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ILIAS is a powerful and flexible platform for web-based learning and working. The system can be used as a learning, knowledge and collaboration platform. ILIAS is not limited to any one particular educational model, but rather supports many different methods and usage scenarios.

- Being open source software, ILIAS can be used without having to purchase a license and at the same time users play an important role in the further development of the software.
- ILIAS allows you to create learning and course materials efficiently and easily.
- Thanks to uniform user interfaces and workflows, ease of use is ensured for both learners and trainers.

- ILIAS is fully conformant with the important e-learning standards SCORM 1.2 and SCORM 2004.
- Users have their own Personal Workspace and are able to create portfolios and blogs.
- Access rights to the various functions and materials can be precisely managed via the role-based access control.
- Learning content such as learning modules, wikis or glossaries can be created directly in ILIAS using the integrated authoring tools.
- A powerful Test & Assessment feature is available to monitor learning progress and offer online exams.
Central to the idea behind ILIAS was the desire to have a learning and working environment with integrated tools. This is indeed where the name ‘ILIAS’ comes from – it stands for the German phrase ‘Integriertes Lern-, Informations- und ArbeitskooperationsSystem’ (integrated learning, information and work-cooperation system).

With ILIAS, the idea is also that learning should not be confined to courses. ILIAS is rather more like a library, making it possible to make learning and work materials available in all areas of the repository. Content can also be made available to non-registered users. This means that rather than being a sort of black box, ILIAS is an open knowledge platform.

The highly-integrated nature of the standard functions is also significant, as this guarantees the consistency and reusability of the modules. It also ensures the cross-cutting functionality of things like notes and comments and metadata handling.

ILIAS was one of the pioneers of e-learning. Created out of practical every day experience gained at the University of Cologne in 1998, the learning platform has since been further developed by a multitude of dedicated users. The non-profit ‘ILIAS Open Source E-learning Society’ is the home and publisher of the software.

The diverse developer community integrates requirements from schools and higher education institutions, businesses and public administration bodies. New developments in e-learning are therefore quickly adopted into the software, guaranteeing users an up-to-date and powerful product.

Quality and compatibility, of course, are always the priorities of the various ILIAS versions. This is ensured by ILIAS’s clearly defined development process and its centralised release and project management.
ILIAS in Schools and Higher Education

ILIAS can be used in a whole variety of different ways. Many universities, for example, use ILIAS as an institution-wide learning platform for blended learning scenarios. Online courses complement classroom-based teaching. Courses can be offered in ILIAS in which students can not only access slides and scripts, but also discussion forums, tests and study groups. Courses are often created and the students assigned using administration and campus management systems connected to ILIAS. At the University of Cologne in Germany, for example, over 3000 ILIAS course are created each semester – automatically by the campus management of the university administration.

Many universities also like to use ILIAS to conduct online exams, such as at the University of Mainz, where tens of thousands of e-exams have already been sat. Special configuration options, such as kiosk mode or IP allocation, act as safeguards and guarantee that exams can be conducted securely and in adherence to examination guidelines.

New paths are now also being trod when it comes to apprenticeships and job training using ILIAS’s integrated e-portfolio. In some courses at the City University of Applied Sciences in Bremen, for example, maintaining and developing a portfolio is an assessed part of the course. The huge advantage for both students and teachers is that thanks to the Portfolio, Blog and Working Space features that are an integrated part of ILIAS, the portfolio work can be carried out in the same environment that is used for learning and working together.

More and more schools are also discovering the advantages of having ILIAS to supplement and expand their teaching. The Elly-Heuss-Knapp School in Neumünster (Germany) for example, uses ILIAS as an integral part of their vocational training course to become a certified care assistant. The traditional ‘work placement report’ part of the vocational training has been replaced with the Exercise Tool – during their work placement, students receive prompt feedback on the tasks they are given to carry out, enabling them to practice and improve on these tasks whilst still at the work placement (rather than receiving feedback later, when they are no longer immersed in the working environment).

“We decided to use ILIAS because ILIAS includes the same professional functions that can be found in commercial learning platforms – from SCORM compatibility and numerous Web 2.0 functionalities to the intuitive Test and Assessment tool. Especially important for us is ILIAS’s multi-client capability, which is ideal for enabling us to manage our various educational brands in one installation.”

