MOODLE AT THE FORSCHUNGSZENTRUM JÜLICH

Take a virtual tour

08. DECEMBER 2023 I INES SCHMAHL

Member of the Helmholtz Association

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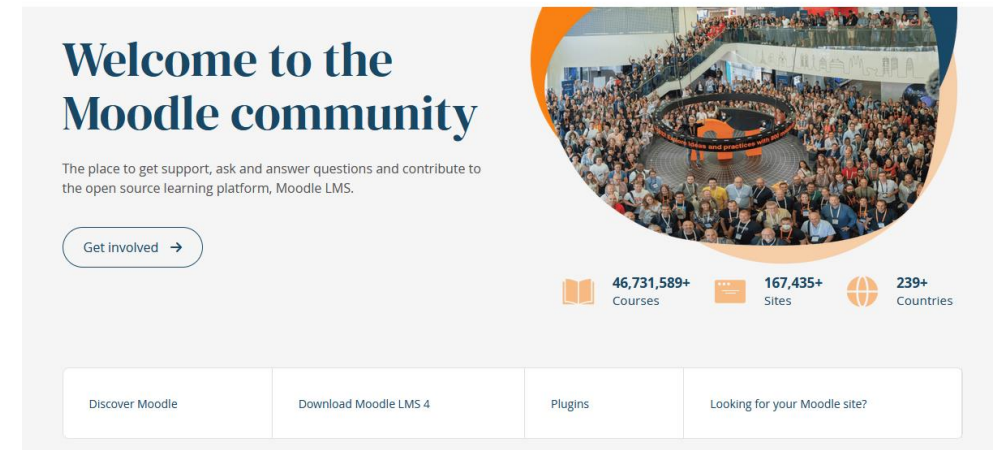Forschungszentrum

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What is Moodle?

Moodle is an open source learning management system.

Moodle is used today in 239 countries.

Moodle allows the creation of online courses.

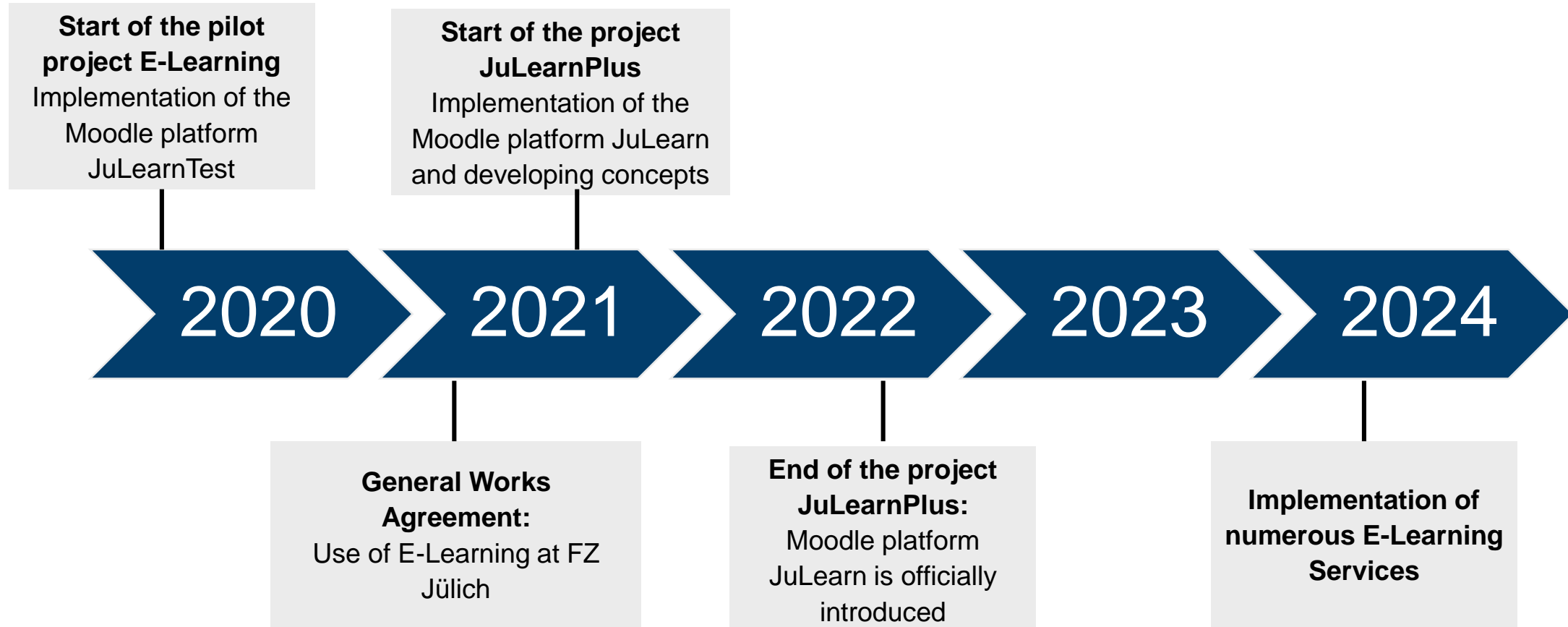Many features and plugins are available to customise the courses.

