

ICT in education

e-school in Estonia

administration of school systems

based on a lecture made by Meeri Sild*, Tallinn Lillekyla Gymnasium and different documents published by the Tiger Leap Foundation**

* in charge of training Estonian teachers to use ICTs
and expert for Estonia in the eTwinning project



**responsible for the national strategy of ICT in education

Estonia – facts & figures



- Population: 1.3 million
- Independent since 1991
- Joined the EU in 2004
- Education System: 17,900 teachers working in 654 primary and secondary schools, serving 190,000 students
- Internet penetration: 51.9% (13.5bb)
- Mobile Phone penetration: 108.8%
- Challenges: Increasing the number of teachers who integrate ICT into teaching and learning; encouraging more innovative uses of technology

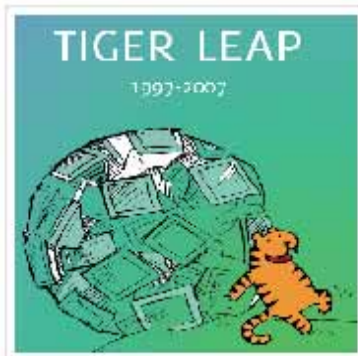
Political Involvement

TIGER LEAP FOUNDATION

Training of teachers | Educational materials | School computer system | European projects | ES
Collaboration | Tiger Leap Foundation

Tiger Leap Foundation

- Tiger Leap 1997-2007
- Contacts
- Articles of Tiger Leap Foundation
- Strategy 2006-2009



Tomorrow's Information Society needs to be **a learning society**, a society which invests in knowledge, **a society in which each individual will build up his or her own qualification on a basis of life-long learning.**

The idea of Tiger Leap Foundation dates back to 1996 when (...) exchanged views regarding new information and communication technology that changes not only way of life but whole educational paradigm. (...) the **President** of Estonia Lennart Meri **agreed to become the Patron** of the programme. On February 21, 1996 President Lennart Meri announced in the Estonian State Television broadcast Tiger Leap project officially open. Actual activity began 1997 when the Tiger Leap Foundation started work with the 35,5 MEEK funded from the national budget.

The Tiger Leap programme is a national specific programme launched by the Estonian Government with an aim **to increase Estonian school education quality utilizing modern information and communication technology.** The programme is funded from the national budget via Ministry of Education

The Tiger Leap Foundation



Three Steps

- Tiger Leap Program (1997-2000)
- Tiger Leap Plus Program (2001-2005)
- Learning Tiger (2006-2009)
- Training teachers in teaching methodologies using ICT during their lessons



All Estonian schools have

- A broadband connection
- Constant in-service ICT methodology training for teachers at different levels
- VLEs (virtual learning environments) to create electronic study materials.

ICT in Education

Teaching tools

- Language teaching programs
- Special Application Software
- Project work, presentations
- Communication- e-mail, forums
- Internet and **Virtual learning environments**

Administrative tools

- Web based learning management system
- Central database of students and teachers

Objectives of Tiger Leap Foundation

- provide digital educational materials through the learning objects repository
- exchange platforms
- distribute innovative e-Learning services
- organise web-based educational projects and competitions between schools
- support teachers' Virtual Practice Communities
- make e-Learning a natural part of daily tutorial work, curricula and
- teacher development training



Virtual Learning Environments

- eKool
 - central electronic register
 - replaces all paper class register
 - designed for secondary schools
 - in use now for 4 years
 - support system for everyday classroom work
 - not for e-learning

Public/Private Partnership

Private partners

- The Tiger Leap Foundation
 - eKool
- Partners in Learning (PiL)
 - Intel (2003), Microsoft (2005, 2006), Banks, Mobile Operator

Public entities

- Ministry of Education
- National Examination and Qualification Centre
- Tallinn and Tartu University

