them and on that basis to formulate their own opinion, judgment, assessment. We use techniques of critical thinking technology to achieve these goals, and find the best ways of solving educational problems.

Critical thinking - a mindset that helps to be critical of any assertion, not to take anything for granted without proof, but at the same time be open to new ideas, methods. Critical thinking - a prerequisite of free choice, the forecast quality, the responsibility for their own decisions. Critical thinking, in fact, is synonymous with quality thinking. This concept along with international concepts brought technological techniques to our lives [2].Critical thinking technology is one of the new educational technologies proposed in the middle 90-ies of XX century by American psychologists D. Steele, K. Meredith and Charles Temple. The purpose of this technology is to develop thinking skills of students needed both in the educational process and everyday life, the ability to take objective decisions, to work with the information, to analyze various aspects of the phenomena, and so on. This technology is aimed at the development of students, the core indicators of which are assessment, openness to new ideas, their own opinions and feedbacks.

The features of this technology: the educational process is based on the regularities of interaction between the individual and the information, patterns and mechanisms of learning processes; various forms and strategies for working with the text, organization of debates can be used while using technology; technology strategies allow to carry out the whole training on the basis of cooperation principles, joint planning and feedback.

The main goals and challenges of critical thinking technology: 1) formation of a new style of thinking, which is characterized by openness, flexibility, an alternative decision-making; 2) the development of the basic personality traits: communicative skills, creativity, mobility, independence, tolerance, responsibility for their own choices and their performance; 3) development of analytical and critical thinking; 4) the formation of an ability to be guided by the sources of information, to understand the read information adequately, sort the information in terms of its importance, «to sift out» secondary information, to assess new knowledge crit-

ically, to draw conclusions and generalizations; 5) promotion of an independent search of creative activity, the launch of self-learning and self-organizing mechanisms.

Technology of critical thinking development can be considered as an integrating, it summarizes the achievements of many technologies, it provides the development of thinking, formation of communicative abilities, development of independent work skills. Due to the large arsenal of techniques and methods included in the technology, each teacher can choose those that are close to him personally, without departing from the framework approach of the technology (allowed everything that is not prohibited).

David Klooster identified five characteristics of critical thinking:

First, critical thinking is independent thinking. When the activity is based on the principles of critical thinking, each student formulates his own ideas, views and assessments independently from the others. No one can think critically for us, we do it only for ourselves. Therefore, thinking can be critical only when it is individual.

Second, information is the starting point, by no means finishing one, of critical thinking. Knowledge creates motivation, without which man cannot think critically, as it is sometimes said, «It is difficult to think with an empty head.» To generate a complex thought, it is necessary to «recycle the pile of raw material» - facts, ideas, texts, theories, data and concepts.

Third, critical thinking begins with asking questions and understanding the problems to be solved. Human beings are inquisitive by nature. We notice something new and want to know what it is. We see some interesting place, and we already want to get inside. However, the true learning process at any stage is characterized by a desire of a learner to solve problems and answer questions arising from his own interests and needs. «Therefore, - concludes John Bean - the complexity of critical thinking teaching is to help students to see the infinite variety of problems around us».

Fourth, critical thinking is to seek a convincing argument. Critically thinking person finds his own solution to the problem and supports this decision with reasonable, justified reasons. He is also aware that there may be different solutions to the same problem, and tries to prove that his chosen solution is more logical and rational than others.

Finally, fifth, critical thinking is social thinking. Every thought is verified and perfected, when it is shared with others - or, according to the philosopher Hannah Arendt, «perfection can be achieved only in someone's presence» [3].

All five points of above said definition may be implemented in various types of training activities, but the best of them both for teachers and students is a written work.

The process of thinking becomes visible in the written work and hence accessible to teachers. Writing student is always active. He always thinks independently and uses all his store of knowledge. He builds a decent argument to support his opinion. Good written work contains the search for solutions to certain problems and offers discovered answer to readers. Development of students' critical thinking is put into effect by oral and written speech activity during the analysis of fiction and journalistic texts, critical articles in the process of mastering the subject knowledge and skills. Texts have the greater opportunities for the development of personal qualities and intellectual abilities included in the cognitive component as they form values in the unity of the ideological content and composite, art-stylistic peculiarities.

The technology of critical thinking development involves three stages of designing a meaningful lesson.