https://moodle.org/

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What is Moodle?

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Timeline

JuLearn → digital infrastructure at FZ Jülich for teaching and learning

Start of the pilot project E-Learning
Implementation of the Moodle platform JuLearnTest

Start of the project JuLearnPlus
Implementation of the Moodle platform JuLearn and developing concepts

2020 **2021** **2022** **2023** **2024**

General Works Agreement:
Use of E-Learning at FZ Jülich

End of the project JuLearnPlus:
Moodle platform JuLearn is officially introduced

Implementation of numerous E-Learning Services

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Overview

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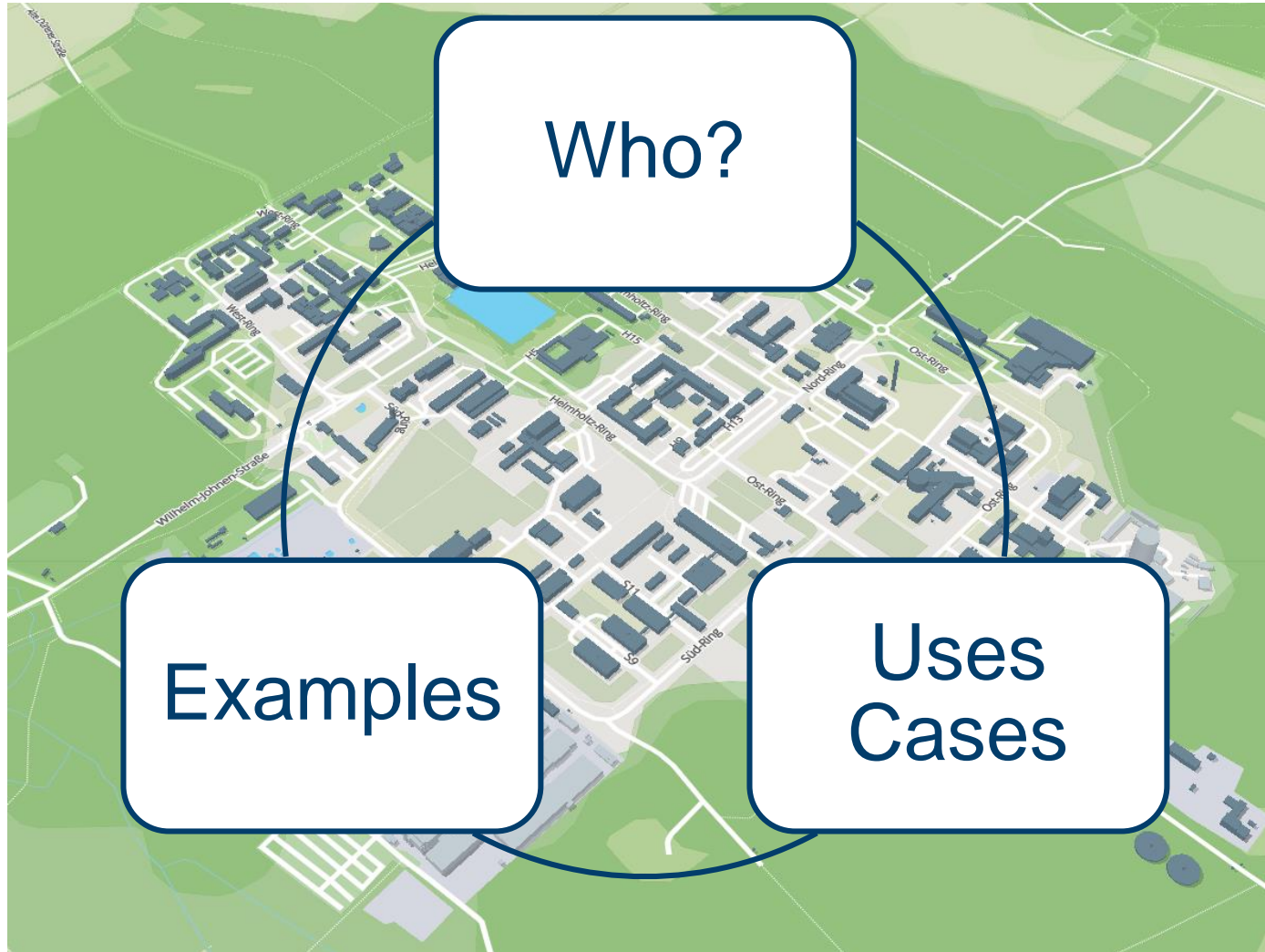
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Who?

