

Open source software in Estonian schools

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Outline of the presentation

- National ICT programmes and current educational software
- Activities by Estonian open source community
- Virtual learning environments and CMS's
- Community based open source project: VIKO
- Open Content

ICT programmes for Estonian schools

- Tiger Leap programme 1997-2000
 - Priorities: computers, internet connection, basic teacher training and educational software
- Phare ISE programme “Information Systems in Education” 1997-2000
- Tiger Leap Plus programme 2001-2005
 - Priorities: ICT competencies, virtual learning, sustainable development of infrastructure, collaboration of all parties involved
- Tiger Leap Foundation:
<http://www.tiigrihype.ee/eng/>

Educational software

- Software development financed by Tiger Leap:
 - Various websites and CD-ROM's with HTML content
 - Testing environment APSTest and various ready-made tests
 - Simulation environment “Hiking Across Estonia”
 - Virtual learning environment VIKO
- Purchased software:
 - EuroPLUS Reward, Lingua Land, The Chemistry Set, Open Physics, MathSoft StudyWorks, Kid Pix Studio, Encarta Encyclopedia, Encarta World Atlas, etc (more than 30 different programs).

Current situation

- Between 18...24 students per computer
- Between 5...8 teachers per computer
- 98% of schools have broadband internet connection
- File server operating system:
 - 47 % Linux
 - 13 % Windows and Linux
- Desktop PC-s operating system:
 - 3 % Linux
- Office software:
 - 14 % OpenOffice

(01.03.2004)

Activities by open source community

- Localization of OpenOffice.org
- Several small research studies in University of Tartu
- Development of school linux distribution by Nordtech, Cybernetica and Offline.ee

Educational software and WINE

- WINE is environment for running Windows software under Linux
- Educational software was tested under WINE environment in University of Tartu
 - 56 programs tested, 21 of them worked without problems
 - 15 of 34 Tiger Leap financed programs working
 - Working examples: MathSoft StudyWorks
 - Not working examples: Open Physics 2.0, Lingua Land, Kid Pix Studio, The Chemistry Set, Encarta World Atlas 1998
 - Some of the HTML-based software works only with Internet Explorer

Linux distribution for Estonian schools

- Based on Mandrake
- Localized version of OpenOffice.org 2.0
- Estonian speller and hyphenation tools
- 50 educational programs (mathematics, languages, ...)
- Handbook about the distribution
- Support services (online forum, demonstrations)

Obstacles in switching to Linux

- Microsoft is offering Windows and Office with really cheap price (“Partners in Learning” programme)
- Schools often do not have enough skills to switch from Windows to Linux
- IT companies are not ready to provide large scale support to open source operating systems
- Open source community does not fully understand the needs of schools

Open source VLE's

- VIKO - simple learning environment used in about 30 Estonian schools
<http://www.htk.tpu.ee/viko/>
- IVA - full-featured LMS used in Tallinn Pedagogical University and some schools
<http://www.htk.tpu.ee/iva/>
- Fle3 - <http://fle3.uiah.fi>
- Moodle - <http://moodle.org/>
- ILIAS - <http://www.ilias.uni-koeln.de/ios/>
- LearnLoop - <http://learnloop.sourceforge.net/>

Open source CMS's

- Drupal - <http://www.drupal.org>
- Plone - <http://www.plone.org>
- Development of school CMS based on Plone

Example of an open source project: VIKO

- VIKO - virtual learning environment for Estonian schools
- Started as a student project in Tallinn Pedagogical University (in 2001)
- Development was supported by Tiger Leap Foundation (in 2001-2003)
- Released under GPL license
- Development continues by community of volunteers and university students

Functionalities of VIKO

- Course information
- Student management with activity control
- Grading
- Course calendar with hometasks
- File management
- Threaded forum
- Bookmark management

Teachers environment

VIKO

Logi välja

Minu VIKO : Hans Põldoja

Kursused

[Kodulehekülgede koostamine \(12b 2001\)](#)
[Testkursus](#)
[Esitlusgraafika ja koduleheküljed \(11b\)](#)
[Kodulehekülgede koostamine \(12b\)](#)
[Esitlusgraafika ja koduleheküljed \(11a\)](#)

Lisa uus kursus

Kursus:

Seaded

[Kasutajainfo ja parooli muutmine](#)

Abi

[Õpetaja tugisüsteem](#)

TPÜ Haridustehnoloogia keskus

Course information

VIKO

[Logi välja](#)

[Minu VIKO](#) | [Kursuse info](#) | [Õpilased](#) | [Tunnid](#) | [Failid](#) | [Foorum](#) | [Lingid](#)

Kursuse info : Esitlusgraafika ja koduleheküljed (11a)

Kursus:	Esitlusgraafika ja koduleheküljed
Klass:	<input type="text" value="11a"/>
Õpetaja:	Hans Põldoja
e-mail:	infojuht@lillekyla.tln.edu.ee
Kursuse sisu:	<div style="border: 1px solid black; padding: 5px;"><p>1) Multimeedia esitluste koostamine:</p><ul style="list-style-type: none">- esitluse loomine;- graafika lisamine esitlusele;- objektide lisamine esitlusele;- animatsioonid ja siirdeefektid;- esitluste kujunduspõhimõtted;</div>
Hindamine:	<div style="border: 1px solid black; padding: 5px;"><p>Arvestuslikud hinnad:</p><ul style="list-style-type: none">- esitlus inglise keeles (11. november);- arvutigraafika tööde portfolio (17. veebruar);- kodulehekülg vabal teemal (19. mai);- arvestuslik hinne vähemalt 2 protsessihinde põhjal.</div>
Õpikud:	<div style="border: 1px solid black; height: 20px;"></div>

