Institute of Electronics and Telecommunications
Kyrgyz State Technical University named after I. Razzakov
International Telecommunication Union

«CONNECT SCHOOLS» PROJECT

FINAL EVALUATION REPORT

OF SHORT-TERM TRAINING COURSES FOR RURAL SCHOOLS TEACHERS

Training for trainers

14.03.2016 - 30.04.2016

Training Staff:	Ms. J. Barakova	*signature*
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Course manager:	Ms. A.Tutlis	*signature*

Bishkek- 2016

I. GENERAL INFORMATION

PROJECT	«TRAINING FOR TRAINERS»
Main idea:	The rural teachers potential improving and sustainable skills development in using modern methods and tools of information and communication technologies
Objective:	To organize short-term courses for teachers in rural schools to improve their skills in infocommunication and web-technologies.
COURSE NAME:	**Short term courses:**
	1st level «Qualification enhance courses on the basis of information and Internet technologies"
	2nd level « Qualification enhance courses on internet and web technologies»
	3rd level "Qualification enhance courses on the basics of algorithms and programming"
	4th level "Qualification enhance courses on the basics of object-oriented programming"
	Presentation of the course "Using Safety Internet", developed by the ITU.
	Presentation of the developed interactive e-book
The purpose of the training courses organization according a levels:	**1st level:** Train rural schools teachers to productive use of Microsoft Office, software to create educational support tutorials for informatics classes and other disciplines, as well as the necessary search actions in the Internet.
	2nd level: Train rural schools teachers for the basics working with information resources of the Internet, HTML markup language basics, CSS application, basics of building sites and placing them on a hosting.
	3rd level Train rural schools teachers for the basics of algorithms and programming in PASCAL environment, the principles of construction of graphical algorithms, verbal algorithms, writing program code. Methods for solving complex problems.
	4th level Train rural schools teachers for the basics of object-oriented design and programming. Design and development of application forms in DELPHI environment for Windows OS. Creating a simple application. Events processing.
	Course program is focused: 1. Show how to develop simple Database and Testing system using MS Excel tools, to create video lessons, presentations, and other programs to create educational support materials for the classes and development of students' independent work skills. 2. Develop basic skills of creating, designing, placing on hosting a simple web-page with educational materials, work in HTML and CSS environment. 3. Develop teamwork skills in the design and development of complex web-resources. 4. To show basics principles of algorithms designing, basic algorithmic structures, programming systems. 5. To teach for PASCAL programming language construct algorithms and programming skills. 6. Formation of work skills with modern application development

	tools for Windows.
Expected outcomes from training:	As a result of this course students should **know**: • The principles and structure of the "World Wide Web" and presentation of information on the Internet; • Methods of work (eds sites, n-p: Adobe Dreamweaver); • Algorithms principles and programming basics. **be able to:** 1. Find, save and organize the necessary information from the network using available technologies and software; 2. Have the skills to work with different browsers (IE, Opera, Firefox, Chrome, etc.) and finding information via Internet; 3. Design, create and host a Web site ; 4. Programming in HTML; 5. Use basic principles of web design of web- pages using CSS and to analyze structure, content, design and functionality; **have skills:** 1. Obtain necessary skills to design, create, organize and update the website. Successful learning in this course provides a solid foundation for further study of web-based technologies.

DATE OF COURSE:	
Start Date:	*14.03.2016*
The End Date:	*30.04.2016*
Duration:	*5 days for each courses*
Evaluation Date:	*10.05.2016*

Project Manager:	*Director of Institute*	*signature*	Prof. B.Nurmatov
Course Staff :	Course Manager	*signature*	Ms. A. Tutlis
	Head of Department	*signature*	Ms.J. Barakova
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II. COURSE CONTENT

2.1. Technical environments for training

Courses 1st, 2nd, 3rd, 4th levels were organized for teachers in rural schools from Issyk-Kul, Osh, Zhalal-Abad, Naryn, Talas regions of the Kyrgyz Republic. Classes held in multimedia classes, which equipped with multimedia facilities and a computer with Internet access.

2.2. Course program

The each courses duration is 5 days. The following *Tables 1, 2, 3, 4* shows the content of programs of courses:

1) "Basics of Information and Internet technologies";
2) "Basics of Internet and Web-technologies";
3) "Basics of Algorithms and Programming";
2) "Basics of Object-Oriented Programming".

Table 1. The content of the course "Basics of the Information and Internet technologies"

1st day		
Time	**Theme**	**The used materials**
9.00-9.20	**Opening of trainings.** **Questionnaires to test the level of knowledge**	**Presentation**
9.20-10.30	**Classification of software. Operating systems. The operating system Windows. New and improved features MS Office** **Microsoft Office Word** – Text formating. – Styles. Application, create, modify, delete styles. – Box objects. Formatting and color correction of the figure. Insert screen shots. Add the names of the objects in the document. – Insert and Edit formulas. – Work with table.	**Presentation**
10.30-11.00	***Coffee-break***	
11.00-12.30	**MicrosoftOfficeWord** – Merge documents. – Merger procedure, using Mail Merge Wizard. – Working with forms and templates. Create a form and add controls – Working with Web documents. Insert hyperlinks. – Create PDF document.	**Presentation**
12.30-13.30	***Lunch***	
13.30-15.00	**Review of daily materials** **Tasks**	**Handouts** **Video Lessons**
15.00-15.30	***Coffee-break***	

