ILIAS®

Join the Free Spirit

ILIAS open source E-Learning

2

Table of Contents

The Open Learning Management System

ILIAS is a powerful and flexible tool for learning and collaborating online. It serves as a knowledge and collaboration platform. ILIAS is not restricted to any particular didactical model but instead supports a variety of uses and methods.

- ILIAS is open source software. You can use it without having to pay licence fee. And you can influence the further development of the product.
- With ILIAS you can efficiently create learning and teaching materials
- Work flows and tools are streamlined throughout the system making it easy to learn and use.

- ILIAS is fully conformant with e-learning standards like SCORM 1.2 and SCORM 2004.
- In ILIAS, all users have a personalised working space.
- Access to learning materials and features can be controlled precisely and flexibly.
- Authoring tools for editing learning materials such as learning modules, wikis and glossaries are integrated into ILIAS.
- Using the powerful 'Test & Assessment' you can offer online exams and assess learning progress.

The ILIAS Concept

The concept behind ILIAS is to offer a flexible online working and learning environment with integrated tools. ILIAS goes far beyond the idea of learning being confined to courses. ILIAS can be seen rather as a type of library, providing learning and working materials at any location of the repository.

ILIAS – the open learning platform

ILIAS is not a locked warehouse but an open knowledge platform – content can, for example, also be made available non-registered users.

The tightly integrated tools have streamlined standard tool bars ensuring ease of system learnability. Examples for this cross-sectional functionality are comments, notes and metadata handling.
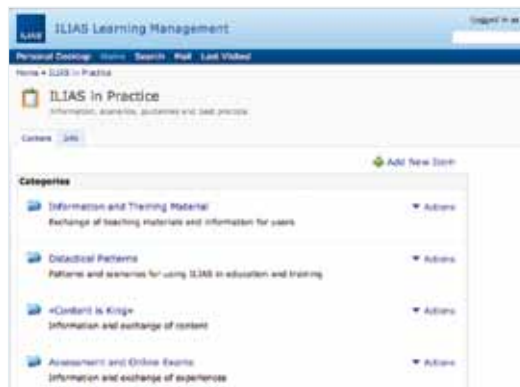
User-driven Development

ILIAS was created by tutors and teachers and its further development is driven by its users. The system's development draws on the experience of its community and is designed to make learning and teaching better and easier every day.

The value of the software today is estimated at more than 20 Million US$. The ILIAS developer community conceptualises and implements feature requests from schools, universities, enterprises and public administration bodies.

Innovations in the field of e-learning are quickly adopted into ILIAS, meaning users enjoy an up-to-date and powerful product. For ILIAS software, quality and compatibility comes first. This is ensured by central product and release management. All development is run according to a clearly defined, documented process.

Many Ways to Use ILIAS

ILIAS is versatile. Many universities deploy it as a campus-wide blended-learning system. Online courses complement classes. Students download slides and scripts, discuss and collaborate online. They can take online exams, too.

An increasing number of institutions use their campus administration systems to auto-create courses and import student data.

More and more universities use ILIAS to run online exams. Such online exams can be carried out in a secure manner that adheres to examination guidelines thanks to special configuration safeguards i.e. kiosk-mode and IP-Assignment.

High-end manager training is the business of Swiss Malik Management St. Gallen. Learners at Malik are supported in structuring their learning using ILIAS learning plans. Tutors can respond individually to the time- and work plans of their students without loosing control of the flow of the whole course.

ILIAS is used as a central and structure-given element for e-learning at Skyguide – the Swiss air traffic controller. It is not only used for providing online learning modules, but also for CBT and even the installation of software which is triggered locally by ILIAS.

SACMI – an Italian mechanical engineering company – uses ILIAS to create, manage and distribute online manuals with its machines in many languages. Staff and users of its machines worldwide are therefore able to efficiently access SACMI's product 'know how'.

"We chose ILIAS because it rivals commercial learning platforms in terms of features and functionality: ranging from SCORM certification and web 2.0 tools, to the user-friendly Test & Assessment tool. The multi-client capability allows us to manage our different educational brands conveniently with one installation."

Hermann Kögler,
COGNOS AG,
management board
member,
private educator

ILIAS – a World of Knowledge

ILIAS supports learning that is not boxed into courses. All learning and teaching material, working material and communication tools are provided in a central repository. Access to the objects and tools is granted by the flexible role-based access control system. This takes ILIAS from being a simple learning platform to being a world of knowledge.