Hermann Kögler, Board member of the private education provider COGNOS AG
More and more businesses and administrations are switching to ILIAS in order to profit from the certified SCORM support and the high degree of flexibility and adaptability of the software – without license fee costs.

The Generali Insurance company has been using ILIAS since 2014 as the company’s central qualification platform. The Generali Online Academy today regulates the training management for all distribution channels and also gives an overview of the complete educational programme available. ILIAS is used to map routes to qualifications with certificates and also to manage all the necessary resources for trainers, participants, materials and hotels.

The Duisburg-based KROHNE Group offers an open further-education platform on the topic of measurement technology. Over 12,000 users from around the world have already taken advantage of the SCORM learning modules on offer. Users who pass a test at the end of their module get a certificate generated by ILIAS.

Malik Management, St. Gallen, Switzerland, specialises in first class further education for managers and executives. Malik uses ILIAS’s learning-plan function to structure self-study phases. Tutors are able to take into consideration the individual time and work schedules of their students, without losing control of the overall process of the course.

ILIAS is the central and structure-giving element of Skyguide’s (Swiss air traffic control) e-learning scenario. The system is used not only to make online modules available. The deployment of CBTs and locally installed software applications are also initiated and managed via ILIAS.

The Italian machine manufacturer SACMI uses ILIAS in particular as a knowledge management system. Members of staff and users of the machines that are in use world-wide are able to access SACMI’s dynamic product knowledge.

"It is especially important for us that learners are able to access content using mobile devices. Thanks to ILIAS’s built-in responsive capabilities, this is no problem at all.”

Steffen Brauers, Direct Marketing and Global E-Learning, KROHNE Group
With ILIAS, learning is not something that is confined to courses. All materials needed for teaching and learning are available in the central repository. Access to the various objects and tools is controlled via the flexible role-based access control system. ILIAS is more than a simple learning platform – it is a world of knowledge.

How you structure your repository is up to you – either like a library or a catalogue of selected categories. Existing organisational structures can therefore be easily represented in ILIAS. You can also easily create deep and nested directory structures.

All content within your repository – whether created within ILIAS, imported or simply linked to, can be described with metadata and therefore easily found using the internal ILIAS search.

Access all your learning materials and tools directly from your Personal Desktop.

Everything at a Glance

Your Personal Desktop is your entrance into the world of learning and knowledge that ILIAS has to offer. It is also your own personal working space – from here you can, for example, continue working through a learning module or drop in to check on one of your study groups.

Selected learning resources and materials can be placed on your Personal Desktop, from where you can easily access them. You can also see your calendar, which shows you any appointments and deadlines that are coming up, and you can see if you have new mails or system messages. Should you wish to get in contact with any other users, you can see who is online from anywhere within ILIAS.

Your Personal Desktop also helps you to have a clear overview and manage your membership of courses and groups, as well as specific system settings such as your preferred language or personal profile.
Many Ways to Create Content

The best learning platform in the world is worthless without content. ILIAS offers you the tools necessary to add content to your installation in two different ways: you can import documents and materials or create content directly within ILIAS. ILIAS also supports the import of SCORM conformant learning modules, any kind of data files, and QTI-based test questions. The exchange of documents using WebDAV is also supported.

Another strength of ILIAS is its integrated authoring tools – for example tools for authoring learning modules or glossaries. Just like in a wiki, trainers and learners can actively cooperate and author content together online. The integrated style sheet editor allows you to easily alter the layout of your learning content. For offline authoring of learning modules you can use the powerful LibreOffice extension, eLAIX. The Data Collection feature is becoming more and more popular in order to document information in a more structured form.

E-portfolios document and reflect upon personal learning processes and are becoming a more and more important part of further education. ILIAS offers all the functions that you need for you to have your own portfolio. A huge advantage is that users create and work on their portfolios and artefacts in the same environment in which they have courses and carry out other learning activities. It is also possible to set ‘creating a portfolio or blog’ as an assignment that needs to be completed as part of a course.

ILIAS’s integrated Portfolio system allows each user to create, per target group, their own portfolio, fill it with content and make it selectively available as they see fit. A selected portfolio can also be designated as the user’s personal profile within ILIAS.