15.30-16.30	**Microsoft Office Excel** – Books and worksheets. – Insert and edit formulas. – Insert functions. – Sort data. Filtering. – Creating and editing diagrams. The use of the layout and style of the chart.	**Presentation**
16.30-17.00	**Review of daily materials** **Tasks**	**Handouts** **Video Lessons**
2nd day		
9.00-9.30	**Previous days' materials review**	
9.30-10.30	**Microsoft Office Excel** – Consolidation. Adding the subtotals – Sorting and filtering – Link between different sheets.	**Presentation**
10.30-11.00	***Coffee-break***	
11.00-12.30	**Microsoft Office Excel** – Data protection in Excel. – Hiding formulas in Excel. – Data Analysis.	**Presentation**
12.30-13.30	***Lunch***	
13.30-15.00	**Review of daily materials** **Task: creation of a system of testing in MS Excel**	**Handouts** **Video Lessons**
15.00-15.30	**Coffee-break**	
15.30-16.30	**Microsoft Office Power Point** – Create Presentation. – Add animation, sound, and video. Adding animation to a slide object (text, charts, etc.). – Insert sound and movies. Sound when the slide transition animations. – The transformation to a video presentation (new in 2010) – The use of the projector. To connect the projector to a computer.	**Presentation**
16.30-17.00	**Review of daily materials** **Tasks: presentation, discussion of created presentations.**	**Handouts** **Video Lessons**
3d day		
9.00-9.30	**Previous days' materials review**	
9.30-10.30	**Computer networks.** – The main components of the network. – Physical addressing. – The structure of IP-address, subnet mask. – Assign static and dynamic address.	**Presentation**

10.30-11.00	***Coffee-break***	
11.00-12.30	**Fixing of the passed materials** **Tasks**	**Handouts** **Video Lessons**
12.30-13.30	***Lunch***	
13.30-15.00	**Basics of Internet resources** – What is the Internet and how to connect to it. – ISPs – A description of the major search engines and their comparative performance. Electronic libraries. – What is e-mail. Sending documents by e-mail. Use of mailing lists. Spam. Anti-spam.	**Presentation**
15.00-15.30	***Coffee-break***	
15.30-16.30	**Cybersecurity** – Security Basics – Sources of Threats – Policy	**Presentation**
16.30-17.00	**Review of daily materials** **Tasks**	**Handouts** **Video Lessons**
4th day		
9.00-9.30	**Previous days' materials review**	
9.30-10.30	**eXe-learning - XHTML editor of the e-learning materials** – Structure window eXelearning. – Editing and formatting data. – Import text materials, inserting objects, pictures, audio and video information. – Set document properties.	**Presentation**
10.30-11.00	***Coffee-break***	
11.00-12.30	**eXe-learning - XHTML editor of the e-learning materials** – Structure management course – Create test materials	**Presentation**
12.30-13.30	***Lunch***	
13.30-15.00	**Review of daily materials** **Task: To create electronic educational-methodical material in eXe-learning.**	**Handouts** **Video Lessons**
15.00-15.30	**Coffee-break**	
15.30-17.00	**Presentation, discussion they created educational materials in eXe-learning.**	
5th day		
9.00-9.30	**Previous days' materials review**	
9.30-10.30	**Creating presentations in an online environment Prezi** – Register. – Structure window.	**Presentation**

	– Box objects. – Setting the slide show. Setting animation effects.	
10.30-11.00	***Coffee-break***	
11.00-12.30	**Presentation, discussion of presentations created in Prezi**	
12.30-13.30	***Lunch***	
13.30-15.00	**Testing, questioning.**	
15.00-16.00	**Certificates Presentation** **Close Ceremony**	

Table 2. The content of the course "Basics of the Internet and web-technology"

1st day		
Time	**Themes**	**Used materials and responsible person**
09.00-09.20	**Welcoming, opening training**	**Presentation**
09.20-10.00	**Introduction to subject**	**Presentation**
10.00-10.30	**Coffee Break**	
10.30-12.30	**Introduction to Internet** – What is the Browser (theory)? – How to work with browser (practice)? – Change browser settings? – Searching information in Internet Copy information to computer. – Classification of sites – What is the Email? – Email service. – Creating email. – Sending and receiving messages. – Browse file to the letter. **Provider**. – What is the provider? – Provider in Kyrgyz Republic	**Presentation**
12.30-13.30	*Lunch* time	
13.30-14.00	Review of daily materials ***Task***	**Used materials** **Video lessons**
14.00-15.00	Web page, Introduction to HTMLtechnologies – What is Web page? – What is the Hyperlink? – How to create Hyperlink? – Creating web-page in text editor MS Word – Creating hyperlink in text editor – Classification hyperlinks	**Presentation** **Video lessons**
15.00-15.30	**Coffee Break**	
15.30-16.50	Review of daily materials ***Practice tasks:***	**Used materials** **Video lessons**