You choose how your institution's repository is structured. You may choose to organise the learning resources along organisational or topic-based lines. ILIAS is so flexible, you can structure it to fit your needs. You can easily create deep and nested structures.

All resources within ILIAS, whether created within the system, imported or linked to, can be described with metadata. This means they can easily be found using the internal ILIAS search.

Bettina Kötteritz,
Roto Frank AG,
head of e-learning

"Roto Frank has used ILIAS to train its sales force worldwide from the very start. The many languages in which ILIAS is available is a huge advantage. We also benefit a lot from the open source structure of ILIAS: already many times our specific requirements have been implemented fast and inexpensively according to our specifications."

Plenty of Options for Content Creation

Even the best learning platform is nothing without good content. ILIAS offers you two ways to fill your installation with content: you can import documents and material or you can create your content from scratch. ILIAS provides powerful tools for both approaches.

ILIAS imports SCORM and AICC conformant modules, any kind of file, or QTI-based test questions. The exchange of documents using WebDAV is also supported.

Another strength of ILIAS is its integrated authoring tools. ILIAS offers integrated tools for authoring learning modules, glossaries, and exercises. Teachers and learners can cooperatively author content online like in a wiki.

For offline authoring of learning modules you can use the powerful open office extension eLAIX.

At One Glance
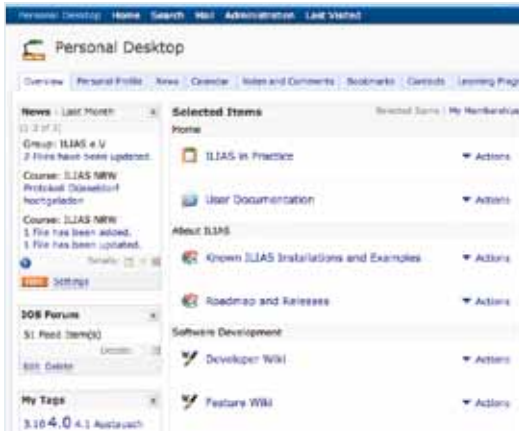
You enter ILIAS at your Personal Desktop. This is the individual working space of each user. It is the starting point for all sessions - from here you could, for example, continue working through a learning module or drop in to check on one of your study groups.

You can select learning resources or materials to put on your Personal Desktop, from where you can easily access them. The calendar on the Personal Desktop shows your appointments and deadlines. ILIAS also offers you mail and news here as well as the ability to look up and contact other online users.

Your Personal Desktop helps you organise and administrate all your groups and courses and your personal settings, such as your preferred language or personal profile.

Searching and Retrieving

The fastest way to find something on the internet or in ILIAS is to search. A search function is available at the top of any page in ILIAS. You can run a search on full text, keywords or metadata. If you activate Lucene, ILIAS will even search uploaded PDF- or HTML-documents. Search results can be saved and re-used. The search will only retrieve those documents to which a user has access permission.

Private notes or public comments can be added to all content in ILIAS. Your notes and comments can be quickly accessed from your Personal Desktop.

ILIAS also offers an internal tagging function, with which you can describe learning resources for yourself and others using tags.

Your entrance to the world of knowledge

assessment blended-learning
collaboration communication cooperation
course course-management didactics
discussion ILIAS information
learning learning-module
learning-progress modular
open-source platform SCORM
survery team team-work test
web2.0 wiki

Manage Learning Flexibly

Using ILIAS, teachers can create scenarios in which lear-
ners automatically get access to content after having
satisfied specific preconditions. Course material can be
organised using learning objectives, the completion of
which, can be assessed in entry level- and completion-
tests. Based on these test results, learning resources are
then recommended. This is a simple way to offer multiple
learning paths and adaptive learning.

*Defining learning
objectives and
supporting adaptive
learning*

ILIAS supports self-directed learning, yet ensures that
learners do not lose track of their main objectives. Lear-
ning plans allow students to define phases of self-directed
learning in a blended-learning scenario.