Who provides trainings?
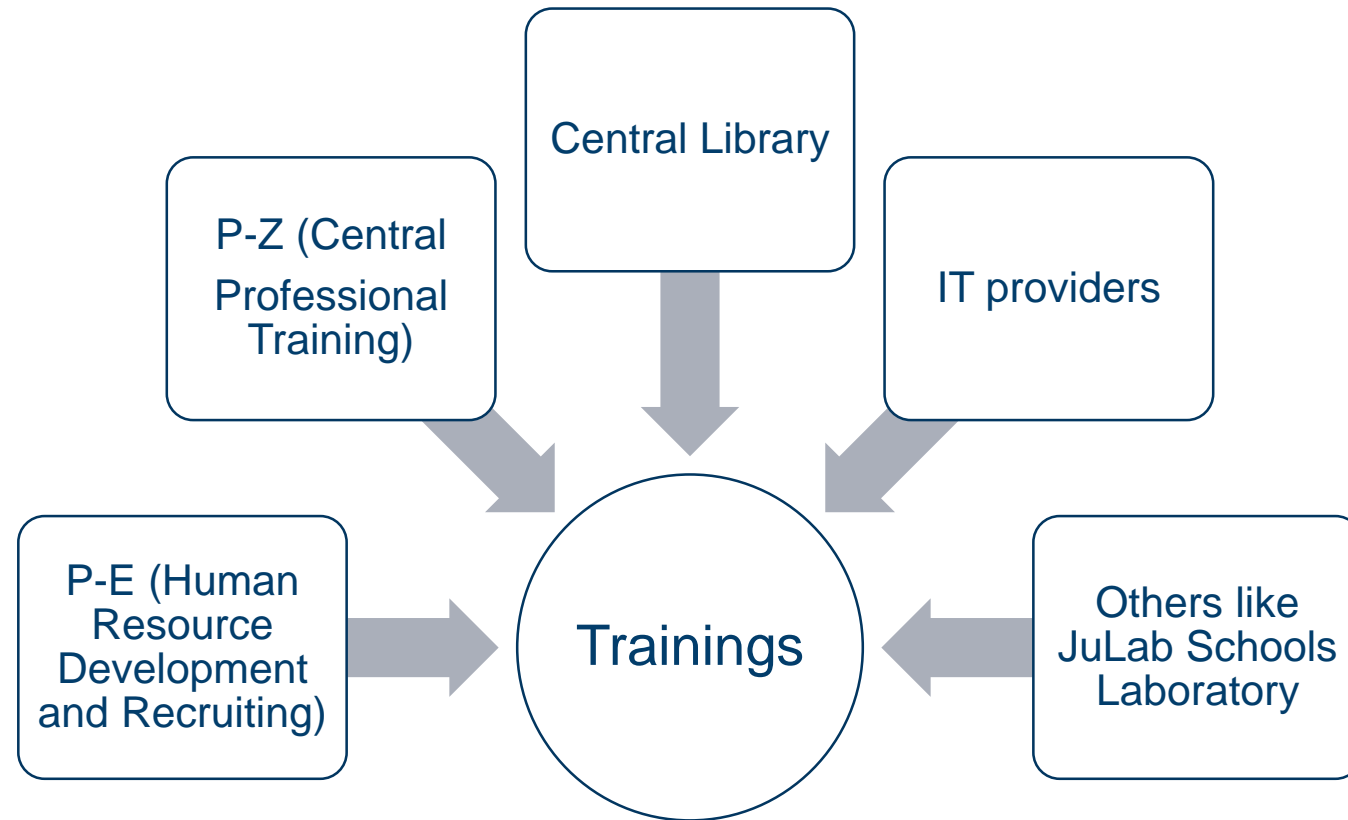
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Who?
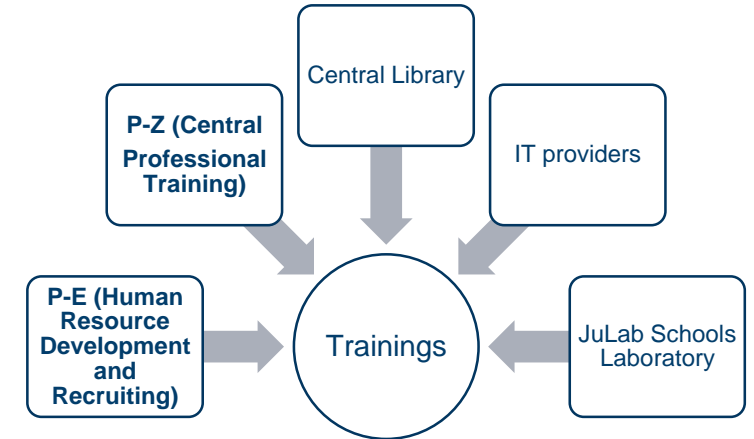
P-E (Human Resource Development and Recruiting)	P-Z (Central Professional Training)
• Employees are the most important resource. • P-E supports employees with a comprehensive training programme covering topics like project management, personal development or health.	• P-Z is responsible for the coordination of professional trainings and internships. • P-Z supports trainers.

