![USAID - From the American People]

# USAID Okuu Keremet! project

**The use of WordCalc tool: Developing grade-appropriate books that children love to read!**

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# Today's Presentation

- Introduction

- Project overview

- WordCalc tool

- Functionality of WordCalc

- Frequency Dictionary

- Outcomes and challenges

- Adoption and Future Plans

- Conclusion

PHOTO: OKUU KEREMET!

# USAID Okuu Keremet! Project (Learning is Awesome!)

USAID Okuu Keremet! is a five-year project launched in 2019 to help improve learning outcomes in reading and math among more than 450,000 students in grades 1-4 in 1,679 target schools in the Kyrgyz Republic

**Objectives:**

- IMPROVED instructional quality in reading, numeracy and mathematics in primary grades 1-4

- IMPROVED formal and non-formal learning environments

- A STRENGTHENED primary education system

**Results:**

- Reached 75% of the country's primary schools

- Trained more than 20,000 teachers

- Built capacity of over 3,500 school administrators and other education leaders/officials

- Created 1,577 new book titles in four languages

- Distributed almost 2 million books to 1,679 school and 83 public libraries

PHOTO: OKUU KEREMET!

# Situational Analysis

- Locally available children's books are outdated (poorly written and illustrated)

- They lack relevance to current realities and modern life of Kyrgyz Republic

- Few books in local mother tongue languages (Kyrgyz, Uzbek and Tajik)

- Lack of age-appropriate literature in mother tongue languages

- Majority of books imported from Russia, thus in Russian language only

- Lack of variety of genres



PHOTO: OKUU KEREMET!

# WordCalc functionality

- A software for analyzing linguistic features of texts to evaluate its level of complexity.

- Developed and refined within USAID-funded reading projects in the Kyrgyz Republic (Time to Read, 2016-2020)

- Originally developed in Excel format under USAID reading project in Georgia

- First electronic version unveiled at CIES 2019

- Updated Kyrgyz and Russian version

- Developed for Uzbek and Tajik

- Developed and implemented in WordCalc a module for creating a frequency dictionary in Kyrgyz, Russian, Uzbek and Tajik languages

- Created a vocabulary minimum for grades 1-4 and implemented in WordCalc

  - The most frequently used words

  - Compound words

  - Rare words

# Supports diverse users

- Authors
- Publishers
- School teachers
- Parents
- Textbook developers
- Standards developers

# WordCalc Use

- It helps authors and publishers in creating age-appropriate children's literature

- Publishers can verify texts tailored to specific classes and levels

- Enhances vocabulary and reading proficiency holistically

- Provides detailed insights into student progress

- Allows for personalized learning experiences and curated reading materials

- Streamlines the process for children's book authors

# Book Creation under Okuu Keremet! With the Leveling Criteria

## Linguistic
### (WordCalc)

- Average word length in syllables
- Length of the words
- Number of words and long words per sentence
- Number of sentences/page
- Average sentence length in words
- Words with unpronounceable consonants at the root

## Content

- Subject standards guide thematic content
- Appropriate to age and level of reading competence
- Develops reading and critical thinking skills
- Coherence between genre, logical sequence, structure and plot
- Attention to gender equality and social integration
- Respect for Kyrgyz culture and diversity

## Design

- Book format
- Text formatting
- Layout
- Illustration (content, style, technical)

| 1-класс | 1.1 деңгээли |
| | 1.2 деңгээли |
| | 1.3 деңгээли |
| 2-класс | 2.1 деңгээли |
| | 2.2 деңгээли |
| 3-класс | 3.1 деңгээли |
| | 3.2 деңгээли |
| 4-класс | 4.1 деңгээли |
| | 4.2 деңгээли |

# Frequency Dictionary – Kyrgyz Language

Refinement of WordCalc:

- Created soft for processing text in Kyrgyz, Russian, Uzbek languages

- Processed more than 1000 texts in each language

- Created frequency dictionary for each language

- Collaborated with linguists to establish the foundation for a frequency dictionary, segregating complex, uncommon and rare words for grades 1-4 into a distinct category.

Result:

- Covers the most frequently used words for grades 1-4

- Languages: Kyrgyz, Russian

- Includes a total of 10,000 unique words for Kyrgyz and Russian.