The learning-progress feature informs a learner about
his or her progress. This progress is based on the results
of tests or exercises, or the time spent working through
learning modules and other factors.

learning objective

recommending

checking

determining

test questions   learning resources
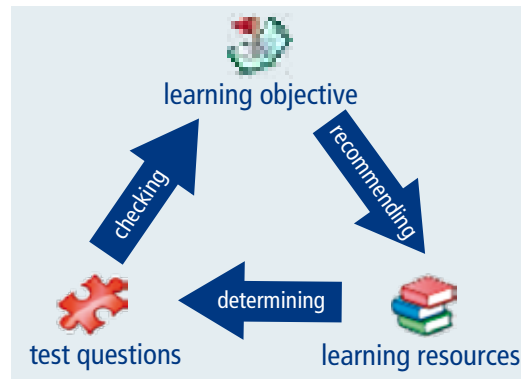
Working Cooperatively

Learning in groups and authoring online material together
has always been one of ILIAS's strong points. Learners are
not seen as mere consumers of knowledge but as active
producers.

Members of groups and courses can be granted au-
thoring permission and use the system to create material.

Cooperative learning can be achieved by using the
integrated wiki or through the joint authoring of learning
modules, glossaries, tests or exercises. The exchange of
files is supported by the version control and the WebDAV
interface.

There is a vast range of features available to admi-
nistrate groups, including several registration options,
group passwords, maximum number of members and
waiting lists.

Successfully Administrating Exams

ILIAS has an integrated Test & Assessment environment to create and administer online tests and exams. A test might serve only to assess one's own learning progress or may be a proper exam. Test results may be used to trigger access to further materials for learners.

ILIAS offers a wide range of question types: single choice, multiple choice, matching, fill-in-the-blanks, hot spots and essays among others.

Question pools make it easy to re-use questions. In a test all kinds of questions can be combined freely. Questions can also be assigned to a test at random.

Kiosk-mode, answer-sensitive feedback, weighting answers, ECTS credit points and certificates are other features offered by Test & Assessment.

Targeted Questioning

ILIAS also offers a sophisticated survey tool. With this tool you can create and administer web based surveys – to evaluate a class or to conduct research.

A broad variety of question types and analysis routines are available. You can define and re-use sets of answers. The answer templates allow you to create surveys in an extremely efficient manner.

Filter questions can be used to direct a participant through the survey depending on his or her answers. Thanks to individualised access codes you can also conduct surveys with non-registered users. All test and survey results are visualised and can be exported to be used externally.

"We have been using ILIAS at Malik Management since 2006 and have learned to appreciate how flexible and reliable ILIAS is. One of our main reasons for using ILIAS is the learning-plan feature which enables learning processes to be planned in detail. For our management training this is indispensable."

Bernhard Grassl,
head of learning media,
Malik Management
Zentrum St. Gallen

Communicate Easily

To stay in close contact with you students you can rely on the variety of communication methods in ILIAS. With the internal news system, for example, you can inform your course participants about changes in room or program. You do not have to bother to maintain lists of mail addresses – ILIAS knows your participants.

Forums can be used for topic-related discussions or to discuss organisational issues. Provide bulletin-boards or FAQs in a forum. Forums are also excellent for didactical purposes; learners can practice debating or take part in discussion based role-plays.

For real-time communication you can use the integrated chat-tool. Users can even use it outside the learning context to exchange information.

Prof. Dr. Armin Hollenstein, Co-Leader iLUB Uni Bern

"Within the space of just a few years at the University of Berne, ILIAS has come out on top against rival LMSs. Often, 'courses', as an accompaniment to a lecture or series of lectures, are set up in ILIAS to maximise „time on task" in the classroom. Outside of course structures, individual ILIAS services are increasingly being used as i-Tools in teaching and research."

Interfaces

ILIAS integrates excellently with your IT-infrastructure. It has a powerful Web Services interface based on SOAP. Many institutions employ this interface to connect ILIAS with their HR-management system or administrative systems.

You can remotely set up courses, assign teachers and learners, and change settings. Interfaces to external systems such as virtual classrooms also already exist in ILIAS and new interfaces can be implemented easily.

Multiple ILIAS installations can be connected to provide content across institutions using the e-learning community server (ECS).

Technology and Administration

To use ILIAS, learners, teachers and administrators only need a browser. ILIAS does not require plug-ins and can even be used without JavaScript. Its interface is accessible according to WCAG.