https://www.fz-juelich.de/en/gp

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Who?
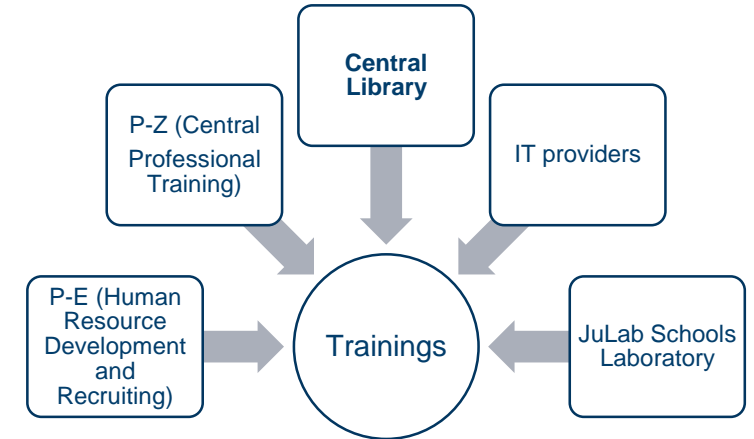
Central Library

- is responsible for supplying employees with literature and information.

- supports employees with trainings and advice.

https://www.fz-juelich.de/en/zb

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Who?

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                    ┌─────────┐
                    │ Central │
                    │ Library │
        ┌──────────┐└────┬────┘┌────────────┐
        │ P-Z(Central│    │     │ IT providers│
        │Professional│    ▼     │            │
        │ Training) │─────┐ ┌───│            │
        └──────────┘     ▼ ▼    └────────────┘
┌──────────────┐      ┌────────┐      ┌────────────┐
│ P-E (Human   │      │        │      │JuLab Schools│
│ Resource     │─────▶│Trainings│◀────│ Laboratory │
│ Development  │      │        │      │            │
│ and          │      └────────┘      └────────────┘
│ Recruiting)  │
└──────────────┘
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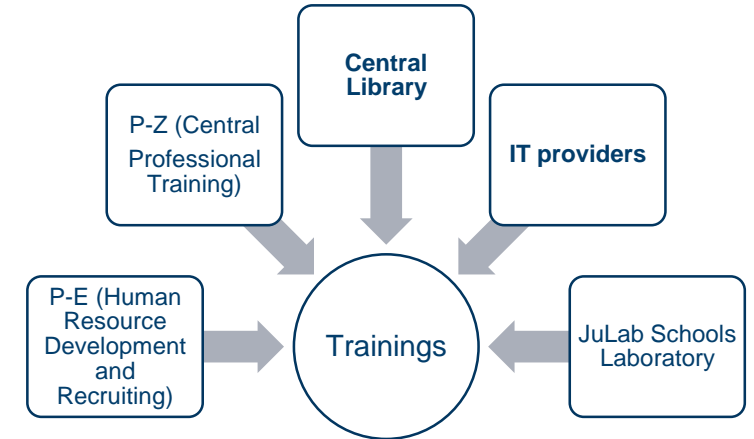
IT providers like JSC (Jülich Supercomputing Centre)

