THE ESSAY AS A TOOL FOR MOTIVATION AND ASSESSMENT OF STUDENTS (FUTURE TEACHERS IN BIOLOGY)

K. YOTOVSKA* and A. ASENOVA
Sofia University “St. Kliment Ohridski”, Methodology of Biology Teaching, Faculty of Biology, BG – 1164 Sofia, Bulgaria

Abstract


The essay as a literary form is released of the restrictions of genre frames. It gives a possibility for reasoning on the causal relationships, and life and science examples, comparison and/or opposition to the facts, signs, events, thoughts of famous people. The essay express the personal opinion, own idea and perspective on a chosen topic. Writing the essay presents the student in greatest degree as an author who has a cognitive and affective style. The application of skills to create an essay in the College and University allows diagnostic of students’ creativity. In this article we describe the application of the essay at the University as a specific way of thinking and attitudes, as well as a tool for motivation and evaluation of students from Sofia University “St. Kliment Ohridski” who are future teachers in biology. Another center in the article is a study of student attitudes pro and cons essay as a form of assessment. As an application to the article put out tools – a map with the evaluation criteria and scale for assessing student’s essays. Clear regulation in the evaluation of the card allows students to self-assessment as they compare to the relevant criteria.

Key words: essay questions, students assessment, technology

Introduction

The assessment of performance (achievement tests) provides information on the results of training conducted in a relatively known and controlled conditions. Usually the achievement tests evaluates final results after the completion of a training program, but it can be also an intermediate characterized during different stages of training (Andreev, 1996; Bijkov and Kraevsky, 2007).

One of the ways to assess the performance issues are free to construct response (free response items). These are essay (essay questions). In this case evaluations meet freely and independently, by demonstrating their knowledge and skills without being restricted in the way of their organization or the choice of the means of expression. Usually by essay, questions are used to put a problem, to set a task, to describe a subject area (Reiner at al., 2002).

The essay as a form of art in which the original way, with artistic means based on acquired knowledge and skills and personal opinion sets out some arguments on an issue. The essay is a type of reasoning. In essence it is a product of the proof thinking – any opinion is supported by arguments, sets up and justify certain opinion. By searchin of argumentation, the associative princip is the leading factor – a thought brings another one spontaneously, which is related in some lines. Therefore, a statement of the essay is characterized by an individual look at the problem, heterogeneity of the arguments, originality.

The impact of the essay is based on arguments and evidence offered, the style of the exposition and the impact of the power of speech as well. It is a thought experiment. Each essay is structured free text, diagrams and preliminary binding models, where the leading is the creativity and imagination of the author (Reiner at al., 2002).

*E-mail: kami_yotovska@abv.bg
Application of the skills to create an essay in high schools (universities) allows a diagnosis of creativity and creative attitudes of students. Writing the essay presents the greatest degree of the student as an author who has a cognitive and affective style.

At the University, we apply the essay as a specific way of thinking and attitude, as well as a tool for motivation and evaluation of students from SU “St. Kliment Ohridski” who are future teachers in biology.

Academic essay allows students to justify their position on a theme, to express their own views on an issue. The position which the author expresses is its own position, without adapting it to the mainstream position. Using the essay makes it possible to express an opinion, to be resisted. Freedom of the essay as a genre allows freedom of thought, free expression of an opinion and position. In the essay very important is the author’s personal experience. The problem is reflected by his individual point of view and thereby more strongly express personal opinion. The essence of the essay is the way of thinking achieved by the depth of thought and emotional empathy.

Methods

Theoretical analysis and synthesis, modeling, surveys, statistical methods.

Results and Discussion

To investigate the attitude towards the use of essay questions, as a form of assessment, we conducted a survey among 45 students of Biology and chemistry and Biology and geography.

As the main advantages of the use of essay questions, respondents indicated:

- Application of knowledge in the new situation - 72% of respondents.
- Case studies, problems, situations - 68% of respondents.
- Enable analysis, synthesis and evaluation of information in an unconventional way - 54% of respondents.
- “Essay questions are a challenge” - 54% of respondents.
- Search for causal relationships - 68% of respondents.

Overall, the attitude of students towards the usage of essay questions is positive, when there are clear criteria for evaluation.

Based on this study, we developed and implemented a system of steps with a final evaluation scorecard, which serves as a tool for measuring performance and self-assessment.

Technology of the process of diagnosis of the successions by essay questions

I. Develop a plan for the essay

Step one: determine what educational goals of the scientific discipline we want to test and evaluate, through an essay question.

Example: a scientific discipline Applied Psychology in education we define a target: obtaining the basic principles and complex theoretical foundations of applied psychology.

Second step: outlining which competence we want to verify and the conceptual area which is subject to assessment and that ensures the achievement of those objectives.


Third step: we formulate an essay question to meet the expecting objectives. We strive to formulate the topic in a way as to provoke the students’ desired mental processes and to motivate them for future work.

Example: Discuss helpful or harmful is the conflict.

Fourth step: Prepare plan scheme for assessing the performance of two major centers: evaluation of job content and structure of work (formal-linguistic and technical criteria).