See details on : <http://www.koolielu.ee/pages.php/0702>

E-school information system

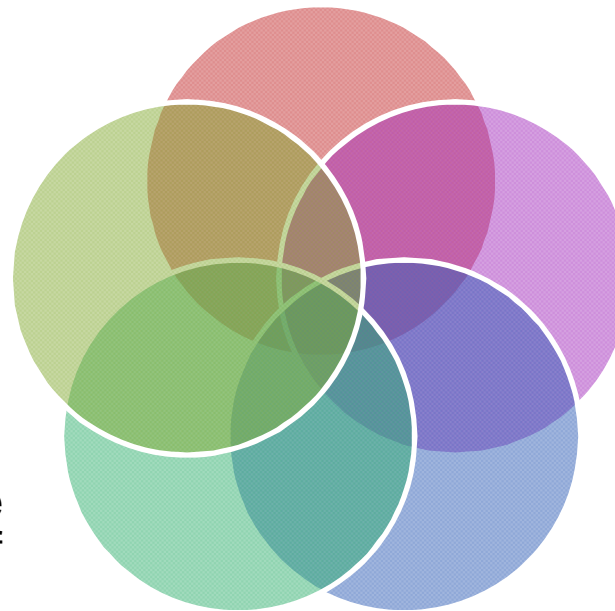
connecting parents,
students, teachers
and school
administrators over
the Internet

eKool is a
commercial
package

an easy-to-use
student
information
system

decreasing the
work routine of
teachers and
school
management ?

making school
information
accessible at
home



Koolielu

Logging into e-school

eKool

[Login](#) [Introduction](#) [Contact Us](#)



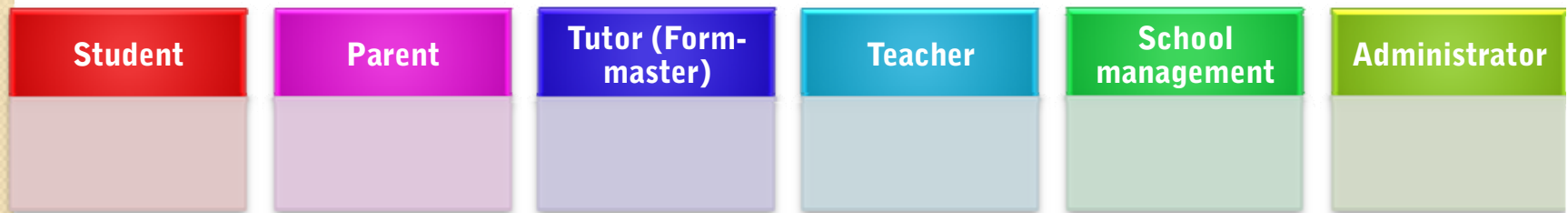
Enter your school in
Internet using:

- Estonian ID Card
- Password
- Hansabank
- Nordea Bank
- Krediipank
- Sampo Bank
- SEB Eesti Ühispank

Not user yet?

