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**FUNCTIONAL-STRUCTURAL MODEL FOR**

**FORMATION OF METHODOLOGICAL KNOWLEDGE AND SKILLS**

**OF FUTURE MATHEMATICS TEACHER**

The article is devoted to the construction of a functional-structural model for the formation of methodological knowledge and skills of future teachers of mathematics during the study of disciplines of the mathematical cycle.

The constructed functional-structural model is a set of structural (aim, content, result) and functional (principles, approaches, conditions, methods, means, criteria, levels) components.

The proposed model contains four blocks: methodological-target, content, active and diagnostical. The work briefly describes the components of these blocks.

The methodological-target block includes: a social order, the purpose and tasks of constructing a structural-functional model; scientific approaches and principles. The goal is to recognize the formation of methodological knowledge and skills of the future teacher of mathematics. The scientific approaches include active, competence, axiological, integrative, systemic, personally oriented. The mentioned scientific approaches are in the relationship and define a set of principles: scientific, differentiation, individualization, consciousness and activity, continuity, systematic, unity of theory and practice.

The content unit includes: methodological knowledge and skills that the future mathematics teacher must learn in the learning process; pedagogical conditions and stages of formation of the called knowledge and skills. Levels of methodological knowledge are specified, their content is disclosed. Examples of methodological skills are given. To pedagogical conditions are classified: structural-content; scientific and methodical; technological; psychological and pedagogical. There are three stages in the formation of methodological knowledge and skills: propaedeutic, educational and activity; evaluative-reflexive.

The activity block of the proposed model includes the forms, methods and means that contribute to the achievement of the intended result.

The diagnostic block includes the criteria and levels of the formation of methodological knowledge and skills of the future teacher of mathematics. The criteria are as follows: motivational, cognitive, activity-operational, reflexive. By the degree of manifestation of the criteria it is established four levels of formation of methodological knowledge and skills of the future teacher of mathematics: initial, medium, sufficient, high.

**References**

1. Aleksandrova N. M. Model formuvannia upravlinskoi kultury maibutnoho vykladacha ekonomiky / N. M. Aleksandrova // Naukovi zapysky Ternopilskoho natsionalnoho pedahohichnoho universytetu imeni Volodymyra Hnatiuka. Seriia : Pedahohika. – 2016. – № 1. – S. 147-153.
2. Bevz H. P. Metodyka vykladannia matematyky: navch. posibnyk / H. P. Bevz. – K.: Rad. shk., 1989. – 296 s.
3. Huba A. V. Teoretyko-metodolohichni zasady formuvannia upravlinskoi kultury vchytelia – maibutnoho menedzhera osvity: dys… doktora ped. nauk : 13.00.04 / Huba A. V. – Z., 2010. – 450 s.
4. Derzhavnyi standart povnoi zahalnoi serednoi osvity http://mon.gov.ua/ education/zagalna-serednya/derj-stand.html/post-derzh-stan-(1).pdf
5. Koroliuk S.V. Rozvytok upravlinskoi kultury kerivnyka zahalnoosvitnoho navchalnoho zakladu Monohrafiia. – Poltava: POIPPO, 2007. – 168 s.
6. Kuhai N. V. Metodolohichni aspekty matematychnoho modeliuvannia / N. V. Kuhai, Ye. M. Borysov // Science and Education a New Dimension. Pedagogy a nd Psychology, III (19), Issue: 38, 2015. – S. 39-42.
7. Кuhai N. V. Metodolohichni znannia maibutnoho vchytelia matematyky: monohrafiia / N. V. Kuhai. – Kharkiv: FOP Panov A. M., 2017. – 336 s.
8. Lozovetska V. T. Teoretyko-metodolohichni osnovy profesiinoho navchannia molodshoho spetsialista silskohospodarskoho profiliu: avtoref. dys. ... doktora psykhol. nauk / V. T. Lozovetska. – K., 2002. – 34 s.
9. Pykelnaia V. S. Teoryia y metodyka modelyrovanyia upravlencheskoi deiatelnosty (shkolovedcheskyi aspekt): Dys. … dok. ped. nauk: 13.00.01 / V. S. Pykelnaia. – Kryvorozhskyi ped. ynstytut, 1993. – 374 s.
10. Shevchuk L. I. Rozvytok profesiinoi kompetentnosti vykladachiv spetsialnykh dystsyplin zakladiv proftekhosvity u systemi pisliadyplomnoi osvity: avtoref. dys. ... kand. psykhol. nauk / L. I. Shevchuk. – K., 2001. – 22 s.