- JSC provides supercomputer resources, IT tools, methods, and know-how

- This includes special trainings on programming languages, HPC systems or introductory courses on deep learning.

https://www.fz-juelich.de/en/research/information-and-the-brain/supercomputing

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Who?
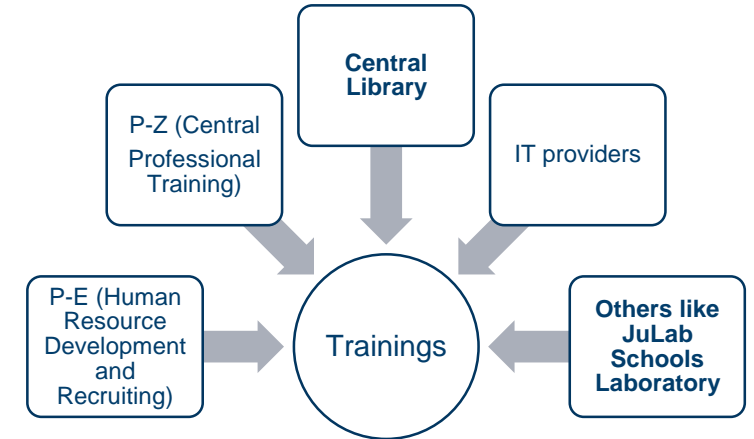
Others like JuLab Schools Laboratory

- JuLab gives pupils and teachers the change for a direct exchange with experts in Jülich research.
- There are numerous offers like workshops, online courses, career orientation days, etc.

https://www.fz-juelich.de/de/julab

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Use Cases

Click on the doors
1, 8, 19 and 24.

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Fully automated self-assessment

Testing knowledge and skills without the need to interact between learners and teachers

Can be used to test

- whether a learning goal has been successfully accomplished

- what level of knowledge the learners have

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Fully automated self-assessment

Advantages:

- Makes the process easier especially for large groups

- Makes it easier to repeat the test

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Fully automated self-assessment

Advantages:

- Makes the process easier especially for large groups

- Makes it easier to repeat the test

- New employees can be assigned to the test anytime

- Learners can do the test on their own at any time and in any place

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Fully automated self-assessment

Advantages:

- Makes the process easier especially for large groups

- Makes it easier to repeat the test

- New employees can be assigned to the test anytime

- Learners can do the test on their own at any time and in any place

- Ensures the documentation of the results

- Ensures a consistent standard in the assessment

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Fully automated self-assessment

Question:

How good can a test with standardized answers evaluate whether learners understood the learning contents?

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Example: Fully automated self-assessment

Prevention of corruption

Requirements for the course:

- All employees need to be trained → large group of learners

- A test must be passed at the end of the course → Certification

- Standardized level of knowledge

- Regular repetitions

- New employees should be easily introduced

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Example: Fully automated self-assessment

Decision:

The best approach here is a fully automated self-assessment.

Course structure:

- Introduction video

- Information on prevention of corruption

- Case Studies

- Test

- Feedback

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Example: Fully automated self-assessment

Decision:

The best approach here is a fully automated self-assessment.
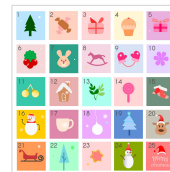
Course structure:

- Introduction video
- Information on prevention of corruption
- Case Studies
- Test
- Feedback

The teaching content should be self-explanatory and engaging.

Teaching methods:
Mixing media types and theory and case studies

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E-learning courses on specific topics

- Teach subject-specific knowledge and skills

- Complete course units

- 2 options for implementation

  - Learners work their way through the course on their own

  - Tutors give support if needed

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E-learning courses on specific topics

Advantages:

- Learners can do the course on their own at any time and in any place

- Courses can be organized as modules

- This allows learners to select and combine courses

- Individual support can be provided by tutors

Note:

Requires learners to be motivated and have a good self-assessment

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Example: E-learning courses on specific topics

Become a literature search expert!