Paul Held, Scientific Director, Innovation in Learning Institute, University of Erlangen-Nürnberg

“The Innovation in Learning Institute at the University of Erlangen has been using ILIAS since 2001 in a whole number of projects. In 2007 we began introducing it to the University (FAU) itself. ILIAS now serves as the backbone of teaching and examining at the FAU. We are delighted that we made the right decision from the very first.”
Working Cooperatively

Working together in groups and working on material online together has always been one of ILIAS’s strong points. Learners are not mere consumers of knowledge, but active producers. Members of groups and courses can be granted extensive authoring permission and use the system to create content themselves.

Cooperative learning can be achieved by using the integrated wiki or by working together online to create ILIAS learning modules, glossaries, tests or exercises. The exchange of files is supported by version control and WebDAV interface.

All the functions you could need to manage groups and their participants are also at your disposal. These include a range of registration options, group passwords, maximum number of participants and waiting lists.

Manage Learning Flexibly

Using ILIAS, teachers are able to make learning content automatically available to learners dependent on certain conditions. It is possible, for example, to include learning objectives within course materials and test these with entry level and completion tests – based on these results, appropriate learning resources are then recommended. ILIAS makes it easy to enable multiple learning paths and adaptive learning.

ILIAS also supports self-directed learning, without the learner left being to their own devices. Learning plans allow students to define phases of self-directed learning in a blended learning scenario.

Learners can find out how they are doing with the Learning Progress function. Test and exercise results, time spent in learning modules and other factors can be taken into consideration.

Setting learning objectives and learning paths
Mirroring Organisational Structures

It is especially the case that businesses and public authorities need to be able to structure access to learning opportunities and reports on learning activities according to their hierarchies. Only a direct superior should, for example, be able to approve a member of staff’s course registration and later view his or her learning data. At the same time, however, members of staff from multiple departments should be able to take part in the same course as part of their continuing education.

The ability to define organisational units and then assign them users and authorisations makes it easy to deal with such scenarios. ILIAS is therefore a useful support in the processes of compliance management in business and administration. At the same time, data protection and the requirements of works and staff councils are taken into account, as of course is the need to have a transparent overview of the learning activities and skills development of members of staff.

Managing Competencies

Effective e-learning takes into consideration the strengths and weaknesses of the individual learners. ILIAS’s integrated Competence Management helps to measure and visualise the skills and abilities of each individual user and make suggestions on how to improve them.

Users can conduct a self-assessment and assign themselves predetermined proficiency levels with the help of relevant questions and statements. The 360° Survey allows third parties to estimate a person’s proficiency – for example colleagues from the same department.

ILIAS doesn’t only record current states though – it also makes it possible to give targeted advice on how learners can improve their abilities. Learning materials suitable for reaching the next proficiency level can be deposited and then recommended to individual learners.
ILIAS includes an integrated TEST & Assessment environment allowing you to create and administer online tests and exams. These can be used simply to assess your own learning progress or can be in the form of proper online exams. Test results maybe be used to trigger access to further materials for learners.

ILIAS offers a wide range of question types including, among others, single and multiple choice, matching and fill-in-the blanks, hot spot and essays. Additional types of questions, for example STACK questions, can be easily integrated via plug-in.

Question pools make it easy to re-use questions. When putting a test together, all types of questions can be combined freely. Questions can also be allocated to tests randomly. Other features include kiosk mode, answer-sensitive feedback, differently weighted questions, ECTS credit points support and certificates.

Whether you want to evaluate a class or conduct research, ILIAS’s survey tool allows you to create web-based surveys tailored to your needs. A wide variety of questions types and evaluation routines are available. You can define standard answer schemes, for example for ordinal questions, which can then be saved as templates in order to be easily re-used. This greatly increases your efficiency when it comes to creating new surveys.

Filter questions can be used to allow ILIAS to automatically direct a participant through a survey depending on their answers. Thanks to individual access codes, you can also conduct surveys with non-registered users. All test and survey results are visualised in ILIAS and can also be exported for external use.