- School
- Parent
- Teacher and student

Different roles for users



Eesti



Русский



English

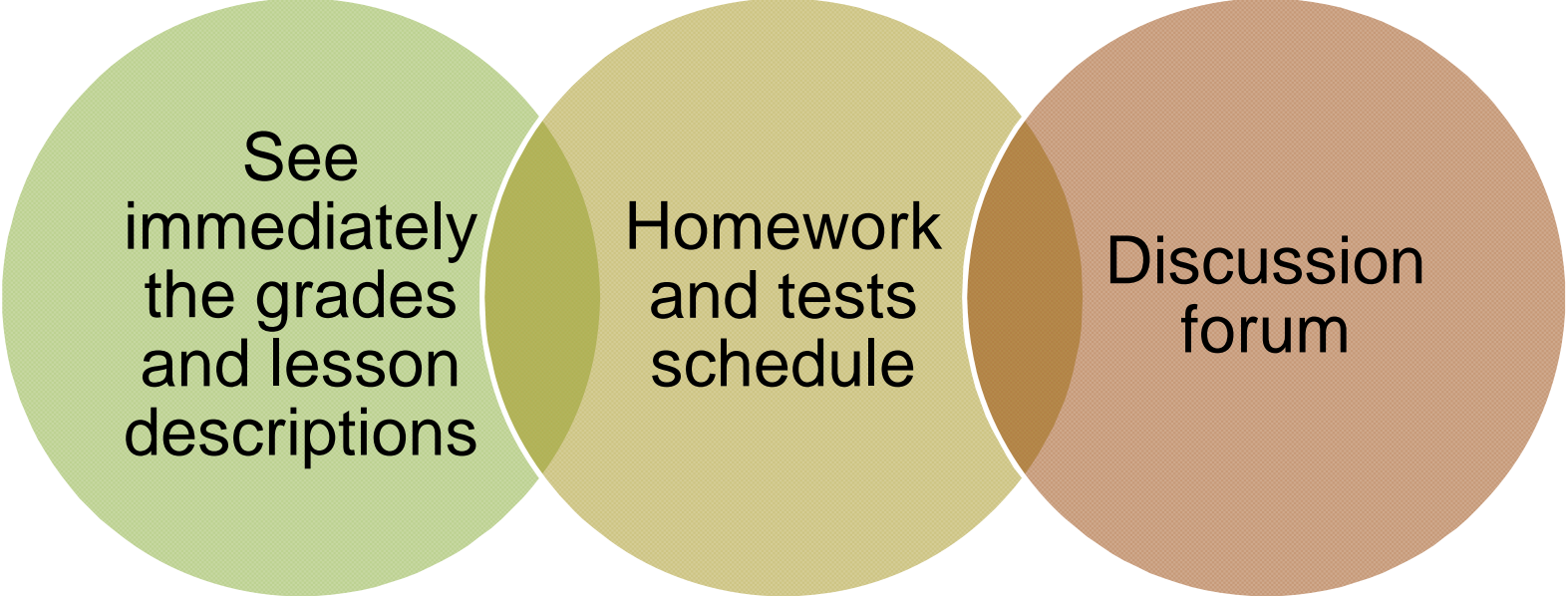


Deutsch

Every user may have several roles in school, determining their activities and rights in eKool.
Please select appropriate role in eKool for proceeding:

Form-master, 12A - Tallinna Lilleküla Gümnaasium
Form-master, 11A - Tallinna Lilleküla Gümnaasium
Parent, SVEN SILD
Teacher, Tallinna Lilleküla Gümnaasium