ILIAS can be installed on a single machine or a distributed system for huge installations can be set up. There is no limit to the number of users, courses or learning resources. Many institutions run ILIAS installations with tens of thousands of users and many hundred users at any one time.

The ILIAS server uses Apache and PHP and can be run on any common operating system. ILIAS 4.0 and higher support the databases MySQL, Oracle, PostgreSQL. An integrated set-up helps you to install and update your ILIAS.

There are several options to authenticate users: LDAP, CAS, Shibboleth, Radius, SOAP and the ILIAS-native authentication. ILIAS supports Single-Sign-On.

You maintain ILIAS using the integrated administration console. As well as user and permission management, the administration console also gives you control over the configuration of all tools and modules, basic settings and options.

Easily Adapted

Thanks to a template engine, ILIAS can be easily adapted to your CI. Thus it can be made to blend in nicely with your institution's website. You can adapt the style sheets for learning modules, for the whole system or just parts of it.

Adaptability is not limited to the user interface: whole functions and modules or just particular roles, can be switched on and off. You can also configure the structure of the repository or the Personal Desktop.
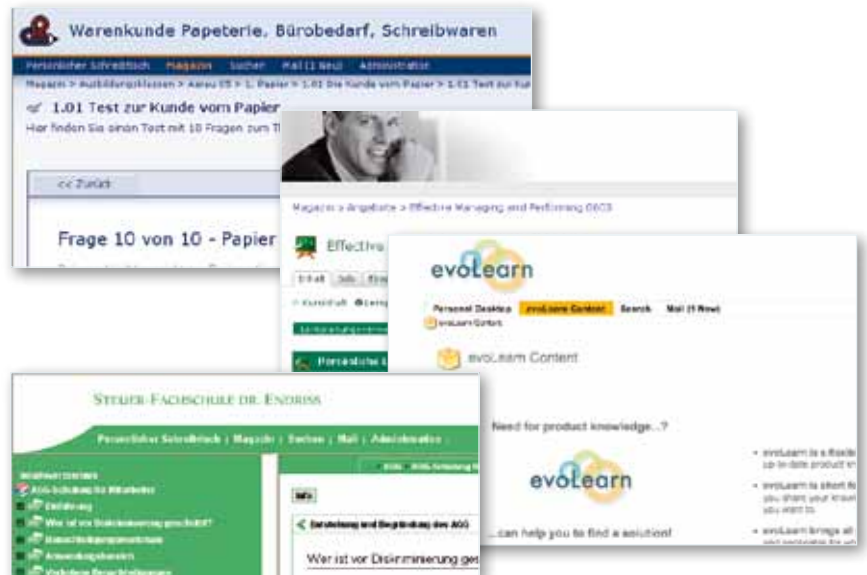
Open Source is Safe

Since 2000 ILIAS has been open source software. It has been a pioneer in the educational industry. The licence secures users access to the code and the opportunity to engage in the software development. This guarantees the sustainability and the independence from commercial vendors.

That open source software can be secure software has been proven by the security certification of ILIAS by NATO in 2008. Content and data in an ILIAS installation are excellently protected against unauthorised access. This is why ILIAS got clearance to be run in NATO's secured intranet for sensitive content and data.

Prof. Dr. Wilfried Hesser
Helmut Schmidt
Universität Hamburg

"ILIAS is the basis for the conception and digital implementation of our curriculum 'Machine Design' and 'Standardisation'. This content is used by more than a dozen national and international universities."

Community and Support

ILIAS users help each other! Many users are organised in regional or national working groups. They cooperate, exchange information, share experience. These working groups initiate the development of new features.

At the International ILIAS Conference users meet annually. You can find information about the conference at www.ilias-conference.org. For ILIAS developers, a bi-annual development conference is held.