The first stage (phase) - Challenge.

The objective of this phase and the activity of a teacher is not to only make students more active, arouse their interest, motivate them for further work, but also «recall» existing knowledge or create association on studied things, which is a serious, activating and motivating factor for further work.

The second stage (phase) - Comprehension (understanding of the meaning).

Students work directly with the information on this stage. Techniques and methods of critical thinking technology keep a student's activity, make reading and listening meaningful. These two stages are fundamental of any lesson.

The most important and interesting stage of the lesson of the proposed technology is the third stage (phase) - reflection (consideration). Personal understanding, adoption and use of the material and its use as personal creative experience, systematization of the material, motivation of students to the next stage of learning happen at this stage. At the motivation stage, you can use «Conceptual wheel» strategy. Students must choose synonyms to the word, which is in the core of the conceptual «wheel», and insert in the wheel-sectors. For example, to the word *integration*, students write such words as *combination, association, and merger*. It gives an opportunity to continue the discussion on the topic: «International economic integration».

«Gallery of answers» strategy can be used at the reflection stage. At the lesson of «The world economy and international economic relations» discipline on theme «Kazakhstan in the system of modern international relations», students were asked to select from all international and regional organizations only those aimed at the development of economic relations. The teacher commented on correctness of the assignment, referees and team leaders fixed individual responses. Each group used the stickers of a certain color. Representatives of the groups attached them to a common cluster, when summing up it was seen which group gave more answers that are correct. The «Problems Mosaic» strategy is interesting when you want to investigate the problem, argue your own position. For example, students on an example of the Eurasian Economic Union determine the pros and cons of economic integration for Kazakhstan.

The teacher offers students two sheets of different colors, which are pre-cut to the same sector and in each issue (problem) has been printed. Students are offered handouts containing the analytical and statistical information on the topic to answer these questions.

After presentation of answers, the sector of the group that brought more arguments remains on the board. After discussing the problem topics, conclusions are drawn, responses are analyzed. Finally, one sheet is formed with different colorful sectors. The winner is the group with more sectors while making the mosaic. The teacher comments correctness of the assignment, group leaders assess students.

«The Tree of predictions» strategy is often used on the subject «Fundamentals of the economy.» This method helps to make suppositions about the development of some events. While analyzing the situation, various hypotheses are put forward, which must be supported by arguments. When thinking up a scheme (tree), it is assumed that the shaft is the main topic, branches - assumptions, and the leaves - arguments.

At the reflection stage, the teacher evaluates the work results of students. Experience shows that the «Plus-minus-interesting» strategy is effective on this stage.

Students are encouraged to complete a table consisting of three columns. In the first column «Plus» students write everything they liked at the lesson, information and ways of working, which caused positive emotions and can be useful to achieve some goals. In the second column «Minus» students write everything they disliked at the lesson, what was boring, remained unclear, or unnecessary information from the point of view of life situations. In the third column, «Interesting» students write all the curious facts that they have learned in class, and what they would like to know on the topic or the questions to the teacher. It is very easy for a teacher to sum up the results of the lesson in accordance with the table [4].

Critical thinking development technology can be considered an integrating, it summarizes the achievements of many technologies, it provides thinking development, the formation of communicative abilities, and the development of independent work skills. Due to the large arsenal of techniques and methods included in the technology, each teacher can choose those that are close to him personally, without departing from the framework approach of the technology (allowed everything that is not prohibited).

In the frame of basic model «Challenge-Comprehension-Reflection», a variety of quite well-known and proven in pedagogical practice teaching strategies can be used: cooperative learning strategy, problem-based learning strategy, organization of educational discussion technology. Despite the heterogeneity of the proposed methods of critical thinking development, they have a single focus - to promote the awareness of actions by students, analysis, synthesis, evaluation, comparison, verification.

Students and teachers often discuss properly and lively. In many cases, these discussions arise because of issues raised by either a student or a teacher. The level, type and structure of questions important to the emerging debate. They support higher complexity levels of the students' critical thinking. Therefore, one cannot help saying about the issues that stimulate critical thinking. When answering such questions, students analyze and interpret data, analyze ideas, build their own assumptions - all this requires from them search activity. At this stage, it is important to understand that such issues are a means to stimulate different types of thinking at different complexity levels. There are questions on memorization or issues of formal level, they belong to the lowest level. Questions to assess or question on the judgment regarded as the highest level of thinking (Sanders, 1969). However, one must assume that all questions are important because they lead to different kinds of thinking [5].