Parent and students

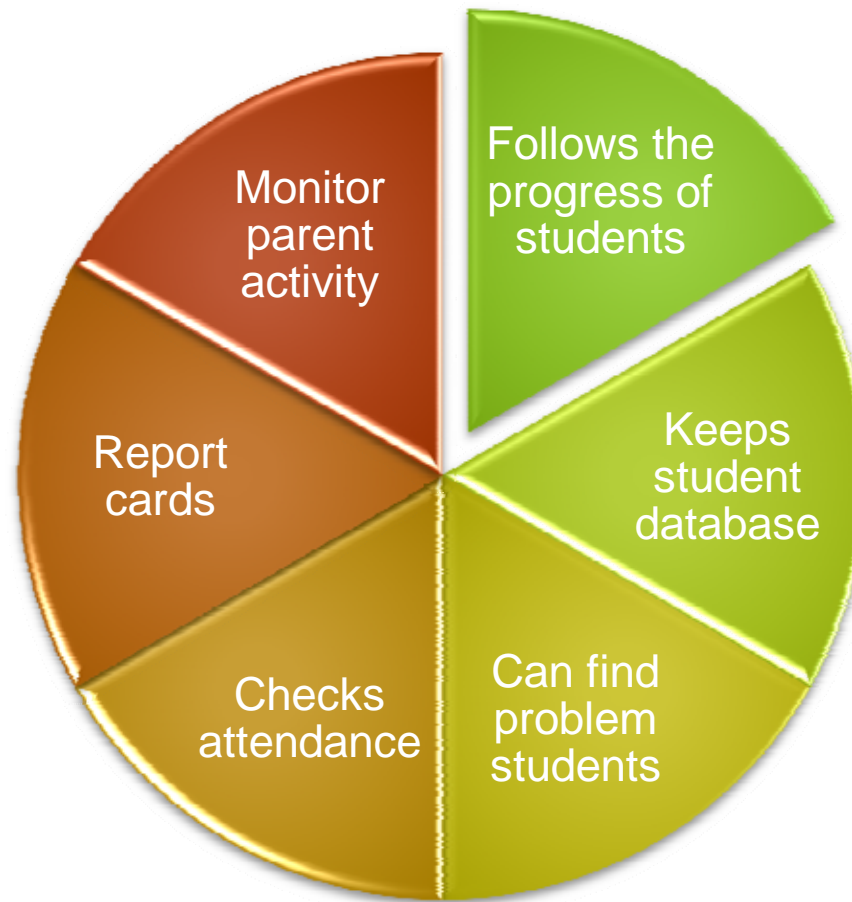


See
immediately
the grades
and lesson
descriptions

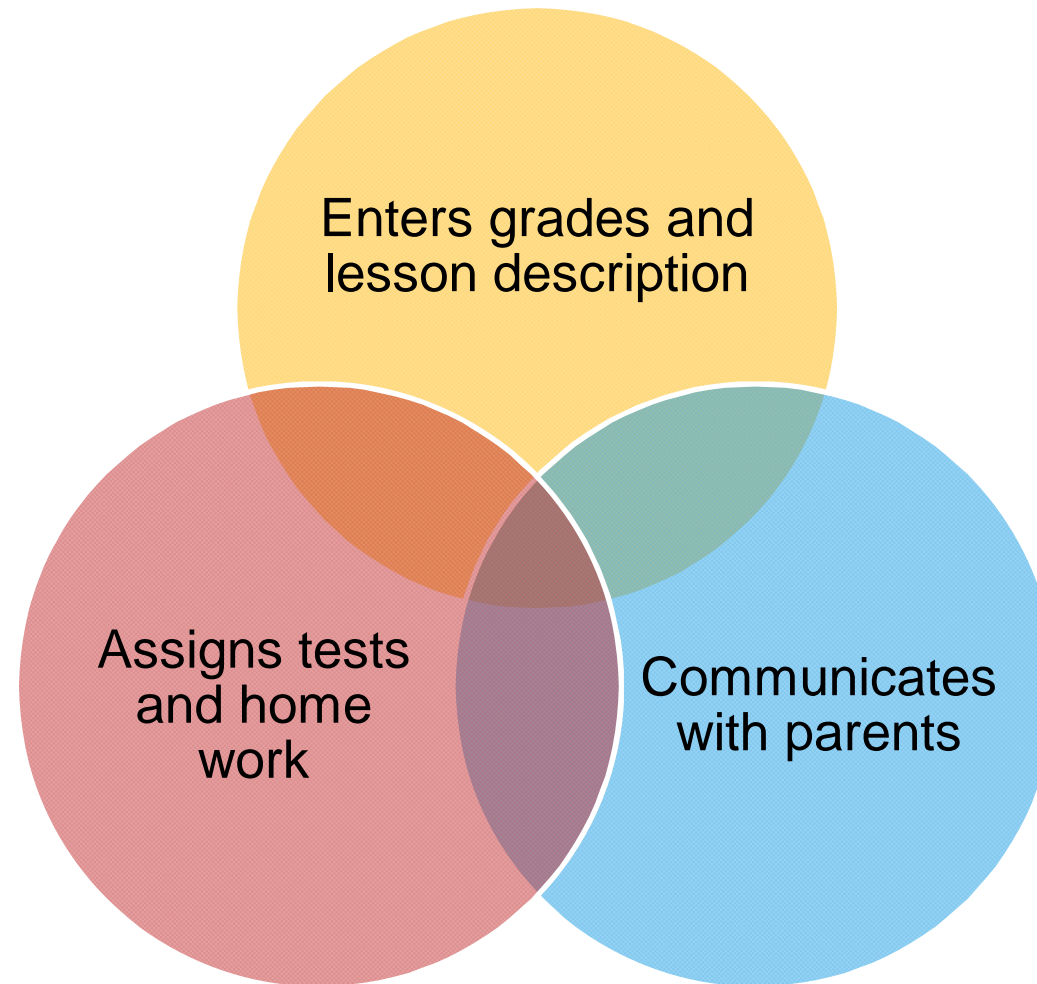
Homework
and tests
schedule

Discussion
forum

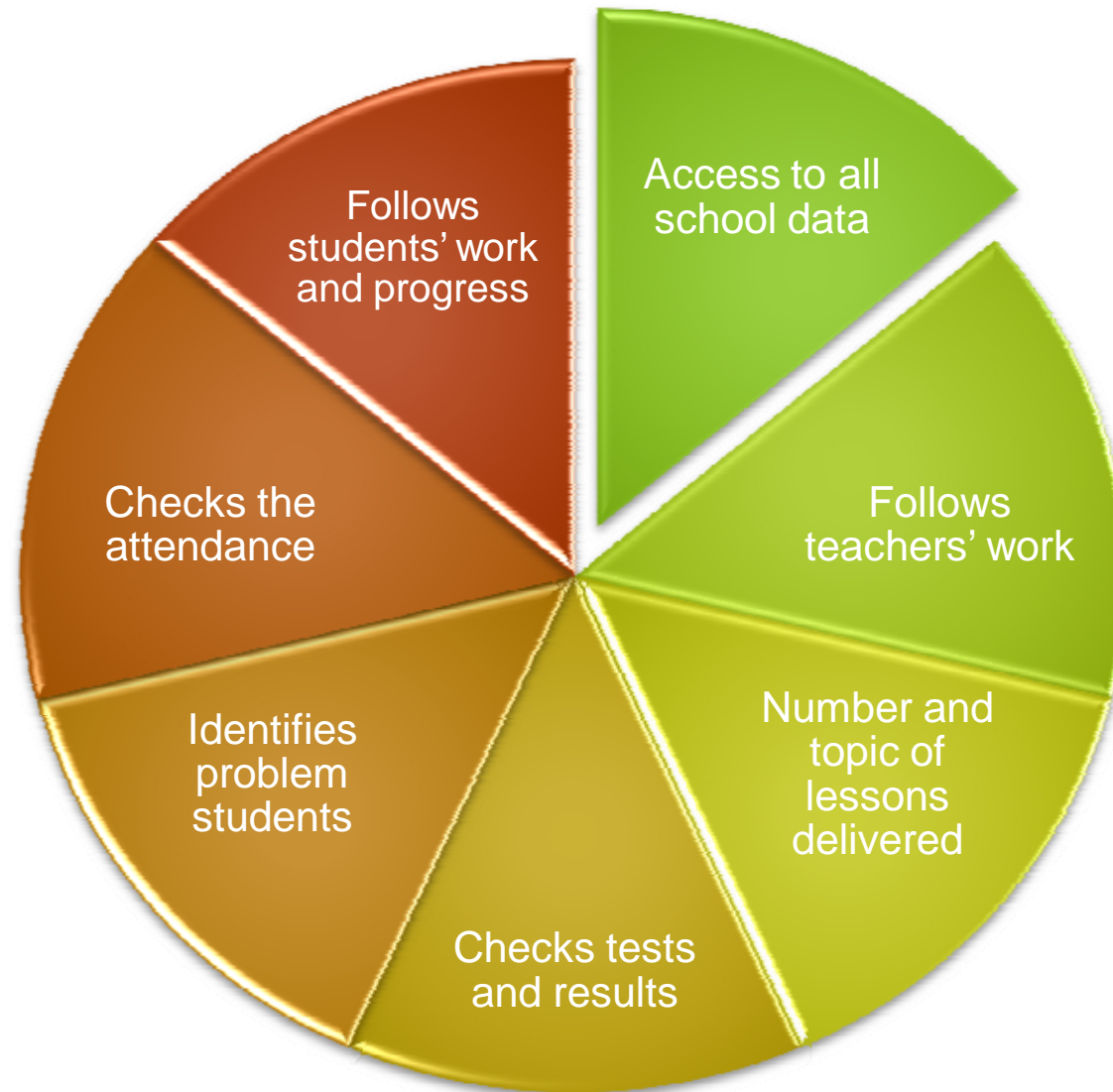
Tutor



Teacher



School management





Administrator

- School's eKool administrator manages the users and assigns roles
 - create, change, erases users' accounts
 - collects personal information
 - father, mother, grand-father, etc
 - manages courses
 - once in the beginning of september

List of courses

assigned to a specific teacher

Timetable **Journal** Tests plan Reports Forums My Account

Class: - All - Subject: - All

Select journal:

10. a äriinglise keel, Äriinglise keel, G
10. b äriinglise keel, Äriinglise keel, G
10 a keelte I rühm (Sild, Mih), Inglise keel -III kursus, G
10 a keelte I rühm (Sild, Mih), Inglise keel -II kursus, G
10 a keelte I rühm (Sild, Mih), Inglise keel -I kursus, G
10 b inglise keele II rühm (Sild), Inglise keel -III kursus, G
10 b inglise keele II rühm (Sild), Inglise keel -II kursus, G
10 b inglise keele II rühm (Sild), Inglise keel -I kursus, G
11 a inglise keele II rühm Sild, Inglise keel-III kursus, G
11 a inglise keele II rühm Sild, Inglise keel-II kursus, G
11 a inglise keele II rühm Sild, Inglise keel-I kursus, G
11 b inglise keel I rühm (Sild), Inglise keel -III kursus, G
11 b inglise keel I rühm (Sild), Inglise keel -II kursus, G
11 b inglise keel I rühm (Sild), Inglise keel -I kursus, G