"The further education department of the Medical Association of Westfalia-Lippe has successfully been using ILIAS to support and carry out training and further education for doctors and other medical staff since 2008. The comprehensive survey and test tools that are available even in the basic installation of the software, offer particular advantages. Other reasons for using ILIAS include not only the fact that the system is outstandingly easy and intuitive to use for both users and administrators, but also that it is compatible with all common LMS formats."

Elisabeth Borg,
Head of the Department of Further Education at the Medical Association of Westfalia-Lippe, Germany
Communicating with Ease

To stay in close contact with your students you can rely on the variety of communication methods available in ILIAS. Using the internal news system, for example, you can inform your course participants about room or programme changes. As ILIAS knows your students and their addresses, you don’t have to bother with tedious maintenance of mailing lists.

Forums can be used for content-related discussions or organisational issues. You can also easily create FAQ forums or bulletin boards. Discussion forums are also an excellent teaching tool – learners can practice debating or take part in discussion-based role plays.

For real-time communication you can use ILIAS’s integrated chat system. Additionally, external tools such as video conference systems, can be connected and used via the plug-in interface.

Searching and Finding

The quickest way to find something in ILIAS is to use the search function. This can be found at the top of any page in ILIAS and allows you to conduct key word, metadata or full text searches. If you activate Lucene, ILIAS will also include PDF and HTML documents in its searches. Search results can be saved and easily re-used. Search results will only show objects for which the user has access permission.

Private notes and public comments can be added to all content in ILIAS. Your own virtual ‘Post-It notes’ 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 keywords.

"Within the space of a few years, ILIAS has established itself, against all competition, as the LMS of choice at the University of Bern. Seminars and lectures are often accompanied by a ‘course’ in ILIAS, with the goal of optimising the ‘time on task’ during face-to-face teaching. Increasingly, in both teaching and research, individual ILIAS services are also being used as i-Tools – uncoupled from any seminar or lecture series being supplemented in ILIAS.”

Prof. Dr. Armin Hollenstein, iLUB University Bern
ILIAS is not a stand-alone solution, but rather a software system that integrates excellently with your IT infrastructure. Its powerful SOAP-based web service interface is often used to connect HR Management or teaching and course administration systems to ILIAS.

It is therefore possible to set up courses, assign teachers and learners, and to change settings practically by remote control. It is also possible to connect multiple ILIAS installations and allow their content to be made mutually available using the E-learning Community Server (ECS).

External software (for example, virtual classrooms) can be connected using ILIAS’s plug-in interface. External systems and content such as recordings of lectures or virtual laboratories can also be integrated into ILIAS using the LTI interface.

ILIAS’s visual appearance can be easily adapted to fit in with your corporate identity, allowing ILIAS to blend in seamlessly with your institution’s overall web presence. You can also make uniform style sheets for learning modules available system wide or only to particular areas.

Adaptability is not something that is only limited to the user interface. Functions and tools can be activated or deactivated globally or for individual roles. You can also configure the structure of the repository or the Personal Desktop.
ILIAS has been open source software since 2008 and therefore belongs to the pioneers of e-learning. The GPL license ensures not only that the user has access to the programme code and the possibility to engage in the further development of the software, but also guarantees the sustainability of the software development and the independence from commercial software companies.

That open source software can be secure software has been proven by the fact that ILIAS was granted security certification by NATO in 2008. Content and data in an ILIAS installation are extremely well protected against unauthorised access. That is why ILIAS was cleared to be run on NATO’s secured intranet in order to use and share sensitive learning content and documents.

In order to use ILIAS, whether as a learner, teacher, author or administrator, all you need is a normal browser. ILIAS can be used on mobile devices. Also, accessibility standards are guaranteed.

ILIAS can be used on a small scale and installed on a single server or be installed as a distributed system for huge installations. 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 hundreds of users accessing the system at any one time.

The ILIAS server can be run on all common operating systems. An integrated setup helps you to install and update your ILIAS.

There are several options available to authenticate users: as well as ILIAS’s own database, there is also LDAP, CAS, Shibboleth, Radius or SOAP. Single-Sign-On is also supported.

The complete administration and maintenance of the system is carried out 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 and basic settings.