There are many methods that teachers can use to make their ability to ask questions even more effective (Gibbs, 2001). After posing the question, it is necessary to give time to think, and less confident students have an opportunity to formulate a response. Using the method «Think – Make pairs - Discuss» teacher enables students to discuss the answer to each other, before expressing their opinions in front of everyone. While developing critical thinking it is necessary to ask questions that develop / continue the discussion,

such as «And what's your opinion?», «What would you add?», etc. Teachers need to provide feedback / comments that neither confirm nor deny the students' responses. Then the discussion remains open. For example, «I wonder,» «I have not thought about it before». After discussing the studied material it is necessary to generalize and summarize, «Who can express this point of view, in other words?». During the discussion opinions of other students can be known, «Who agrees?» «Who disagrees? Why?». While studying it is necessary to use a method of talking about thoughts/reasoning aloud: «How did you come to that answer?». Ask all students, not just those who raise their hands. However, we must quickly move on, if the student does not want to answer. Teacher should warn students about the possibilities of different answers: «There are many possible answers to this question.» You can use imagination: «What has happened if ...?».

Thus, analyzing this technology's system of strategies and teaching techniques, we conclude that the use of critical thinking in teaching solves many educational objectives. It increases the motivation to learn; activates the process of learning and thinking; disrupts the barrier between a student and a teacher; establishes dialogical relationship; facilitates the manifestation of personal qualities, creativity, willingness to cooperation and social activities, student's self-realization. This technology generates a new way of thinking, which is characterized by openness, flexibility and reflexivity, an alternative decision-making; develops such basic personality traits like sociability, creativity, mobility, independence and responsibility for own choices and performance; it forms a reading culture, stimulates independent search creative activity. The ability to think critically - is not seeking out the shortcomings, but objective assessment of the positive and negative sides to the knowable object.

Critical thinking development technology helps to form communication, tolerance, empathy, proper criticism. The task of a teacher - the cultivation of humanistic relations in groups, taking into account individual, personality, age characteristics of students. Having troubles, various interests of students performing certain roles, the diversity of students' interactions in the problem solving process, the need for reflection - all this creates the conditions for the effective critical thinking development of the future vocational training teachers.

Participation in the debate helps students to clarify their own understanding of the problem, to understand their views critically, knowledge, point of view, new information, and new arguments; identify logic errors encountered in the course of the discussion (substitution of the thesis, the transition from the problem under discussion on personal characteristics, inexact wording of disagreements, incorrect conclusions, etc.). The pedagogical value of discussion increases, if in addition to the subject content discussion process is comprehended.

This technology allows to create the ability to work with information, extract necessary one, separate the important from the secondary, simplify it. It forms the ability to develop one's own opinion, make sense of own experience, come to definite conclusions, build a chain of evidence logically. The technology also forms the ability to arrange the text material graphically, interpret the available information creatively. It forms the ability to rank information on the degree of novelty and importance, the ability to apply the arguments in disputes, look at old ideas from a new point of view, to distinguish facts from assumptions, to distinguish between valid value judgments and a reasonable estimate, identify causal relationships and to detect errors in them.

Critical thinking development technology can solve not many individual problems in the learning process, but their combination. It is aimed at the acquisition of skills and experience, experience of creativity and scientific activities that have an impact on the development of future specialist's internal and external self-organization. The technology is interactive in nature and, therefore, increases the cognitive interest, develops thinking, imagination, communication skills. The use of different kinds of work during lessons allows students to maintain focus on a high level, reduces fatigue and strain. Non-standard form of a lesson provides an opportunity for self-expression and creativity of both students and teachers. In addition, this technology is aimed at the development of tolerance, respect for the human person, democracy, endurance and benevolence. It stimulates demand for new knowledge and skills, as well as the nomination of new hypotheses, interest in independent research, problem-solving methods.

However, on the one hand, the use of this technology at every lesson is time-consuming for a detailed study of information, definition of students' education level, discussion of alternative viewpoints, creative processing of studied things. On the other hand, technologization of learning process can move the content of a lesson to the second plan.