	– Create web-page in text editor MSWord – Create several copies web-pages – Create hyperlink every page into main page	
16.50-17.00	***Blank form: Proposes for the next lessons, questions***	
2nd day		
09.00-09.30	**Previous days' materials review**	
09.30-10.30	– Main structure of HTML documents – What is a "tag", attributes – title and paragraphs in HTML pages(<p>,<h>) – Tags and attributes for list and marking HTML pages (,) – TAG and creating hyperlinks(<a>)	**Presentation** **Video lessons**
10.30-11.00	**Coffee Break**	
11.00-12.30	**Practice** ***Tasks* :** – Create 1-HTML page – Use tags and titles and forparagraphs – Enter marking and lists – Create link to the another page – Enter images into page – Create links to the images	**Presentation**
12.30-13.30	*Lunch time*	
13.30-14.00	**Practice discussion**	
14.00-15.00	**TAG and (*proposition*)** – TAG and table(<table>) – Attributes and TAG and table(border, color) – Tagspecify the font settings and his attributes(<font>,) – tagdefining color (<color>) – Insert images into pages (<img>) – Create link from the image (<a>)	**Video lessons**
15.00-15.30	**Coffee Break**	
15.30-16.50	**Practice review** ***Task:*** – Create table in HTML page – Change settings in the table – Insert table into down of – Change image settings – Create link from the image into another page	**Presentation**
16.50-17.00	***Blank form: Proposes for the next lessons, questions***	**Used materials**

3d day		
09.00-09.30	**Previous days' materials review**	
09.30-10.30	Cascade Style Sheets(CSS) – Introduction to CSS – Types Selection – Selector of tags – ID Selectors – The class selector – Group selector	**Presentation**
10.30-11.00	**Coffee Break**	
11.00-12.30	**Practice review** **Task:** – Create file style.css. saving – Connect style.css into web-page – Using selectors	**Used materials** **Video lessons**
12.30-13.30	*Lunch time*	
13.30-14.00	**Practice discussion**	
14.00-15.00	**Work with styles** – Properties Font-family? – Properties Font-size – Properties Font-color – Properties Font-style – Properties Font-weight – Text-decoration **Work with text** – Properties Text-align. – Properties Text-indent? **Work with background** – Properties Background	**PresentationVideo lessons**
15.00-15.30	**Coffee Break**	
15.30-16.50	**Practice review** **Tasks:** – Change style settings web-pages – Correct texts and selectrow – Change screen page – Insert images in screen page	**Presentation**
16.30-17.00	***Blank form: Proposes for the next lessons, questions***	**Использованные материалы**
4th day		
09.00-09.30	**Previous days' materials review**	
09.30-10.30	**Macromedia Dreamweaver HTML Editor** – Download of Macromedia Dreamweaver – Main editor interface – Tools and window properties – Work with window design and code – Creating web-setting – Work with tables – Work with hyperlinks	**Presentation**

10.30-11.00	**Coffee Break**	
11.00-12.30	**Practice review** ***Task:*** – Create web-page with Macromedia Dreamweaver editor – Create table, – Create link to another page	**Presentation** **Video lessons**
12.30-13.30	*Lunch time*	
13.30-14.00	**Practice discussion**	
14.00-15.00	**Macromedia Dreamweaver (contd.)** – Connection file style.css into web-page – Work with styles – Stylish classes and work with it – Work with web-forms	**Used materials**
15.00-15.30	**Coffee Break**	
15.30-16.50	**Practice review** ***Task:*** – Macromedia Dreamweaver Editor attaching style.css on the web page – Work with class – Create web-form – (text row, checkbox, button and so on.)	
16.50-17.00	***Blank form: Proposes for the next lessons, questions***	
5th day		
09.00-09.30	**Previous days' materials review**	
09.30-10.30	**Domain and Hosting** – What is domain? – What is hosting? – Free hosting – Replace sites into hosting – Manage sites in hosting	**Presentation**
10.30-11.00	**Coffee - Break**	
11.00-12.30	**Practice review** **Task:** – Register in the free hosting – To get domain. – Loading sites in domain – Work with program "total commander"	
12.30-13.30	*Lunch time*	
13.30-15.00	**Testing**	
15.00-16.00	**Rewarding the Sertificate**	

Table 3. The content of the course "Basics of algorithms and programming"

1st Day		
Time	**Themes**	**Used materials**
9.00-9.20	**Opening of trainings, greeting.** **Questionnaires to check the level of knowledge**	**Presentation**
9.20-10.30	**Basics of algorithms** • The concept of algorithm • Properties and types of algorithm • The main characters are block - schemes of algorithms • Basic algorithmic structures **Develop flowcharts algorithms** • Develop flowcharts algorithms for problems of linear structure • Development block - schemes algorithms for problems branched structure • Develop block - schemes algorithms for problems of a cyclic structure	**Presentation**
10.30-11.00	*Coffee Break*	
11.00-12.30	**Languages and programming methodology.** Classification of programming languages Methodology of programming Structured programming Object-oriented programming Declarative programming The parallel programming	**Presentation**
12.30-13.30	*Lunch Time*	
13.30-15.00	**Fixation passed materials of lessons** **Practical training**	**Educational materials** **Video lessons**
15.00-15.30	*Coffee Break*	
15.30-16.30	**Software for PC** **Programming in Pascal** • The structure of the program; • Data, data types; • Operators.	**Presentation**
16.30-17.00	**This lesson materials** **Hands-on Lab** **A homework assignment.**	**Educational materials** **Video lessons**
2nd Day		
9.00-9.30	**Repeate passed materials of lessons**	
9.30-10.30	**The development of branching and cyclic programs** Using structured operators in the programs: - Organization of branching using conditional operators and selection; - Organization of programs cyclic structure.	**Presentation**
10.30-11.00	*Coffee Break*	
11.00-12.30	**Fixation passed materials oflessons** **Practical training**	**Presentation**
12.30-13.30	*Lunch Time*	