Requirements for the course:

- Learners are trainees on the campus → large group

- Course is on a voluntary basis

- Teaching content:

  - library services for the trainees like the reading room or workplaces

  - How to use the information portal JuLib eXtended for a literature search

- Easy access for learners anytime and anywhere
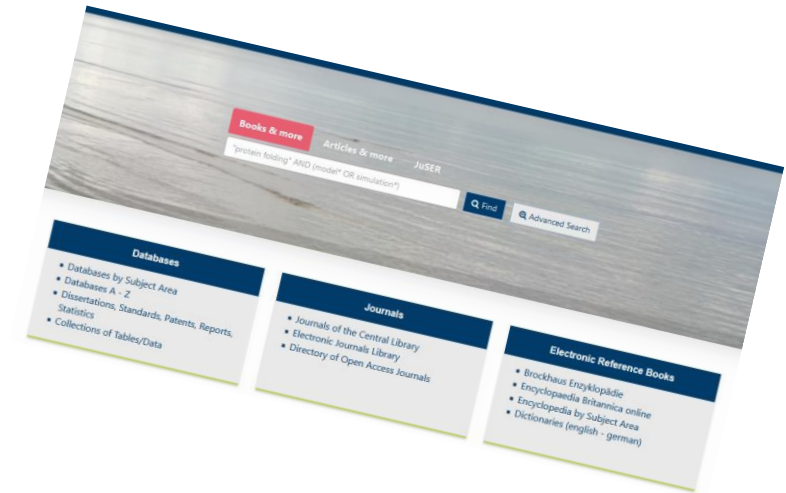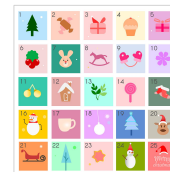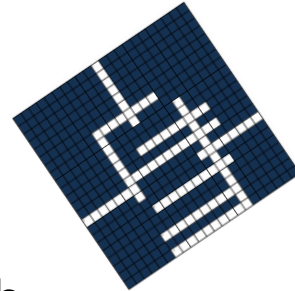
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Example: E-learning courses on specific topics

Decision:

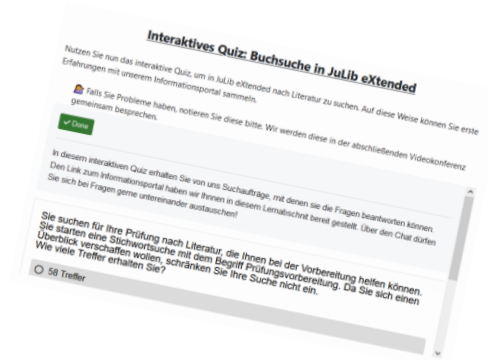The best approach here is a E-Learning course.

Course structure:

- Introduction

- Information portal JuLib eXtended

- Check list for your next literature search

- Summary

- Feedback

The teaching content should fit to the target group and give a dense overview.

Teaching methods:
Short information sections with fun features like video or crossword puzzle and working material at the end

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Blended learning courses

- Blended learning combines online and in-person teaching.

- In general, the units take place in alternation.

- It is important that in-person and online units are well aligned with each other.

- Blended learning combines the advantages of both, but it requires more preparation.

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Example: Blended learning courses

Open Science Workshop

Requirements:

- Learners are PhD students

- Background knowledge is heterogeneous

- Open Science is a new topic, which demands teaching and individual tutoring

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Example: Blended learning courses

Decision:

The best approach here is a blended learning course.

Course Structure:

- Start with moodle course

- In-person workshop

- Exercise in Moodle

- In-person workshop

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Example: Blended learning courses

Decision:

The best approach here is a blended learning course.

Course Structure:

- Start with moodle course

- In-person workshop

- Exercise in Moodle

- In-person workshop

Content:
- Introduction into open science and information on the workshop
- What is a model?
- Exercise as preparation for the in-person workshop

Globe placed on a wooden board
Intisar Ali
https://en.wikipedia.org/wiki/Globe
CC BY-SA 4.0
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Example: Blended learning courses

Decision:

The best approach here is a blended learning course.
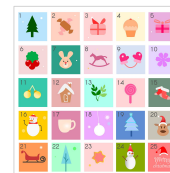
Course Structure:

- Start with moodle course

- In-person workshop

- Exercise in Moodle

- In-person workshop

The teaching content demands the ability to transfer theoretical concepts on real world problems.

Teaching methods:
- Mix of teaching and tutoring
- Learners get time to reflect the gained skills.

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Outlook

For 2024:

- Helpdesk for all requests about E-Learning

- Open hour

- Train-the-trainer courses on how to create E-Learning content

- Service for the creation of specific content on request

- Templates for courses

- Video studio

- Subject-specific E-Learning courses for institutes

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