“ILIAS has been, and is, the prerequisite for the conception and digital implementation of the curricula ‘technical drawing’ and ‘standardisation’. The subject content in ILIAS is now used by budding mechanical and industrial engineers in over a dozen universities, both in Germany and abroad.”

Prof. Dr. Wilfried Hesser, Helmut Schmidt University Hamburg
Extending Functionality

Even though ILIAS boasts a comprehensive palette of features, some e-learning scenarios may require additional features. Thanks to the open development process of ILIAS, in such cases, suggestions and ideas on how ILIAS could be further developed are easy to make.

New functions and improvements are first suggested and discussed online on the Feature Wiki at features.ilias.de. Subsequently, a decision is made at the Jour-Fixe meeting as to whether the feature should be adopted into the core software. If it is approved, programmers are commissioned to develop the new function and it is then made available on the ILIAS test and evaluation system and thoroughly tested. The new function will be made available to all users, at no extra cost, with the next annual major release of ILIAS.

Functions of external software systems (for example virtual classrooms) can be integrated into ILIAS using plug-ins. It is also possible to implement special features that are only of interest to individual users this way. On top of all this, ILIAS’s open source licence allows users to carry out comprehensive adjustments in order to adapt the system to their own specific needs.

Community and Support

As an ILIAS user you are not alone! Many users are organised in regional or national working groups, cooperate, exchange information and share their experiences. These working groups also often initiate the development of new features.

The ILIAS Conference offers an annual opportunity to get together with other users from all over the world. You can find information about the conference at www.ilias-conference.org.

For ILIAS developers there is additionally a bi-annual Development Conference as well as topic-specific workshops.

For professional support when it comes to setting up ILIAS, for training sessions and workshops as well as for the further development of the software, there is an international network of service partners to aid you: have a look at www.ilias.de.

For all queries and further information write to us at info@ilias.de.

Further Info:
www.ilias-conference.org
www.ilias.de
info@ilias.de
A Society for ILIAS

ILIAS’s publisher and also the home of the ILIAS community is the ILIAS open-source e-Learning e.V., a non-profit organisation comprised of developers, service providers and supporters of the software since 2009. Their membership fees and donations ensure the sustainability of ILIAS. This includes the coordination of the development of the software and defining processes, as well as supplying the necessary infrastructure for development and quality control.

The society organises community events such as the annual ILIAS Conference, the developers’ conferences and numerous user meetings. The society also finances numerous development projects in order to improve ILIAS, adapt it to the possibilities opened up by new technological developments and make it more user friendly.

The society is open to private individuals, higher education institutions, businesses and all other institutions that use ILIAS, as well as service partners who offer services related to ILIAS. At the Annual General Meeting, the society members make decisions on the society’s general direction and broad goals. The institutional members and the service providers are also members of the Advisory Council giving them even more direct influence on the further development of the software.

Members of the society profit from reduced participation fees for the ILIAS Conferences and access to additional information. Individuals belonging to institutions that are members can use the society’s own ECS server and have the possibility to prioritise reported bugs so that these can be more quickly corrected.

Further information on the society and how to become a member can be found here: verein.ilias.de
Selected References