13.30-15.00	**Develop programs with branching structure:** - **Programming using conditional statements** - **Programming with select statements**	**Educational materials** **Video lessons**
15.00-15.30	*Coffee Break*	
15.30-16.30	**Develop programs cyclic structure:** - Programming cycles with a known number of repetitions; - Programming cycles precondition; - Programming cycles postcondition.	**Presentation** **Electronic books**
16.30-17.00	**Fixation passed materials of lessons** **Practical training.** **A homework assignment.**	**Educational materials** **Video lessons**
3rd Day		
9.00-9.30	**Repeate passed materials of lessons**	
9.30-10.30	**Develop a program using arrays:** - Accessing elements of array; - Programming tasks using one- dimensional arrays; - Programming tasks using multidimensional arrays.	**Presentation**
10.30-11.00	*Coffee Break*	
11.00-12.30	**Fixation passed materials of lessons** **Practical training.**	**Educational materials** **Video lessons**
12.30-13.30	*Lunch Time*	
13.30-15.00	**The development of complex software products** General information about the subroutines: – Programming with subroutines; – Procedures and functions as a kind of subroutines; – Organization of libraries of user subroutines.	**Presentation**
15.00-15.30	*Coffee Break*	
15.30-16.30	**Development of procedures and functions in the programs:** - Develop tasks using by the procedures; - Functions defined by user.	**Presentation**
16.30-17.00	**Fixation passed materials of lessons** **Practical training** **Homework**	**Educational materials** **Video lessons**
4th Day		
9.00-9.30	**Repeate passed materials of lessons**	
9.30-10.30	**Working with data files:** – Description of the file type – Typed text and typed files **Procedures and functions for working with files** Text files as a source of input data: – Initialization text file; – Writing information to a text file; – Reading data from a text file/	**Presentation**
10.30-11.00	*Coffee Break*	

11.00-12.30	**Fixation passed materials of lessons** **Practical training**	**Educational materials** **Video lessons**
12.30-13.30	*Lunch Time*	
13.30-15.00	**Working with records:** – Announcement records; – Accessing elements record.	**Presentation**
15.00-15.30	*Coffee Break*	
15.30-17.00	**Fixing of studied materials** **Practical lesson** **Homework**	**Handouts** **Video tutorials**
5th Day		
9.00-9.30	**Repeate passed materials of lessons**	
9.30-10.30	**Graphics Programming** – Initialization graphic mode; – The simplest graphical operators (procedures) language TurboPascal	**Presentation**
10.30-11.00	*Coffee Break*	
11.00-12.30	**Fixation passed materials of lessons** **Practical training**	**Handouts** **Video tutorials**
12.30-13.30	*Lunch Time*	
13.30-15.00	**Testing. Questioning**	
15.00-16.00	**Presentation of certificates**	

Table 4. The content of the course "Basics of object-oriented programming"

1st day		
Time	**Themes**	**Used materials**
9.00-9.20	**Opening of trainings, greeting.** **Questionnaires to check the level of knowledge**	**Presentation**
9.20-10.30	**Algorithms basics** – Definition of algorithms – Properties and type of Algorithms – Flowcharts of Algorithms – Algorithms base structure **Development of algorithms flowcharts** – Development of algorithms flowcharts for Linear structure tasks; – Development of algorithms flowcharts for conditional structure tasks; – Development of algorithms flowcharts for loop structure tasks;	**Presentation**
10.30-11.00	*Coffee-Break*	
11.00-12.30	**Language and programming methodology** Classification of programming languages	**Presentation**

	Programming methodologies – Structural programming – Object-oriented programming – Declaration programming – Parallel programming	
12.30-13.30	*Lunch*	
13.30-14.00	**Strengthen of studied materials** **Practical lesson** **Code Development** **Programming in PASCAL and DELPHI** – Program structure – Variables, type of variables Operators	**Handouts** **Video**
14.00-14.30	*Coffe-Break*	
14.30-16.30	**Introduction to Delphi-7, Interface** **Object-oriented definition** Theory: -conditional and loops.	**Presentation**
16.30-17.00	**Strengthen of studied materials** **Practical lesson** **Homework**	**Handouts** **Video**
2nd day		
9.00-9.30	**Repeat previous class materials**	
9.30-10.30	**Delphi components property:** – Property of Forms; – Event processing; – Component Edit; – Component RadioButton; – Component Listbox,ChekBox.	**Presentation**
10.30-11.00	*Coffee-Break*	
11.00-12.30	**Strengthen of studied materials** **Practical lesson**	**Presentation**
12.30-13.30	*Lunch*	
13.30-15.00	**Components property:** – Component Menu; – Component ComboBox; – Component Image BitButton;	**Handouts** **Video**
15.00-15.30	*Coffee-Break*	
15.30-16.30	**Component property:** – Component Chart; – Component ImageList.	**Presentation** **e-books**
16.30-17.00	**Strengthen of studied materials** **Practical lesson** **Homework**	**Handouts** **Video**

