

ANNOTATION

of dissertation work of Azhmoldaeva Clara Baizhigitovna for the Philosophy Doctor's degree (PhD) in the specialty 6D011300 - "Biology" on the topic "Methodological bases of using of regional components in the professional training of future biology teachers."

Research topic: Methodological bases of using of regional components in the professional training of future biology teachers.

The purpose of the study: is to theoretically substantiate regional components in the professional training of future teachers and to develop a methodology for use in universities, introducing the methodology into the educational process of a secondary school, and determining methodological effectiveness.

The aim of the research is to substantiate the theoretical foundations for the application of regional components used in the professional training of future teachers; to develop a methodology for the application of regional components in universities; to introduce the developed methodology into the educational process of a secondary school and prove its effectiveness.

Research objectives:

1. Study of theoretical and practical issues of the use of the regional component in the training of biology teachers in higher educational institutions.
2. Creation of a structural, substantive and procedural model for the use of regional components in the training of biology teachers in universities.
3. Selection of regional materials for teaching biology in higher educational institutions on the example of plants of the Aral Sea region and the introduction of a regional component into the process of school education.
4. The study of the effectiveness of the pedagogical experiment.

Research methods: theoretical analysis of philosophical, psychological, pedagogical and methodological literature on research issues, as well as concepts, educational standards, educational programs, textbooks and manuals on natural sciences; observation, survey, interview, lesson analysis; and conducting defining and formative experiments.

The basic principles proposed for protection (proven scientific assumptions and other conclusions that represents a new knowledge).

– the basis of the professional activities relevant for future teachers is the use of regional materials as a person's readiness to create harmonious relations with the natural environment; describing a system of actions that includes environmental protection; effective use of environment; its restoration; and their interrelation,

– the structural-content-procedural model of the use of regional components in the training of future teachers in the process of teaching biological subjects includes the definition of skills based on personal-activity techniques and

their subject, content, activity, volumetric components, as well as the levels of formation and their criteria

– the effectiveness of the methodology of using regional components in the professional training of future biology teachers can be tangible when professional skills allow improved or updated student activities which relate to environmental conditions, such as: updating general bioecological knowledge and skills; organizing interdisciplinary connections; using interactive forms of learning; and using local history material and personal experience of future teachers.

The main results of the study:

1. Conclusions are presented on the analysis of theoretical and practical problems of using the regional component in the training of biology teachers in higher educational institutions.

2. A structural-content model has been developed for the use of regional components in the training of biology teachers in universities.

3. The selection of the content of the plant world of the Aral Sea region was carried out as a regional component for teaching biology in higher educational institutions and for implementation in the educational process of the school.

4. A pedagogical experiment was carried out, the effectiveness of the method proposed by the author was proved.

Novelty and significance of the results obtained:

The novelty of the first result pertains to the theoretical and practical problems of using the regional component in biology teacher training in higher educational institutions. The significance of the results obtained is that the theoretical and methodological foundations of the use of regional components in the training of biology students were determined, the possibilities of their introduction into the modern educational process was considered.

The novelty of the second result pertains to the development structural-content-procedural model for use regional components of training future teachers in the process of teaching biological subjects. It includes skills based on personal-activity methods, as well as the purpose, content, actions, assessment components, levels, and criteria for their formation. The significance of the obtained results is determined through training biology students effectively, the theoretical and methodological foundations of the use of regional components in the training biology students, the possibilities of their introduction into the modern educational process are determined.

The novelty of the third result refers to the methodology of using the regional component in training biologists in higher educational institutions, the selection of the content of the flora of the Aral Sea region as a regional component in the teaching of biology in higher educational institutions, general educational institutions was carried out. As a result of research, an author's programs of applied course "Biological local history", school course "Environmental biology of plants of Kazakhstan" and "Atlas of topical plants of the buttercup family of the Aral Sea region" were created.

The novelty of the fourth result refers to a pedagogical experiment which was conducted to introduce a regional component into the process of training

biologists, and the results obtained were introduced into the educational process in secondary schools. The importance of the experimental results was analyzed and clarified.

Compliance with the directions of science development or state programs:

The main idea of the research work corresponds to the State Program for the Development of Education and Science in the Republic of Kazakhstan for 2020-2025, to the State Mandatory Educational Standards of all levels of education, to the Professional Standard of a Teacher (19.12.2022, №31149), to the Law of the Republic of Kazakhstan "On the status of a teacher"; and to the Environmental Code of the Republic of Kazakhstan PK (02.01.2021, № 400-VI).

The contribution of the doctoral student to the preparation of each publication (the share is indicated, measured as a percentage of the total publication volume of the author of the dissertation)

9 scientific papers published on the materials of research, including:

- 1 article published in a scientific journal indexed in the Scopus database.
- 3 articles in publications approved by the Committee for Quality Assurance in Education and Science of the Ministry of Science and Higher Education of the Republic of Kazakhstan.

- 5 articles in international and republican scientific and practical seminars and conferences, 1 of them published in the materials of foreign conferences.

- 1 author's program "Environmental biology of plants of Kazakhstan", reviewed at the meeting of the Expert Council of the Institute for Advanced Training of Teachers in the Kyzylorda region of the branch of JSC "Orleu" dated October 22, 2021, Protocol №. 6

- 1 methodological manual for teaching the course " Environmental biology of plants of the Aral Sea vicinity of the Kyzylorda region", reviewed by the Pedagogical Council of the Zh. Kizatov № 23 Lyceum School, Protocol №. 4 of 21.04.2021.

All publications are prepared in the course of the research.