# How WordCalc analyzes text complexity?



USAID
АМЕРИКАНЫН ЭЛИНЕН

КЫРГЫЗ РЕСПУБЛИКАСЫНЫН
БИЛИМ БЕРҮҮ ЖАНА ИЛИМ
МИНИСТРЛИГИ

Нускама

**Recommended level**

| Сунушталган деңгээл: | Сөздөрдүн жалпы саны | Сүйлөмдөрдүн жалпы саны | 🗄 Текст |
|---|---|---|---|
| 1 класс | 81 | 15 | ✔ жүктөлдү |

| Матрица | Муундар & уникалдуу сөздөр | Тексттин жыштык сөздүгү | Көп муунду сөздөр | Татаал сөздөр | Балдар сөздүгү 5000+ |
|---|---|---|---|---|---|

**Сандык параметрлер:**

|  |  | 1 - класс | | 1.3 | 2 - класс | | 3 - класс | | 4 - класс | |
|---|---|---|---|---|---|---|---|---|---|---|

Индекс **Quantitative parameters**

| Индекс | Жыйынтык | 1.1 | 1.2 | 1.3 | 2.1 | 2.2 | 3.1 | 3.2 | 4.1 | 4.2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Сөздөрдүн орточо узундугу муундар менен | 2.3 муун | 2.0 муун | 2.2 муун | 2.3 муун | 2.3 муун | 2.4 муун | 2.4 муун | 2.44 муун | 2.5 муун | 3.0+ муун |
| Сүйлөмдүрдүн орточо узундугу сөздөр менен | 5.4 сөз | 3.0 сөз | 5.0 сөз | 6.0 сөз | 6.3 сөз | 7.0 сөз | 8.0 сөз | 10.0 сөз | 11.0 сөз | 12.0+ сөз |
| Көп муунду сөздөр: > 3 муун ⓘ | 2 сөз | 4.0 сөз | 5.0 сөз | 6.0 сөз | 16.0 сөз | 20.0 сөз | 30.0 сөз | 40.0 сөз | 60.0 сөз | 90.0+ сөз |
| Татаал жана кош сөздөр ⓘ | 0 сөз | 0.0 сөз | 2.0 сөз | 4.0 сөз | 7.0 сөз | 9.0 сөз | 10.0 сөз | 11.0 сөз | 12.0 сөз | 20.0+ сөз |
| Сейрек кездешүүчү сөздөр ⓘ | 0 сөз | 0.0 сөз | 0.0 сөз | 2.0 сөз | 5.0 сөз | 6.0 сөз | 7.0 сөз | 8.0 сөз | 15.0 сөз | 20.0 сөз |
| Кошмок сөздөр ⓘ | 0 сөз | 2.0 сөз | 3.0 сөз | 4.0 сөз | 4.0 сөз | 5.0 сөз | 6.0 сөз | 7.0 сөз | 7.0 сөз | 10.0 сөз |
| Көп колдонулган сөздөрдүн % | 93.8 % | | | | | | | | | |
| Татаал сөздөрдүн % | 2.5 % | | | | | | | | | |

**Лексикалык параметрлер :**

|  |  | 1 - класс | | | 2 - класс | | 3 - класс | | 4 - класс | |
|---|---|---|---|---|---|---|---|---|---|---|---|

| Индекс | Жыйынтык | 1.1 | 1.2 | 1.3 | 2.1 | 2.2 | 3.1 | 3.2 | 4.1 | 4.2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Лексикалык көп түрдүүлүк ⓘ | 0.81 | 0.9 | 0.85 | 0.8 | 0.75 | 0.7 | 0.65 | 0.6 | 0.55 | 0.5 |

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# Outcomes



- 40 authors and 25 illustrators were trained in Okuu Keremet! to use WordCalc
- Facilitated the production of over 1,577 new titles, distributed 2 million copies to 1,687 schools

- Bloom library **https://bloomlibrary.org/kyrgyzstan-OkuuKeremet**

- MOES KR     https://kitep.**edu.gov.kg/ru/catalog/ok**



Bloom library



MOES KR

# Challenges

- Lack of texts and materials for analysis (Kyrgyz, Uzbek and Tajik)
- Language specifics (language type, structure, etc.)
- Multi-factor verification still in progress (all new texts are stored in the database for further checking and processing of lexical parameters)

# Adoption and Future Plans

WordCalc introduced and presented to broader audience, including:

- Educators
- Authors
- Publishers
- Ministry of Education and Science

The project plans to handover the tool to MOES's Kyrgyz Academy of Education after further refinement in 2024



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# Thank You!

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