Ärztekammer Westfalen-Lippe *
AOK Niedersachsen
ARAG
Basler Versicherungen
Bayer Vital
Belgisches Verteidigungsministerium
BGHW *
BGRCI *
BGW *
Bundesverwaltungsamt
Cognos AG *
Copernicus Provinz Bozen-Südtirol
Dachser
Dennis Gabor College Budapest
Deutsche Hochschule für Prävention und Gesundheitsmanagement *
Duale Hochschule Baden-Württemberg *
ETH Zürich *
FH Aachen *
FH Bielefeld *
FH des Bundes für Öffentliche Verwaltung *
FH Dortmund *
FH Nordhausen
FH Münster *
FH Vorarlberg *
Französisches Verteidigungsministerium *
Fundeon
Generali Versicherungen
HDI-Gerling / Talanx
Hochschule Biberach
Hochschule Bonn-Rhein-Sieg *
Hochschule Bremen *
Hochschule Bremerhaven *
Hochschule Karlsruhe
Hochschule Luzern *
Hochschule Ostwestfalen-Lippe *
ionesoft GmbH *
Interkantonale Hochschule für Heilpädagogik *
Karlsruher Institut für Technologie *
Katholische Universität Eichstätt-Ingolstadt *
Malik Management Zentrum St. Gallen
Martin-Luther-Universität Halle-Wittenberg *
Medizinische Hochschule Hannover
McDonald’s Deutschland
Nagaoka University of Technology
NATO Headquarters Allied Command Transformation
Niederländisches Verteidigungsministerium
Pädagogische Hochschule Bern *
Pädagogische Hochschule Thurgau *
Pädagogische Hochschule Zürich *
Pharmatechnik
Phorms Education *
Rheinische Fachhochschule Köln *
SACMI
Skyguide Air Navigation Services Switzerland *
SSI Schäfer IT Solutions GmbH *
Lufthansa Aviation Training Switzerland *
Technisches Hilfswerk (THW)
Universidad de Jaén
Universität Basel *
Universität Bern *
Universität Bonn *
Universität der Bundeswehr Hamburg *
Universität der Bundeswehr München *
Universität Düsseldorf *
Universität Erlangen-Nürnberg *
Universität Freiburg *
Universität Gießen
Universität Göttingen
Universität Hannover
Universität Hohenheim *
Universität zu Köln *
Universität Konstanz *
Universität Mainz *
Universität Marburg *
Universität Münster *
Universität Stuttgart *
Université Toulouse III
Universitätsbibliothek Tübingen *
Zumtobel

* User is also an institutional member of the society
Overview of Features

Personal Learning Environment
- Personal Desktop that shows personally selected learning resources, courses, groups etc...
- Personal Workspace including file uploader
- Management of own certificates and badges
- Personal blogs and portfolios
- Individual learning-progress checks
- Skills Management
- Personal Calendar
- Multi-language user interface (with more than 20 languages)
- ‘Who is online?’ function

Learning Content Management
- All content objects (courses, groups, learning modules, wikis, glossaries, podcasts and much more) are provided centrally
- Complete LOM metadata support
- Access control: role-based and preconditions
- Import interface for SCORM (1.2, 2004), HTML modules, ILLIAS (XML) and further formats
- SCORM Offline Player based on HTML5
- Integrated search engine

Learning and course management
- Courses and study programmes to support teaching and training
- Sessions that mirror face-to-face teaching
- Time-controlled access to learning objects
- Learning-goal oriented provision of learning content
- Learning progress control at course level
- Individual learning planning in courses
- Management of timed exercises
- Feedback function for participants of exercises
- Certificates and badges
- Course participant administration
- Registration function (including max number of participants)
- Course mail with member gallery

Authoring
- Integrated authoring environment for learning modules and glossaries
- SCORM 1.2 and 2004 certification
- SCORM 2004 online editor
- Integrated wiki
- Connected tests and glossaries
- Integrated data collection object

Collaboration
- Create and administrate working groups of any kind
- Timed and password protected registration
- Waiting list and option to limit maximum number of participants
• Resource management
• Container for collaborative editing of files
• History and version of files
• Data Collection for the structured gathering of information
• Group mail and public comments

Test & Assessment
• Question types: single choice, multiple choice, fill-in-the-blanks, assigning and placement questions with hot spots
• Plug-in interface for new question types
• Mathematical problem generator
• Administration of questions in central pool
• Ability to set testing options such as time allowed or marking schemes
• Versatile analysis tool (including export)
• Certificate function
• Learning progress control

Communication
• Awareness-tool for chat invitations
• 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

System Administration (Back-Office)
• Configuration of modules and services
• Global and local roles (unlimited)
• Permission and context sensitive online help
• Plug-in interface for connecting third party software
• Web Services / SOAP interface
• IMS LTI-Support
• Automatic registration, password generation and confirmation mail
• Privacy protection and security settings
• Authentication: CAS, LDAP, SOAP, Shibboleth
• Copyright Management (Creative Commons)
• Flexible adaptation of graphical user interface using skins
• Activation and administration of system languages
• Workflow engine for implementation of modelled workflow processes
• Multi-client capability

Survey
• Personalised and anonymous surveys
• 360° Survey connected to Competence Management
• Pools for question administration
• Online result analysis
• CSV and excel export of survey results