For the professional set-up, training and support as well as software development there is a community of service partners to serve you: have a look at **www.ilias. de.** We are happy to answer questions directed to **info@ ilias.de**

Selected References

Académie de Bordeaux

ARAG

Basler Versicherungen

Bayer Vital

Bundesagentur für Arbeit

Bundesverwaltungsamt

Cognos AG

Copernicus Provinz Bozen-Südtirol

Dennis Gabor College Budapest

ETH Zürich

Fachhochschule Aachen

FH des Bundes für Öffentliche Verwaltung

Fachhochschule Dortmund

Fachhochschule Heilbronn

Fachhochschule Köln

HDI-Gerling / Talanx

Hochschule Bremen

Hochschule Karlsruhe

Hochschule Luzern

Hochschule für Wirtschaft und Recht Berlin

Katholische Universität Eichstätt-Ingolstadt

Malik Management Zentrum St. Gallen

Medizinische Hochschule Hannover

National Taras Shevchenko University of Kiew

NATO Headquarters Allied Command Transformation

Pädagogische Hochschule Thurgau

Pädagogische Hochschule Vorarlberg

Pädagogische Hochschule Zürich

Pharmatechnik

Rheinische Fachhochschule Köln

Roto Frank

SACMI

Santander Consumer Bank

Skyguide

Technisches Hilfswerk (THW)

Universidad de Jaén

Universidad Nacional de San Luis

Università degli Studi di Bergamo

Universität Bern

Universität der Bundeswehr Hamburg

Universität Duisburg-Essen

Universität Düsseldorf

Universität Erlangen-Nürnberg

Universität Gießen

Universität Hohenheim

Universität Karlsruhe

Universität zu Köln

Universität Mainz

Universität Marburg

Universität Stuttgart

Universität Trier

Universität Tübingen

VDI - Wissensforum IWB

Zumtobel

Overview of Features

Personal Learning Environment
- Personal Desktop with selected learning resources, courses, groups, forums
- Personal learning progress checks
- Personal Calendar
- Personal Profile Administration
- Multi-language user-interface
- Personal notes and public comments
- Who-is-online? Feature

Learning Content Management
- All content objects are provided centrally: courses, groups, learning modules, wikis, glossaries, podcasts, and much more
- Complete annotation with LOM metadata
- Role-based access control and preconditions
- Import interface for SCORM 1.2, 2004, AICC, HTML modules, ILIAS XML and other formats
- Integrated search engine
- Save search results
- Metadata search

Learning and course management
- Sessions support classroom
- Time-directed access to learning objects
- Learning-objective oriented provision of learning objects
- Learning progress control at course level
- Individual learning planing in courses
- Management of timed exercises
- Feedback function for participants of exercises
- Course calendar
- Course participant administration
- Course mail with member gallery

Authoring
- Integrated authoring environment for Learning modules, glossaries, and digital books
- SCORM 1.2 and 2004 certification
- SCORM 2004 online editor
- Different presentation styles for learning modules
- Style sheet generator
- Integrated wiki
- Connected tests and glossaries
- Glossaries with display of links to learning modules

Collaboration
- Create and administrate working groups of any kind
- Timed and password protected registration
- Limitation possibilities for number of participants and waiting list
- Container for collaborative editing of files (incl. Virus-scanner)
- History and version of files
- Group calendar
- Group mail and public comments

Test & Assessment

- Question types: single choice, multiple choice, matching, fill-in-the-blanks, hot spots, flash, java applet and essays among others.
- Plug-in interface for new question types
- Mathematical problem generator
- Administration of questions in central pool
- QTI-interface to import externally generated questions
- Ability to set test-processing options such as time or grade schemes
- Versatile analysis tool (incl. Export)
- Certificate function
- Learning progress control

Survey

- Personalised and anonymous surveys
- Question types: cardinal, ordinal, matrix, open answer
- Pools for question administration
- Online result analysis
- CSV and excel export of survey results

Communication

- Awareness-tool for chat invitations
- Personal website
- Chat with moderation function
- Discussion forum (moderation, file attachment, notification about new posts, export)
- Integrated mail system (file attachment, mail to external addresses)
- Notification via RSS/ATOM
- Interface to virtual classroom

System Administration / Back Office

- Configuration of modules and services
- Global and local roles
- Role templates for easy re-use of permission settings
- Plug-in interface for connecting third party software and functionality
- Web Services / SOAP interface
- Automatic registration, password generation and confirmation mail
- Privacy protection and security settings
- Authentication: CAS, LDAP, SOAP, Shibboleth
- Copy-Right Management (Creative Commons)
- Flexible adaptation of graphical user interface through templates and skins
- Administration of third party software
- Activation and administration of system languages
- Payment settings to market and charge for content
- multi-client capability
- Set-up assistant for installation and updates

www.ilias.de