Publication included in the scientometric databases Web of Science and Scopus:

Student-centered technology in the professional training of future biology teachers for the regional component. Word journal on Educational Technology: Current Issues, Volume 1, Issue 3 Turkey 2022, p.837-854. (Co-authored by: Ibadullayeva S., Shildebayev Z., Zhumisov A., Zhusupova L., Alieva Z., 25%). The doctoral student's contribution to the preparation of the publication is 75%. The article shows the possibilities of introducing regional components into the course of biological education of students. The descriptive analysis method was used for the analysis of the research data.

Publications included in the list of the Committee for Control in the Field of Science Education and of the Republic of Kazakhstan – 3:

1. Заманауи биологиялық білім беруде өлкелік компонентінің рөлі // Bulletin of S. Toraighyrov Pavlodar University. Pedagogical series. Pavlodar, №3 2021, – p.44-56. (Co-authored by: Ibadullayeva S.Zh., Shildebaev Zh.B., 20%). The contribution of the doctoral student to the preparation of the publication is 80%. The article shows the place of regional components in modern biological education.

2. Биологиялық білім беру үдерісінде өлкелік компонентті оқытудың ерекшеліктері // Bulletin of Toraighyrov University. The series is pedagogical. Pavlodar, ISSN 2710-2661, № 3 2022, –p.96-105. (Co-authors by: S.Zh. Ibadullayeva, A.B. Karabalaeva, A.T. Abenova, G.S. Balgabaeva, 20%). The doctoral student's contribution to the preparation of the publication is 80%. The article describes the regional component and the methodology of introducing the regional component into the educational process.

3. ЖОО-да биолог-мұғалімдерді даярлаудың білім мазмұнына өлкелік компонентті ендіру ерекшеліктері // Bulletin of Karaganda University, №1(105) 2022, –p.101-108. (Co-authored by: Ibadullayeva S. Zh., Suleimenova M.T., Beganova A.B., 30%). Contribution to the preparation of the publication is 70%. The article discusses the ways of introducing regional components into biological education.

Publications published in other scientific journals:

1. Білім беру процесінде өлкелік компонент оқытудың ерекшеліктері // Materiy XVII Międzynarodowej Naukowipraktycznej Konferencji, Pedagogiczne nauki, Przemyśl, ISSN 1561-6916, 07 - 15 stycznia 2021 roku, –p.18-22. (Co-authored by: Ibadullayeva S.Zh., 20%). The doctoral student's contribution to the preparation of the publication is 80%.

2. Биологияны оқытуда өлкелік компонент ерекшеліктері // "Culture and education: topical issues of science development in the XXI century" II International Scientific and Practical Conference, Nur-Sultan, December 26, 2020, –p.29-31. The doctoral student's contribution to the preparation of the publication is 100%.

3. Биологиялық білім беруде оқушылардың зерттеушілік қабілетін регионалдық материал негізінде дамыту // "Scientific creativity: the experience of scientific research and priority areas", dedicated to the 1150th anniversary of the birth of Abu Nasir al-Farabi XXII Republican Scientific Conference of Students and Young scientists, Kyzylorda, April 23, 2020, –p.472-475. (Co-authored by: Ibadullayeva S.Zh., Shaimerdenov E.K., 20%). The doctoral student's contribution to the preparation of the publication is 80%.

4. Биологиялық білім алуда регионалдық дидактикалық материалдарды қолдану ерекшеліктері. Collection of materials of the International scientific and practical conference "Science and Innovation: news, problems and achievements", Almaty, Vol 1, April 29-30, 2020, –p.151- 153. (Co-authored by: Ibadullayeva S.Zh., Iztleuova D., 20%). The doctoral student's contribution to the preparation of the publication is 80%.

5. Өлкелік компонентті биология курсына ендіру артықшылықтары // Republican Scientific and Practical seminar, Kyzylorda, April 30, 2021, –p.227-230. (Co-authored by: S.Zh. Ibadullayeva, A.Zh. Berdenkulova, 20%). The contribution of the doctoral student to the preparation of the publication 80%.

Educational-methodical manuals:

1. Жалпы биология. Textbook, Karaganda, Medet Group LLP, 2021. – p.154. Co-authored by: S.Zh. Ibadullayeva, N.S. Auezova, L.B. Ramanova, 30%). The contribution of the doctoral student to the preparation of the publication is 70%.

2. Атлас актуальных растений семейства Лютиковых региона Приаралья. Educational and methodical manual: Kyzylorda, Zhienai Publishing House, 2022, –p.59 (Co–authors by: Tavstukha O.G., Pyatibratova N.A., 20%). The contribution of the doctoral student to the preparation of the publication is 80%.

3. Қазақстан өсімдіктерінің биоэкологиясы. Author's program: Kyzylorda, Zhienai Publishing House, 2021, –p.95 (Co-authored by: S.Zh. Ibadullayeva, A.R. Kiyasova, 20%). The contribution of the doctoral student to the preparation of the publication is 80%.

4. Қазақстан өсімдіктерінің биоэкологиясы (Оқушылардың жұмыс жасауына арналған дидактикалық мәліметтер жиынтығы). Methodical manual: Kyzylorda, Zhienai Publishing House, 2021, –p.59 (Co-authored by: S.Zh. Ibadullayeva, A.R. Kiyasova, 20 %). The contribution of the doctoral student to the preparation of the publication is 80%.

5. Қызылорда облысы Арал маңы өсімдіктерінің биоэкологиясы курсын оқытуға арналған әдіс-тәсілдер жиынтығы. Methodical manual: Kyzylorda, Zhienai Publishing House, 2021, –p.16 (Co-authored by: A.R. Kiyasova, 20%). The contribution of the doctoral student to the preparation of the publication is 80%).

These publications are related to the content of the dissertation, are independent works of a doctoral student based on the obtained research results.