3rd day		
9.00-9.30	**Repeat previous class materials**	
9.30-10.30	**Components property:** – Component PageControl; – Component RichEdit; – Component Progress,TrackBar; – Component StatusBar;	**Presentation**
10.30-11.00	*Coffee-Break*	
11.00-12.30	**Strengthen of studied materials** **Practical lesson**	**Handouts** **Video**
12.30-13.30	*Lunch*	
13.30-15.00	**Component property:** – Component ListView1; – Component ListView2; – Component TreeView1;	**Presentation**
15.00-15.30	*Coffee-Break*	
15.30-16.30	**Component property:** – Component TreeView2; – Component Sistem Timer; – Component OpenDialog, SaveDialog;	**Presentation**
16.30-17.00	**Strengthen of studied materials** **Practical lesson** **Homework**	**Handouts** **Video**
4-й день		
9.00-9.30	**Create simple application**	
9.30-10.30	**Cursor parameters;** **Text Editor:** – Text Editor 1(work field) – Text Editor 2(Tools Panel) – Text Editor 3(Opening and Saving files) – Text Editor 4(Using graphics)	**Presentation** **Video**
10.30-11.00	*Coffee-Break*	
11.00-12.30	**Strengthen of studied materials** **Practical lesson**	**Handouts** **Video**
12.30-13.30	*Lunch*	
13.30-15.00	**Web-browsers:** – Web-browsers 1(work field, components) – Web-browsers 2(address string) – Web-browsers 3(Tools panel)	**Presentation** **Video**
15.00-15.30	*Coffee-Break*	
15.30-17.00	**Strengthen of studied materials** **Practical lesson**	**Handouts**

	Homework	**Video**
5-й день		
9.00-9.30	**Repeat previous class materials**	
9.30-10.30	**Project work** – Creating application a «super calculator»	**Presentation**
10.30-11.00	*Coffee-Break*	
11.00-12.30	**Strengthen of studied materials** **Practical lesson**	**Handouts** **Video**
12.30-13.30	*Lunch*	
13.30-15.00	**Testing. Questioning**	
15.00-16.00	**Presentation of certificates**	

2.3. List of Participants

There were 107 rural teachers from different regions of the Kyrgyz Republic and 83 of them were women (*Table 5*, *Fig.1*).

On the 1st level was trained 15 persons with topic "Basics of Information and Internet technologies", on "Basics of Internet and Web-technologies" 2nd level courses was participated -28 persons, there are 29 persons was in "Basics of Algorithms and Programming" courses and finally on the 4th level "Basics of Object-Oriented Programming" – 35 persons.

Table 5. The number of course participants

N	Region	Date	Level	The amount of participants	
				Man	Woman
1.	Osh group 1 *(Fig.2)*	14.03.2016-18.03.2016	2	3	10
2.	Osh group 2 *(Fig.3)*	22.03.2016-26.03.2016	3	2	15
3.	Issyk-Kul *(Fig.4)*	28.03.2016-01.04.2016	4	3	17
4.	Zhalal-Abad *(Fig.5)*	04.04.2016-08.04.2016	1	7	8
5.	Talas group 1 *(Fig.6)*	11.04.2016-14.04.2016	2	4	11
6.	Talas group 2 *(Fig.7)*	11.04.2016-14.04.2016	4	3	12
7.	Naryn (*Fig.8*)	25.04.2016-29.04.2016	3	2	10
Total: 107				**24**	**83**

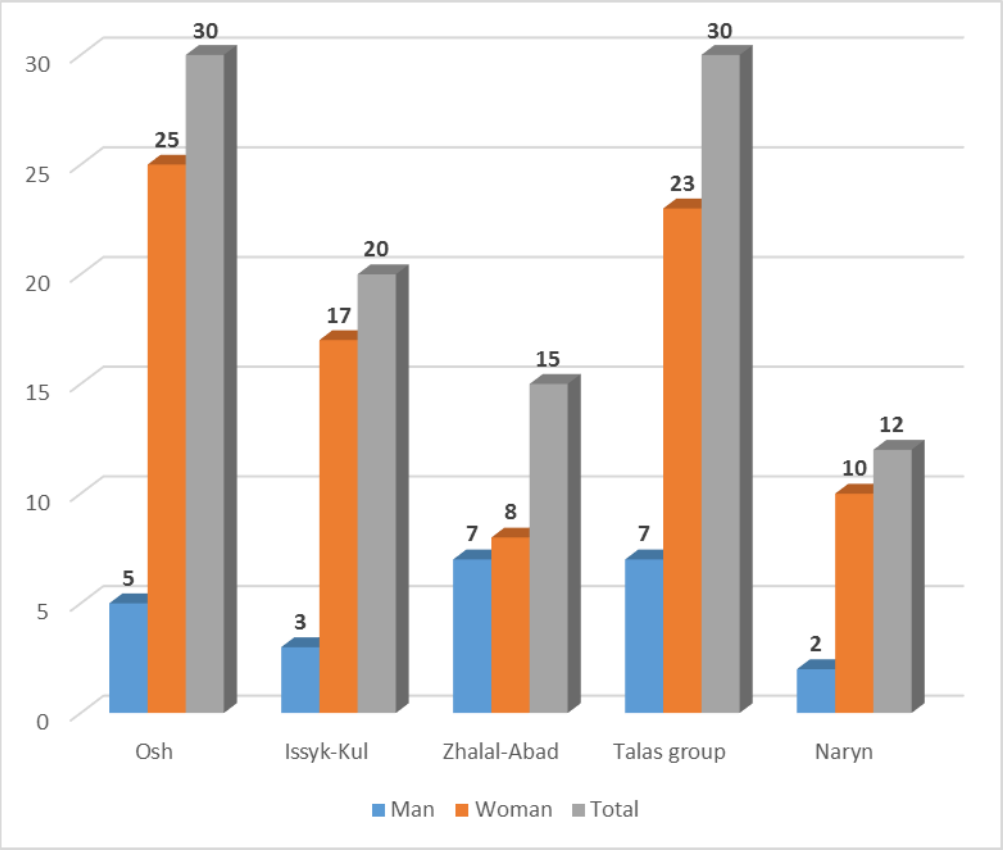

Fig.1. The total number of course participants

Fig.2 Rural schools teachers of Osh region (group 1)