Course information

VIKO

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Kursuse info : Esitlusgraafika ja koduleheküljed

Kursus: Esitlusgraafika ja koduleheküljed

Õpetaja: Hans Põldoja

e-mail: infojuht@lillekyla.tln.edu.ee

Kursuse sisu:

- 1) Multimeedia esitluste koostamine:
 - esitluse loomine;
 - graafika lisamine esitlusele;
 - objektide lisamine esitlusele;
 - animatsioonid ja siirdeefektid;
 - esitluste kujunduspõhimõtted;
 - esitluse malli koostamine.
- 2) Arvutigraafika:
 - RGB värvimudel;
 - enamkasutatavad rastergraafikaformaadid;
 - lihtsam graafikatöötlus;
 - skanneerimine;
 - tekstide kujundamine;
 - GIF animatsioonide koostamine.

Course calendar

VIKO

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Tunnid : IT õppekavaarenduses

Kuupäev	Tunni sisu	Kodune ülesanne	Tähtaeg	Hinne
12.05	IT uuenevas õppekavas - õppekavaarenduse metodoloogilised alused, erinevad käsitlused, \"kuumad teemad\" õppekavaarenduses infoajastul. IT läbiva teemana Eesti üldhariduskoolide riiklikus õppekavas.	Koostage rühmatöös (2-3 liikmelistes rühmades) interdistsiplinaarse IT-põhise õpiprojekti kava (sis. vähemalt projekti eesmärged lähtuvalt RÕK 2002-st, oodatud õpitulemusi, tegevuskava, ülesandeid ja hindamiseeskirja). Laadige töö tekstidokumentina üles VIKO keskkonda.	26.05	
26.05	IKT pädevused õppekavas - pädevusstandardid õppekavaarenduses, IKT alaste pädevusstandardite süsteemid eri tasemetele, IKT pädevuste hindamine.	Valmistada RÕK 2002 IKT pädevustest lähtuvalt multimeedia-õppevahend ühe pädevuse õpetamiseks ja test selle pädevuse hindamiseks.	09.06	
09.06	IKT vahendid õppekavaarenduses - elektroonilised tugisüsteemid,	Arvestus: rühmatöö presentatsioon ja online-test.	09.06	

File management

VIKO

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Failid : IT õppekavaarenduses

Faili nimi	Tüüp	Maht
Õppekava-arenduse mudelitest Lühireferaat erinevatest lähenemistest õppekava arendusele Marsh & Willise raamatu \"Curriculum - alternative approaches, ongoing issues\" põhjal.	doc	51 KB
IKT riiklikus õppekavas 2002 Kaaskiri riikliku õppekava 2002.a. sügisel kehtima hakkavale versioonile.	rtf	37 KB
Koolininformaatika ja \"teine kirjaoskus\" M.L. artikkel ajakirjast A&A	rtf	66 KB

TPÜ Haridustehnoloogia keskus

Threaded forum

VIKO

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Foorum : IT õppekavaarenduses

Teema	Saatja	Aeg
Esmamulje VIKOst (9)	Mart Laanpere	12.05 15:47
esmamulje (2)	Tiina Puusalu	12.05 15:48
Huvitav, huvitav? (3)	Andres Sarri	12.05 15:50
Kuidas faile uploadida? (1)	Toomas Rähn	12.05 15:51
Hariduse misjoonist meil ja mujal (1)	Olev Räisa	12.05 15:54
Õppekava-arenduse metodoloogia (1)	Mart Laanpere	12.05 16:09
Nimi (2)	Martin Sillaots	12.05 16:10
Palve (2)	Toomas Rähn	12.05 23:19
Veel VIKO-st (2)	Toomas Rähn	13.05 10:31
Ma olen rumal :((2)	Toomas Rähn	19.05 23:20
Kuidas laadida? (2)	Martin Sillaots	24.05 18:57
Simu: IT roll kooli õppekavas (57)	Mart Laanpere	09.06 14:12

Lisa uus teema

Saatja: Hans Põldoja

Teema:

Sõnum:

Open source development

- Strong contact with end users:
 - mailing lists
 - teacher training
 - users give feedback to scenarios and user interface mockups
 - development sprints planned for the future
- Main benefit for developers is learning
- Open source development boosts the whole software industry in Estonia

Open source is not enough

- Important part of educational software is learning content, therefore GPL is not enough
- Tiger Leap Foundation has decided that all future software projects supported by them must be released under the terms of GPL (for source code) and Creative Commons (for learning content)

Open content

- Open content describes any kind of creative work including articles, pictures, audio, and video that is published in a format that explicitly allows the copying of the information
- Open content licenses: GNU Free Documentation License, Creative Commons license
<http://creativecommons.org>
- Open content is important to achieve the reusability of learning content
- Estonica online encyclopedia released under Creative Commons: <http://estonica.org>

Problems with GPL and CC

- In some cases the distinction between software and content is not clear
- With several technologies the meaning of source code is not clear (e.g. Flash, digital video, ...)
- Should the specific formulas/algorithms also be open?
- It is possible, that we going to have less project proposals

Conclusions

- In the context of educational software we need open content license together with open source license
- Open source software will not succeed in schools without community and support
- IT companies are not ready to provide large scale support to other operating systems than Windows

Contact information

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