

Preparation for International Assessment Research by Forming Types of Functional Literacy in Future Chemistry Teachers

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Abstract

The article presents the literacies and competencies needed to prepare future chemistry teachers for international assessment research. At the same time, concepts about functional literacy and its composition of competencies are given.

Keywords: functional literacy, communicative, literacy in emergency situations, activity literacy, knowledge of foreign languages, literacy in solving household problems, financial, natural-scientific, mathematical, reading literacy.

Introduction

PF-5538 of the President of the Republic of Uzbekistan dated September 5, 2018 "On additional measures to improve the public education management system", April 29, 2019 "The concept of development of the public education system of the Republic of Uzbekistan until 2030 Decree No. PF-5712 on approval, Resolution No. 997 of the Cabinet of Ministers of the Republic of Uzbekistan dated December 8, 2018 "On measures to organize international research in the field of education quality assessment in the public education system" participation in evaluation research has been identified as one of the top 30 developed countries, and a number of measures have been implemented in this regard. In particular, in order to prepare our students for international evaluation studies, we need qualified personnel with strong potential and knowledge. It is in our research that prospective chemistry teachers should acquire functional literacy in international assessment research in preparing their future students for international assessment research. In our article, we aim to build the competencies and skills of future chemistry teachers by explaining functional literacy competencies in international assessment research. We believe that these qualifications and skills will be effective in preparing the general education students who will work in the future. It is the literacy and competencies that future chemistry teachers need to develop in order to prepare them for international assessment research. For example [1-7].



Functional literacy is the ability to use the knowledge acquired during a person's life to solve various life problems in various areas of human activity, communication and social relations [8].

Functional literacy involves the ability to freely use reading and writing skills to obtain information from text and to communicate such information in authentic communication, using texts and other communications [9].

The parameters of functional literacy include language, computer and information, legal, civic, financial, environmental literacy, the ability to define and change the goals and objectives of one's activity, to communicate, and to perform the simplest activities in conditions of uncertainty [11].

There are several main types of functional literacy:

Information: find and select the necessary information from books, reference books, encyclopedias and other printed texts;
read drawings, diagrams, graphs;
use of mass media;
use of the alphabetical and systematic catalog of the library;
digital data analysis [10].

Communicative: work in a group, team;
winning over other people;
mood swings, adapting to new, unusual requirements and conditions, organizing group work [12].

General literacy: write an essay, calculate without a calculator, answer questions without difficulty in forming phrases, choose words, write an application, fill out any questionnaires, forms.

Computer: searching for information on the Internet;
use of e-mail;
creating and printing texts;
work with spreadsheets;
using graphic editors [13-14].

Literacy in emergency situations: providing first aid to the victim;
request emergency assistance from specialized services;
taking care of your health;
to behave in situations that threaten personal safety.

Literacy of activity: the manifestation of organizational skills (regulating) and skills, that is, the ability to set and verbally formulate the purpose of an activity, plan and, if necessary,



change it, verbally argue about these changes, self-management, self-evaluation, self-correction [15-16].

Knowing foreign languages: translating a simple text with a dictionary;
talk about yourself, your friends, your city;
understand the texts of instructions on packages of various goods, household appliances;
communicating with foreign friends and acquaintances on various household topics.

Literacy in solving household problems: choosing products, goods and services (in stores, in various services);
planning money expenses based on the family budget;
k use of various technical household devices using instructions;
moving in an unfamiliar city using a directory, map [17].

Financial Literacy: Knowledge and understanding of financial concepts and financial risks, as well as the skills, motivation and confidence needed to make effective decisions in a variety of financial situations that improve the financial well-being of individuals and society, and the ability to participate in economic life [18].

Natural-scientific literacy. A person's ability to take an active civic position in issues related to natural and scientific ideas:
scientific explanation of phenomena;
understand the characteristics of natural-scientific research;
interpreting data and using scientific evidence.

Mathematical literacy. Ability to formulate, apply and interpret mathematics in different contexts:
applying mathematical reasoning;
using mathematical concepts and tools [19].

Reading literacy: a person's ability to understand and use written texts, reflect on them and achieve their goals, expand knowledge and opportunities, and participate in social life.

Functional literacy is the ability to act effectively in non-standard life situations. It can be described as "everyday wisdom", the ability to solve problems outside the table, build your life wisely and not get lost in it [20].

"Functional literacy is the basic education of the individual today. It is important for teachers and students to have this literacy :

1. Willingness to communicate successfully with a changing world.
2. The ability to solve various (including non-standard) educational and life tasks.
3. Ability to build social relationships.



4. A set of reflective skills that enable them to assess their literacy and pursue further learning [21].

According to Natalya Fedorovna Vinogradova, a Russian pedagogue and RAO correspondent, the development of functional literacy in primary education is an urgent task of teachers and educators .

According to AA Leontiev , "**a functionally literate person is a person who** is able to use all the knowledge, skills and abilities continuously acquired during life to solve the widest range of life problems in various spheres of human activity, communication and social relations." [22]

Therefore, every teacher and our students should have functional literacy, which is one of the urgent problems of today. With the help of this literacy, it is very important for us to be able to solve the problems and events in our life, to make the right conclusions.

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