Fig.3 Rural schools teachers of Osh region (group 2)

Fig.4 Rural schools teachers of Issyk-Kul region

Fig.5 Rural schools teachers of Zhalal-Abad region

Fig.6 Rural schools teachers of Talas region (group 1)

Fig.7 Rural schools teachers of Talas region (group 2)

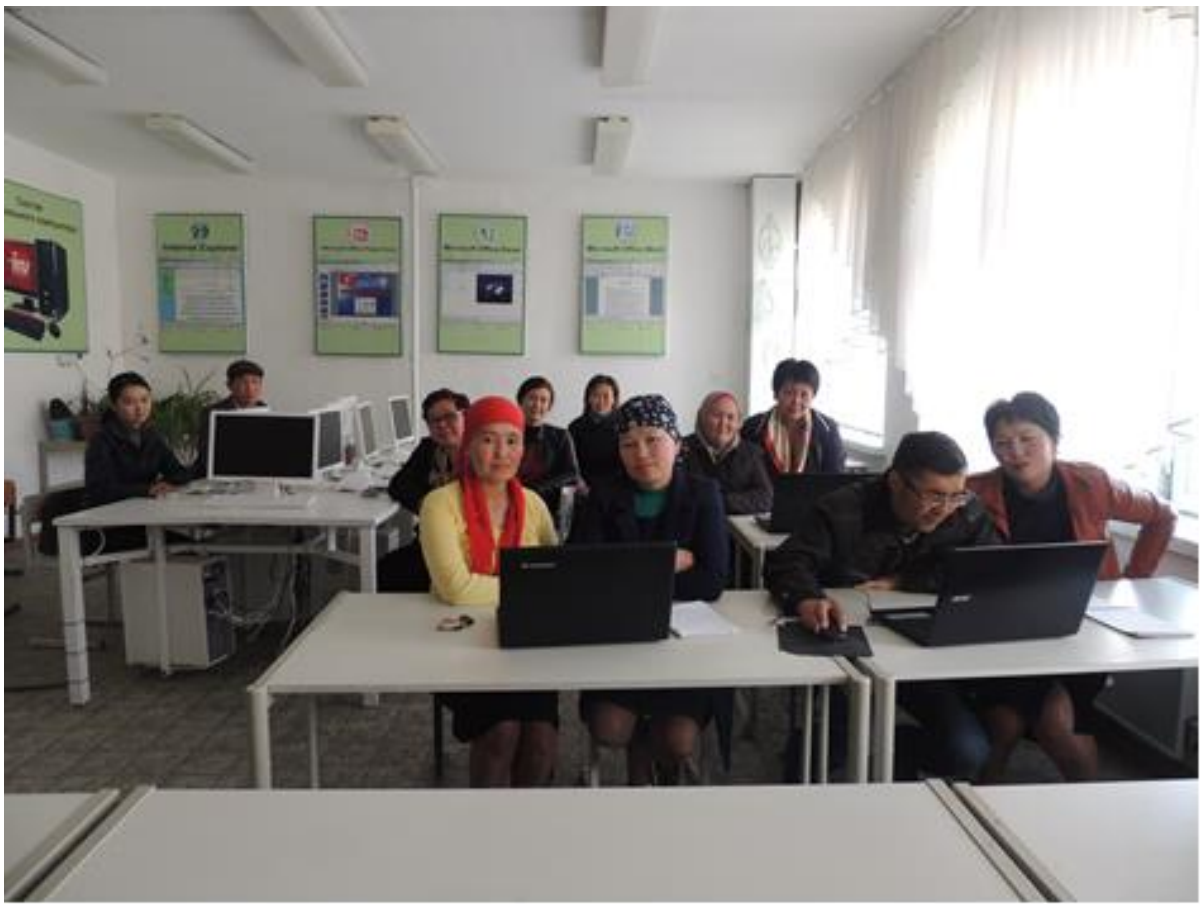

Fig.8 Rural schools teachers of Naryn region

2.4. Questionnaires

Some questions were asked to course participants. Each student should leave opinion about course and give own suggestion according course, trainers, teaching methods and organization of training *(Table 6-8).*

As the results of the survey, an average of more than 95% of the participants did not know the materials of the course.

Table 6. Results of the survey at the beginning of the course of 1st level

N	Region	Have you ever participated in previous courses held within the project " Connect Schools "		Please, point what is the programs from Microsoft Office do you use often?					Do you know about OS Windows?		Do you know about safety parameters of Internet browsers?		Have you ever learnt about Information security?		Do you know some soft wares for creating study materials?	
		Yes	No	MS Word	MS Excel	Power Point	MS Access	Don't use MicrosoftOffice	Yes	No	Yes	No	Yes	No	Yes	No

1	Zhalal-Abad	**0%**	**100%**	**100%**	**50%**	**50%**	**0%**	**0%**	**46,7%**	**53,3%**	**0%**	**00%**	**0%**	**100%**	**0%**	**100%**

