

# Learning is Personal

V 1.1

**An App to document and analyze  
classroom activities**



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Links:

<http://talkademy.org/index.php?id=80>

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# 1 Introduction to LIP and this document

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This document is designed to support users of Learning is Personal (LIP) in understanding the functions of the program and applying it optimally in their work.

- Teachers, who are using LIP in their classes, should read the complete document.
- Students, who only use LIP to document their activities, should get familiar with chapter 2 (Logbook, Diary and Plan). Reading more is optional.
- Users supporting the data management should get familiar with chapter 1 (introduction) and 4 (administration). Reading more is optional.

**Related Documents: This document includes references to the "Initial Configuration Tool" and its manual.**

*To make this manual easily readable, we will use male pronouns when referring to the users, students, etc., while wishing to refer to people of the male AND the female gender.*

## 1.1 Why LIP?

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Learning processes are highly personal and individual – schools unfortunately in most cases are not. One of the reasons why individuality is often not present enough in schools are missing opportunities to make learning achievements visible. The common learning and measuring of the learning processes of all students of a class together is the only option for observing which student is keeping up with the program and which is not able to follow. By doing this we accept that individualization gets out of focus - which is externally pushed by the pressure of PISA-studies and education standards.

LIP wishes to support the development of another path by making it possible for teachers to document and evaluate the learning activities of each individual student. Through this system learning achievements are made visible, as well as learning strategies. By looking at the data teachers for example are able to observe whether a learning strategy has proven effective for a student or not.

The basic method used here is observation: The more data about the activities of the individual students are collected, the more conclusions concerning the competencies of the students are possible and the more meaningful these conclusions are. Therefore, the main function of LIP is the documentation of observations: For this function to be possible it has to be adapted to the situation in which the teacher is compiling the documentations, which means that it has to be possible for the

teacher to enter the information during classtime. Also it has to be simple enough for students to be able to document their own activities. For the latter it is important that during the documentation the student does not need to make any interpretations of his activities, so the documentation simply focuses on WHAT is happening – conclusions concerning the strategies, competencies, etc. are automatically drawn by the system.

LIP was inspired by the following ideas:

- The pedagogies of Maria Montessori and self-determined learning: The child decides what it works, how, for how long and with whom.
- Formative assessment: Instead of being given simple grades, students receive an assessment of their learning which is designed to support the student by giving him information on his learning processes ("feed forward")
- Making Learning Visible ((c) John Hattie): Visualization of learning achievements.
- Flipped classroom: To acquire the learning matter individually and based on material (e.g. with the support of videos) – usage and practice should take place in groups and with the support of the teacher.
- Freedom vs. control: Making a maximum of freedom possible for the student without losing the overview of what the individual student knows and is able to do as well as in which field he needs further work.
- Learning diagnostics and training regulations in sports activities: In the analysis of fitness, sports, and medical rehabilitation systematical documentation is standard. Since the introduction of apps like Runtastic and Wathcadoo for smart phones the tracking of training progress has become mainstream.

LIP was developed by the NGO "Verein Offenes Lernen" in the context of the EU-funded project NEXT-TELL ([www.next-tell.eu](http://www.next-tell.eu)).

## 1.2 LIP - Overview

### 1.2.1 Main screen

If you open LIP, you see the following screen:

The screenshot shows the LIP main screen with the following elements and annotations:

- main functions:** Points to the navigation bar (Logbook, Didactic Row, Diary, Plan, Analysis, Group, Inventory).
- groups:** Points to the group selection field (1D).
- students:** Points to the student list (Damir, Desiree, Donovan, guest, Dorothea, all).
- data about one single observation + SUBMIT-button:** Points to the 'Free work' tab and the input fields for material, assignments, and observations, along with the 'submit' button.
- calendar and list to show data that has already been entered:** Points to the November 2014 calendar and the empty table below it.

Table 1 - LIP main screen

The main function groups are

- **Logbook** - for entering data
- **Didactic row (planned for LIP V1.2)** - for displaying the didactical order of activities and offer an alternative, spreadsheet-like mode of entering data (rows: activities, columns: students - selecting cells enters data) as well as displaying already existing data by markers in the cells.
- **Diary** - the complete list of a selected student
- **Plan** - entries, that had been marked as "Planning" (also per students)
- **Analysis** - various ways to view existing data
- **Group** - for creating new groups of students (Note: depending on the configuration this feature might be disabled, as groups can also be created using the "Initial Configuration Tool")
- **Inventory** - for entering and maintaining material

### 1.2.2 Functionality

LIP offers two main groups of functionality:

1. **Data collection:** A simple, intuitive opportunity to document observed processes: WHO did WHAT, WITH WHOM, HOW, and using WHICH MATERIAL? The HOW, WHICH MATERIAL and WHAT don't all have to be stated, one out of these three is enough.
2. **Data analysis:** The collected data is being analyzed according to three aspects:
  - Activities and topics: This shows the teacher which topics the student is working with and which ones he is avoiding.
  - Competencies: This part is only analyzed on a basic level within LIP, but through the connection to the two NEXT-TELL tools "MyClass" and "OLM" a more detailed analysis is possible. (see chapter 5)
  - Social: Who likes working with whom?