In this case, the main thing is to keep the «spirit» of technology, i.e. keeping the principles of cooperation, personal independence, self-reliance and humanism.

Conducting training sessions on economic disciplines with the use of techniques of critical thinking technology improves students' interest in learning. It can be said that strategies of critical thinking development, used in the study of economic disciplines, aimed at improving the educational process and the creation of conditions for the formation and consolidation of the students' new knowledge and skills.

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Г.С. Султанова

Экономикалық пәндерді оқытуда сын тұрғысынан ойлауды дамыту технологиясы әдісін қолдану

Мақалада «сын тұрғысынан ойлау» ұғымының анықтамасы және осы ойлау типінің даму сипаттамасы талқыланған. Сын тұрғысынан ойлауды дамыту технологиясын қолдану кезіндегі дәріс сатылары және белгілі бір кезеңдерде қолданылатын кейбір стратегиялар қарастырылған. Экономикалық пәндерді оқытуда сын тұрғысынан ойлау технологиясының әдісін қолдану білімгерлердің жан-жақты қабілеттіліктерін дамытудың бірден бір құралы екені айқындалған. Барлық үш сатыда (шақыру, пайымдау немесе іске асыру, рефлексия немесе ойлау) сауатты жолға қойылған дәріс білімгердің оқуға деген ынтасын жоғарылатуға немесе олардың өз бетімен жұмыс істеу дағдысын қалыптастыруға мүмкіндік береді. Шақыру сатысындағы білімгерлерге қойылған сұрақтардың барлығын олардағы бар білімді өзектілендіруге және оқуға деген ынталарын жоғарылатуға, соның ішінде өзіндік жұмыстарының тәсілдеріне бағытталған. Пайымдау сатысында басты міндеттер шешілді: білімгерлерді ғылыми мәтінмен өз бетінше жұмыс істеуге үйрету. Ал рефлексия сатысының міндеті – тақырып бойынша қолда бар мәліметтер жүйесіне жаңа білімді қалыптастыру, оған деген қарым-қатынасты тұжырымдау, қажет болған жағдайда тақырыпты әрі қарай іздеу жолдарын қарастыру. Мақалада қарастырылып отырған сын тұрғысынан ойлау технологиясының ерекшелігі білімгерлердің экономикалық пәндерді меңгеру барысындағы оны іске асырудың салыстырмалы қарапайымдылығында болып табылатындығы жазылған. Экономикалық пәндер сабағында сын тұрғысынан ойлау технологиясын әр уақытта қолдану тәсілдері білімгерлердің әр түрлі қабілеттерін дамытудың бірден бір жолы екені қарастырылған.

Кілт сөздер: сын тұрғысынан ойлау технологиясы, сын тұрғысынан ойлау стратегиясы және сипаттамалары, сыни ойлау, ойлау үрдісі, экономикалық пәндер.

Г.С. Султанова

Использование приёмов технологии развития критического мышления при изучении экономических дисциплин

В статье проанализированы определение термина «критическое мышление» и характеристики развития данного типа мышления. Рассмотрены стадии занятия при использовании технологии развития критического мышления и некоторые стратегии, применяемые на определенном этапе. Определено, что на всех трех стадиях (вызов, осмысление или реализация смысла, рефлексия или размышление) грамотно выстроенное занятие позволяет либо повышать мотивацию студентов к обучению, либо формировать у них навыки самостоятельной работы. Все вопросы, которые ставились перед студентами на стадии вызова, были направлены не только на актуализацию имеющихся у них знаний, но и на повышение мотивации к обучению, в том числе приемам самостоятельной работы. Отмечено, что на стадии осмысления решалась главная задача: научить студентов умению самостоятельно рабо-

тать с научным текстом; задача стадии рефлексии — встроить новые знания в систему имеющихся сведений по теме, выработать отношение к ней и, если необходимо, наметить пути дальнейшего поиска по теме. Особенности рассматриваемой в статье технологии критического мышления заключены в относительной простоте ее реализации в процессе изучения студентами экономических дисциплин. Подчеркнуто, что практическое применение приемов технологии критического мышления на занятиях экономических дисциплин показывает развитие разнообразных способностей студентов.

Ключевые слова: технология критического мышления, характеристики и стратегии критического мышления, критически мыслить, процесс мышления, экономические дисциплины.

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