Table 7. Results of the survey at the beginning of the course of 2nd level

N	Region	Have you participated in previous courses held within the project " Connect Schools "		Specify what browsers you use most often?					Have you tried creating websites?		Did you work with the program AdobeDreamweaver?		Have you studied the basics of HTML?		Have you studied the basics of CSS?	
		Yes	No	Opera	InternetExporer	MozillaFirefox	GoogleChrome	do not use the Internet	Yes	No	Yes	No	Yes	No	Yes	No
1	**Osh**	**8%**	**92%**	**38%**	**16%**	**8%**	**0%**	**38%**	**38%**	**62%**	**0%**	**100%**	**0%**	**100%**	**0%**	**100%**
2	**Talas**	**0%**	**100%**	**6,67%**	**20%**	**26,67%**	**26,67%**	**20%**	**6,7%**	**93,3%**	**0%**	**100%**	**6,7%**	**93,3%**	**0%**	**100%**
	Average	**4%**	**96%**	**22,3%**	**18%**	**17,35%**	**13,33%**	**29%**	**22,35%**	**78%**	**0%**	**100%**	**3,35%**	**97%**	**0%**	**100%**

Table 8. Results of the survey at the beginning of the course of 3rd and 4th level

№	Name	Have you participated in previous courses held within the project "School Connect"		Have you conception's about algorithms?		What programming languages do you know?			Did you work with PascalABC?		There is an access to the Internet?		Do you have textbooks in Kyrgyz language ?	
		Yes	No	Yes	No	Pascal	Basic		Yes	No	Yes	No	Pascal	
1	**Osh (1st group)**	**0%**	**100%**	**76.47%**	**23.53%**	**23.53%**	**70.59%**	**0%**	**17.65%**	**82.35%**	**23.53%**	**70.59%**	**11.76%**	**88.24%**
2	**Issyk-Kul**	**55 %**	**55 %**	**100 %**	**0 %**	**50 %**	**55 %**	**25 %**	**25 %**	**70 %**	**64%**	**15 %**	**10 %**	**90 %**
3	**Talas (2nd group)**	**86,6%**	**13,4 %**	**100 %**	**0 %**	**20 %**	**80 %**	**0%**	**13,4 %**	**86,6 %**	**73,3 %**	**20%**	**20 %**	**80 %**
4	**Naryn**	**41,67%**	**58,33%**	**91,67%**	**8,33%**	**33,33%**	**83,33%**	**0%**	**41,67%**	**58,33**	**16,67%**	**25%**	**8,33%**	**91,67%**
	Average	**47,06%**	**57%**	**92,03%**	**8%**	**32%**	**74,5%**	**6,25%**	**24,43%**	**74,32%**	**44,4%**	**33%**	**12,5%**	**87,5%**

35% of participants noted that the school is not connected to Internet.

Also, some participants noted the poor level of equipment of schools with textbooks and computers, and the inaccessibility of the Internet.

III. COURSE TEST RESULTS

3.1. Testing exam

At the end, of course participants tested according training tutorials, the test results are shown in *Table 9 and Fig.9.*

Table 9. Test results

N	Region	Excellent	Good	Satisfied	Not satisfied
I	**The course of 1st level**	**2**	**9**	**4**	**0**
1	Zhalal-Abad	2	9	4	0
II	**The course of 2nd level**	**3**	**22**	**3**	**0**
2	Osh (1st group)	1	12	0	0
3	Talas (1st group)	2	10	3	0
III	**The course of 3rd level**	**2**	**19**	**8**	**0**
4	Osh (2nd group)	1	13	3	0
5	Naryn	1	6	5	0
IV	**The course of 4th level**	**0**	**17**	**18**	**0**
6	Issyk-Kul	0	7	13	0
7	Talas (2nd group)	0	10	5	0
	Total	**7**	**67**	**33**	**0**
	%	**6%**	**63%**	**31%**	**0**

All participants passed the test and more than 80% of them have shown good results (Fig.9).