Register

marks

reason for missing/ test redone

attendance

		Add		Lesson description							Back								
Students names	Add	January				February							March	Total					
	13.06	26/2	31/4	02/2	05/6	07/4	09/2	12/6	14/4	16/2	19/6	21/4	23/2	26/6	28/4	02/2	P	H	K
	Pass <input type="checkbox"/>																		
VIA	<input type="text"/>	4	5							5					4	5	4		
	<input type="text"/>	5	5							5					5	5	5		
	<input type="text"/>	H/4*	4*							5			V		3	H/4	4		
	<input type="text"/>	4	5	V					H	5				K	K	K/4*	4		
	<input type="text"/>	3	5							4					3	3	3		
	<input type="text"/>	3	4							4	K		K		4	4	4		
	<input type="text"/>	3	4							4			V		3	4	3		
	<input type="text"/>	3	5							V/5					5	5	4		
	<input type="text"/>	4	3		H					5	H			H	5	4	4		
	<input type="text"/>	V/3*	5					+		4					3*	3	3		
	<input type="text"/>	V/5*	5		K	K	K			V/5					5	H/5	5		
	<input type="text"/>	P/4*	3		+					5			H		K/4*	4*	4		
	<input type="text"/>	4	5		H					5					5	5	4		

button to send personal messages visible by parents also

Lesson descriptions

Home work and due date

10.10.2006	3	Lihtminevik ja kestev minevik. TV 6,7 lk. 22. Kuulamine 10/23. Tekst Walt Disney World. TV 8/23	Korrata kooli teema sõnavara kirjutamisülesandeks.	11.10.2006	Sild, Meeri	Change
09.10.2006	6	Unit 4. Tunniplaan. Harj. 6 lk. 27. TV lk. 20-21	Nali. TV lk. 24	10.10.2006	Sild, Meeri	Change
04.10.2006	3	Grammatika harjutused VIKOs.			Sild, Meeri	Change
03.10.2006	3	Esitluste analüüs. Ristsõnad. Unit 4 sõnad. Tunniplaan.	Unit 4 sõnad	04.10.2006	Sild, Meeri	Change
02.10.2006	6	Ristsõnade koostamine Puzzlemakeri abil.			Sild, Meeri	Change
28.09.2006	1	Teksti arvestuslik jutustamine. Kordamisharjutused.	KIri suvest.	02.10.2006	Sild, Meeri	Change
27.09.2006	3	Unit 3 tekst. Harj. TV 4/16, 5/17, 8/18. Kuulamise harjutamine.			Sild, Meeri	Change
26.09.2006	3	Esitluste esitamine ja hindamine.			Sild, Meeri	Change
25.09.2006	6	Unit 3 tõlketöö. Harj lk. 20. Ajavormid. TV 1,2 lk. 15, 3 lk. 16	Tekst lk. 22-23. Harj. 10 lk. 23 kirjalikult.	27.09.2006	Sild, Meeri	Change
21.09.2006	1	A jutustamine. Omadussõna. Unit 3 sõnad. Luuletus lk. 18.	Unit 3 sõnad. TV harj. 10 lk. 19	25.09.2006	Sild, Meeri	Change
20.09.2006	3	Tekst lk. 16. Kirjutamine- minu lemmikpaik Eestis. Eessõnad. TV 2/8.			Sild, Meeri	Change
19.09.2006	3	Esitluste lõpetamine.			Sild, Meeri	Change

Detailed description and list of exercises done at school help missing students to catch up at home

Test planner

Timetable Journal **Tests plan** Reports Forums My Account

Class: Course: Teacher: Start date: End date:

Test plan : 21.05.2007 - 27.05.2007

Class	21.05	22.05	23.05	24.05
10A	Vene keel b-keelena / SR	Geograafia / MK	Inglise keel / SM	
10B		Geograafia / MK		
11A	Füüsika / KS	Soome keel c-keelena / AM		Vene keel b-keelena / SR
11B	Füüsika / KS	Soome keel c-keelena / AM		
12A				
12B				
7A			Loodusõpetus / AA	Matemaatika / LV
9A				

Helps teachers to avoid to make more than one important test per day

Tutor



Report cards printed by the 'Form-teacher' are sent at the student's home

Sild, Meeri in role:

Form-master, 11A - Tallinna Lilleküla Gümnaasium

Timetable Class Journal Attendance Study book Students Reports Forums My Accounts

Parents audit Attendance Grades Sheet Problem students Poor grades Period grades Attestation Progress Demographics Attendance journal

Class: 11a klass

General data of students

Students personal data (name, address, parents names, contact data) and data accumulated during his stay at school is kept and archived at school

Discussion forum

This forum is only open to parents, teachers and students of that particular school and closed to the others

[Timetable](#) [Journal](#) [Tests plan](#) [Reports](#) **[Forums](#)** [My Account](#)

Thread: Koolielu

Topic	Author	Last post	Number of posts
huviringid	Paulson, Leemet	24.05.2007	6
toitlustamine	Õunpuu, Merike	02.05.2007	9
Kooli algus kell 9.00? start class at 9	Ohvriil, Anneli	02.05.2007	8
Tantsukursused dance lessons	Sau, Andres	18.02.2007	12
Koolivägivald violence at school	PINO, KATI	24.04.2007	15
E-KOOL	Aru, Ly	27.05.2007	9
Tunniplaan E-koolis???	Binsol, Ketlyn	24.05.2007	4
Kooli koduleht	PINO, KATI	19.05.2007	1
Vähem kodutöid	TUISK, TAANIEL	28.05.2007	3

[Add new topic](#) [Back](#)



Main functionalities

- Class Register
 - for entering the results of session work and missed classes as well as reprimands made to the student, also for monitoring student progress at school.
- Attendance
 - Classes the student missed or was late for over all subjects during the period. The class teacher adds reasons for missed classes entered by the subject teacher into the register and generated simultaneously in the class register.
- Student grade sheet
 - shows the student and parents the up-to-date grades of the student, missed classes, late arrivals in all subjects during the period. Besides, the page includes subject content (class descriptions) and reprimands to students.



Main functionalities continued

- Study book
 - here the student and parent can view all the grades of the quarter (term) and year. These give an overview how the study program has been covered student's progress.
- Timetable
 - shows the timetable to the student, parent and teacher. The input can be either the existing electronic timetable, or the timetable can be entered directly into the eKool application.



Main functionalities (continued)

- Homework and tests
 - this part of eKool shows to the students and parents the homework and tests entered into the class register along with the deadlines for home assignments, such as projects, reports, etc.
- Forums
 - are a communication channel between parents, students and the class teacher as well as between parents and school management. In direct communication involving matters that interest just one parent and subject teacher or class teacher e-mail will remain the main channel of communication. Anonymous participation in the forum is excluded, the name of the person who wrote



Benefits of e-school

- One time data entry makes information more accurate and up to date;
- Students' attendance information will appear only a few seconds after the teacher has entered the absences
- Home, teachers and administrators receive up-to-date information of what happens in school and student participation in schoolwork
- Simple data collection of parents and students information, because they are able to update the necessary information by themselves
- Easy test scheduling, information exchange with most popular timetabling software gpUntis, more space for describing lessons
- School administrators can benefit from real time reporting tools. Number of off-the-shelf reports grows according to school's proposals



Expérience de Meeri Sild

- « La balance entre les efforts nécessaires à la tenue à jour de la base d'informations et ceux précédemment nécessaires au suivi des élèves est très positive »
- « Les rapports individuels étaient très difficiles à faire auparavant »
- « La grande transparence du système a posé de nombreux problèmes d'acceptation au début – aujourd'hui chacun en demande davantage »
- « La responsabilité personnelle des élèves s'est considérablement accrue, il y a de moins en moins de fausses excuses »



Difficultés du début

- Pannes de matériel et/ou de logiciel, surtout au début
- Enseignants mal à l'aise avec l'informatique



Future

- Connecting e-school with different Virtual Learning Environments and other education databases
- References
 - Meeri Sild
 - <http://www.ekool.ee>

Mobile Access



- EMT and eKool (eSchool) have extended the internet-based school information service to mobile phones
- Real-time access to:
 - class schedules
 - information about time and location of the class as well as a link each class's homework
 - homework
 - grades
 - up-to-date current grades, report cards and exam results
 - important general information
 - attendance
- Memos and messages from school
 - missed classes, student's reprimands and honours as well as changes in schedule of classes.