We use the analytical approach. There the response is analyzed preliminary by determining its characteristics. It serves as the evaluation criteria, and thus we determine the main aspects of the expected response.

Example: Students must to test thoroughly and completely helpful or harmful is considering all the conflict “Pro” and “Cons”.

“Pro” conflict:
- reducing social tension;
- deep understanding of the parties, their convergence, providing information-connective effect;
- increase productivity, promote social change and the progress,
- disclosure of existing conflicts and determining ways to overcome them;
- increasing opportunities for rethinking the previous values and norms;
- reinforcement to reconsider the previous norms and values;
- reinforcement mutual trust, tolerance of members of the group, their cohesion.

“Cons” conflict:
- frustration, anxiety, depression, reduced activity, a decline in labor productivity, turnover of staff;
– low degree of cooperation, distancing and alienation between the parties in conflict;
– promote the “enemy complex”, e.g. perceptions of the other Party as an enemy;
– trend of increasing animosity between the parties at the expense of reducing cooperation;
– preserve the possibility of further escalation of the conflict.

Fifth step: Prepare instruction to students (Appendix 1).
In general, it includes:
a. overall plan, the students should use;
b. the form where the student must submit their answers (in the form of connected text);
c. general criteria that will be used in the evaluation of responses;
d. terms of volume, duration, etc.

II. Evaluating the results of essay-questions
As an appendix to the article a tools is based – evaluation card with the respective criteria and scale for assessing the student essays (Appendix 2). Clear regulation in the evaluation card allows students to self-assessment, and compare their products with their known criteria. Specially developed system of evaluation criteria applies equally to the answers to all students. Evaluation criteria are known by the students. The purpose is the students to organize their responses in accordace with test requirements and to increase the validity of the assessment and self-reflection.
Depending on the specific content of the essay questions, only the content part is adapt. Content section provides information about what specific issues should be covered by students.
An important element of the assessment scheme is to define the standard for performance. This is the acceptable minimum level of knowledge and skills that students must demonstrate to have achieved specified learning objectives of the course. In the course of the audit assess the adequacy of our model on the sample of students and respond to it if need refining.
Work is evaluated separately in each criteria, which carries a number of points. Final grade (test score) formulate as sum of points for each criteria. Then transform the test score in the grading assessment under the assessment system in Bulgaria.

Conclusions
The essay as literary form is exempt from the restrictions of genre frames. It allows for reflection on the assessed causal relationships, life science examples, comparison and/ or opposition to the facts, signs, events, thoughts of famous people. Essay expressing personal opinions, their own idea and perspective of students by chosen topic.

References
http://testing.byu.edu/info/handbooks/WritingEffectiveEssayQuestions.pdf

Appendix 1

Instruction to Students in Writing Academic Essay
Academic essay is the most free form of research and presentation of scientific ideas. To be successfully implemented there is need the following:
1. Finished essay is transmitted in digital format on the determinate term.
2. The text is built according to his own vision and individual preferences of the author. The essay should include an introduction, exposition and conclusion, the whole subject to the topic.
The purpose of the introduction is to provoke the reader, to involve him. This you can achieve for example through an interesting story, provocative, controversial statement, anecdote, etc. An important requirement is to be clear, original and show good awareness.
The exposition is the core of the essay. You should develop your opinion and to argue it.
The conclusion should give a complete and final look of the essay. It may be a summary of what was said or to seek points of contact or relations with other subjects.
3. The essay uses scientific facts and relationships, life events – situations, personal experiences, and logical, emotional, moral, aesthetic arguments, etc., “pro” or “cons” the essay topic. In terms of scientific facts and laws can draw from that literature. Experience of live material you can choose freely, but it must be relevant to the topic. You must use the notion of applied psychology apparatus. The essay must be written with a solid and original approach to the topic.
Recommended proportions science – life is 40% to 60%.
4. The essay must be written in literate, literary Bulgarian, have a cover page. The essay should be no longer than 1500 words and no less than 800 words.
Appendix 2

Assessment of Academic Essay

Name of the student, group ............................................. ..............................................

Final assessment:

Please rate the candidates against a six-grade system with the criteria described below:
2: extremely poor performance
3: unsatisfactory, but acceptable performance
4: good performance of the candidate
5: very good performance, but with certain remarks
6: excellent performance, without objection

Evaluation criteria

I. Content criteria (skills-building text)
1. Orientation compared to the exhibition theme.
2. Built own argument and expressed personal opinion.
3. Use and discussion of relevant bibliographic sources.
4. Elaboration of arguments, evidence, counter-supported argument in a logical order.
5. Using appropriate examples from everyday life.
6. Originality, creativity.

II. Formal linguistic and stylistic criteria
7. Stylistic skills – expression of the author and the influence of text on the reader, clear language, accurate terms.
8. Grammatical skills – grammatically correct Bulgarian.

III. Technical criteria
Proper structure of text – an introduction; exhibition; conclusion.
Correct citation of sources and bibliographic references and author’s use.
11. Readability and visual appearance of text.
12. Volume (guidance in relation with the instructions).