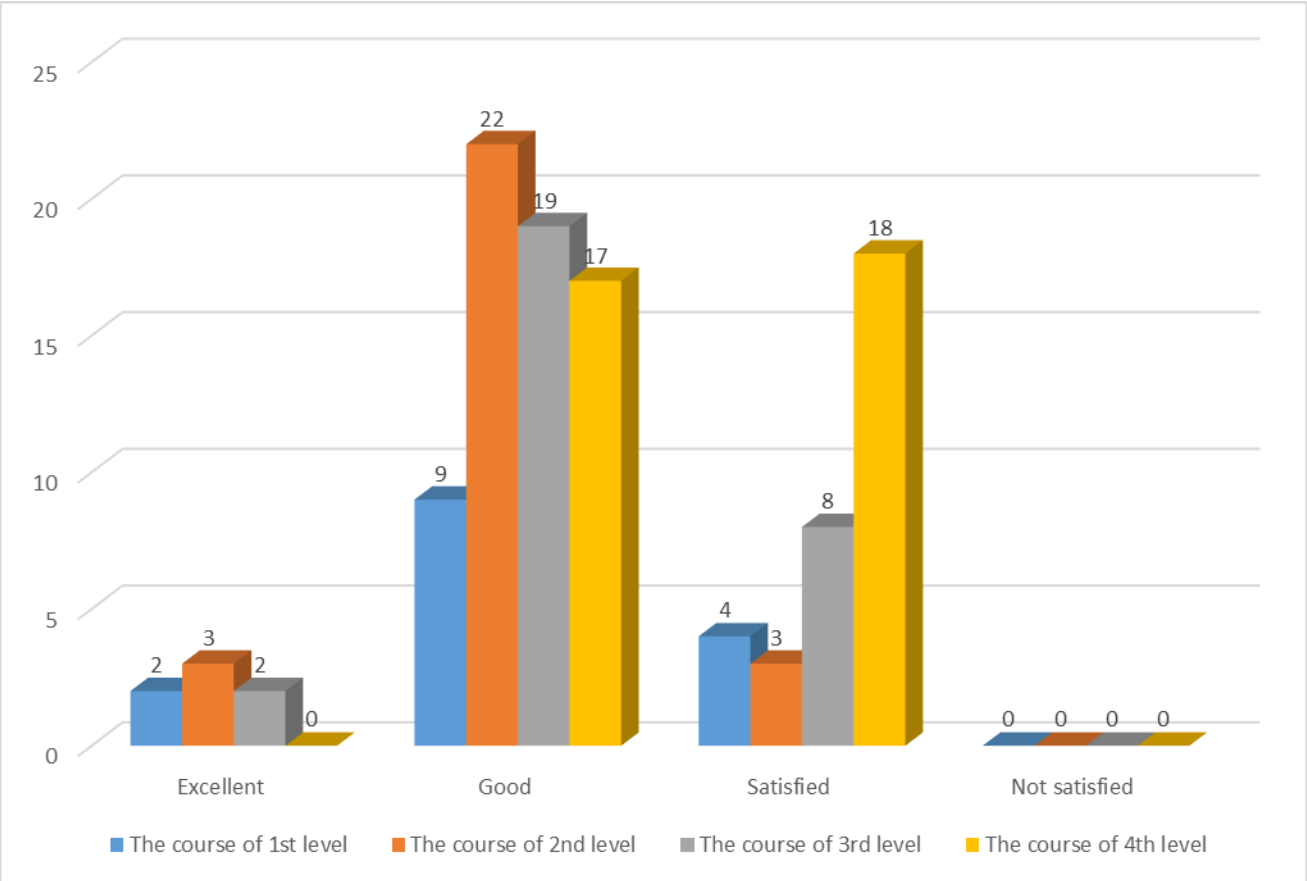

Fig. 9. Test results

To assess the level of courses conducted a participant's survey at the end of the course *(Table 10).*

Survey results shown after the course, participants noted the high level of courses and expressed gratitude to the organizers: the International Telecommunication Union and the Institute of Electronics and Telecommunications, as well as the course trainers and the desire to participate in the courses next level.

Table 10. Results of the survey at the end of the course

Total amount of participants	You enjoyed the level of the course?		Do you want to participate in the course of the next level?		How you estimate your level of knowledge after a course?		
	Yes	No	Yes	No	Excellent	Good	Satisfied
107	**100%**	**0%**	**100%**	**0%**	**6%**	**63%**	**31%**

IV. CONCLUSIONS

During the period from 14.03.2016 to 04.30.2016 was conducted courses for rural school teachers in the framework of the project "Connect Schools" where attended and received certificates of 107 teachers from various rural schools from Issyk-Kul, Osh, Jalal-Abad, Naryn and Talas regions of Kyrgyzstan.

All course participants noted the importance of such courses, since these courses really help to improve the skills of schoolteachers in the area of ICT.

In final survey the courses participants wrote the high level of teaching, the usefulness and quality of the course. They mentioned that also, it helps to improve their ICT competence, and it is an additional source of information, how to organize the learning materials for the classes and develop skills for independent students work, as well as this course helped them to love their work, and make sure in the profession future.

The quality and effectiveness of the courses confirmed by numerous positive reviews given by participants, also regional education departments expressed their thanks for help in issues like an improving computer competences of teaching staff. Department provides training for teachers, but it most relate rather with teaching methodology than with practical work, so courses for teachers of Informatics held by Institute trainers, is much more useful from a practical point of view.

All teacher staff wish to continue this initiative and in further expecting new courses on programming languages, web programming technologies (PHP, MySQL, Jscript, Apache, and others.) and Databases administration. Regional educational departments will provide with participants and not only Informatics teachers.

While in Kyrgyzstan held a mass connection of schools to the Internet, the ICT accessibility analysis and Internet in the educational process, has shown that in many schools there are some issues:

1. The lack of computers availability;
2. There are no specialists, providing technical support for the computer classes;
3. There are no local-area networks in many schools, and they not connected to the Internet;
4. The lack of ICT experience of the teacher;
5. There are no textbooks on information and communication technologies in the state language.
6. Schools where there is Internet access, is the problem of the protection of children from non-desired content.

Solution:

1. Updating and upgrading of Computer Park in secondary schools;
2. The creation of local networks and Internet connection;
3. To increase the ICT competence of other subjects teachers, continuous training of school teachers in ICT;
4. The development of training tutorials on information and communication technologies in the state language;
5. Conduct online safety training in cyberspace.

Interventions:

1. Raised the issue of the need to update and upgrade computers in secondary schools;
2. Setting of the need to connect schools to the Internet;
3. Course participants may conduct courses for other schoolteachers using course handouts (audio, video tutorials, presentations, etc.) and educational resources;
4. Work is underway on the development and deployment of online tutorials on information and communication technologies in Russian and Kyrgyz languages;
5. Conduct training courses of computer science teachers in schools;
6. Introduction of the course "Using safety Internet", developed by the ITU and the organization of passing the tests for this course.
7. Successful course participants award Textbook for information and communication technologies in the Kyrgyz language, developed by the project trainers.