The data analysis gives the teacher valuable input for planning his lessons, which, by the way, he can do using the same tools he uses for the data collection.

### 1.2.3 Data model

The data model, on which this software is based, contains the following parts:

- A list of **materials** which can be used during the lessons. Each of the materials is included in a material group and a subject area. The field "material" (see fig. 1) is initialized with default values (those materials that exist for the current group). Each school selects a subset of existing materials and puts it into their **inventory**.
- A list of **assignments** which can be realized using the existing material (e.g. with the material "simple vacations brochure London" different tasks like "reading", "excerpt" and "orally summarize" can be realized). The field "works on assignments" (see fig. 1) is initialized with default values - according to the needs of the teacher.
- A list of **competencies** was compiled based on existing standards (BIFIE education standards, CEFR, etc.). The competencies are connected to a combination of material(s) and assignments. This way the system automatically "knows" that if a student for example used the simple vacation brochure of London written in simple English and wrote a summary about it he developed his competencies in "A2 reading" and "A2 writing". The list of competencies is not visible at documentation time, so nobody has to know which competencies are addressed, or even needs to assess those competencies - this is done "in the background".
- **Observations:** In the third field (see fig.1) teachers have the possibility to enter their observations. This field is also initialized with default values (e.g. "done"), according to the needs of the teacher. In this field also observations concerning the social behavior can be documented (e.g. concerning the motivation of the student).

- The identities of the students are enciphered and stored in the central data base. The “translation” of the enciphered data into plain text happens in the specific end device.
- Multi-client capability: A part of the data is specific for each school (e.g. the list of materials) and another part is the same for everyone (e.g. the model of competencies).

## 2 Logbook, Diary & Plan

The Logbook is used to document the observations in the classroom.

The screenshot shows the 'Logbook' interface with the following elements:

- Navigation tabs:** Logbook, Didactic Row, Diary, Plan, Analysis, Group, Inventory.
- Class/Group selection:** 1D
- Student selection:** Damir, Desiree, Donovan, guest, Dorothea, all.
- Activity type selection:** Free work, Test, Presentation, Assignment, Coaching, Others, Planning.
- Material input:** with material (what) - Gruffalo
- Assignment input:** worked on assignments (why, aim; rem.: separate by ", " comma) - read
- Observations input:** Observations (how, results) - very loudly
- Privacy toggle:** privat
- Buttons:** submit, empty form
- Calendar:** November 2014, with the 17th highlighted.
- Logbook Table:**

when	who	what	content	observation
No data available!				

Figure 1 - Log complete view

### 2.1 Documentation of activities

To fill the log, and by doing that document the currently observed task, the user has to start on the top of the page and make his way down (see figure 1):

- select the group and the student(s)
- select the social setting: free work, test, presentation, etc. (these labels are customized to the needs of the teacher); the only "compulsory" label is "Planning", as it has the special semantics, that this activity was not fulfilled but is planned for the future.
- enter the material (first typed letter will bring up a list of materials from the inventory that start with this letter)
- enter the assignment (first typed letter will bring up a list of pre-defined assignments)



- enter an observation (first typed letter will bring up a list of pre-defined assignments)
- if the entry shall only be visible for the person who created it: click the button "privat"
- calendar: the default date is today, however it is possible to click a day in the past to document observations that happend some time ago or in the future (for planned activities)
- press SUBMIT

After submitting, the form becomes empty as soon as the data are successfully stored and thus is ready for the next entry. If you want to empty already entered data, press EMPTY FORM.

The following facts are valid for the 3 fields material, assignment and observations:

- lists are prefilled with user-defined values that are loaded from the database
- entering the first letter opens a list of items that start with this letter
- the user can select an item from the list or enter free text
- more than one entry is possible (e.g. material: "Gruffalo"; assignment: "read", "translate")
- at least one of the 3 fields must be filled

The example in fig.1 has the following semantics:

*"On November 17th 2014, Damir and Desiree spend some time of their time for free work on reading the Gruffalo; they read it very loudly"*

## 2.2 Overview of the log entries

At the bottom of the form, there is a calendar, that displays already entered data when clicking on a day. Per default, all entries for all students are shown (see fig. 2); selecting a student (on top of the form) restricts the displayed items to this student.

November 2014						
Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						







Logbook					
when	who	what	content	observation	
Free work	Desiree, Donovan	Hello1			 
Free work	Donovan	ABC			 
Free work	Donovan, Desiree	Benny_Bear, Mummy...			 

Figure 2 - already documented

The list displays that material in the column "what", the assignment in the column "content" and the observation in the last column.

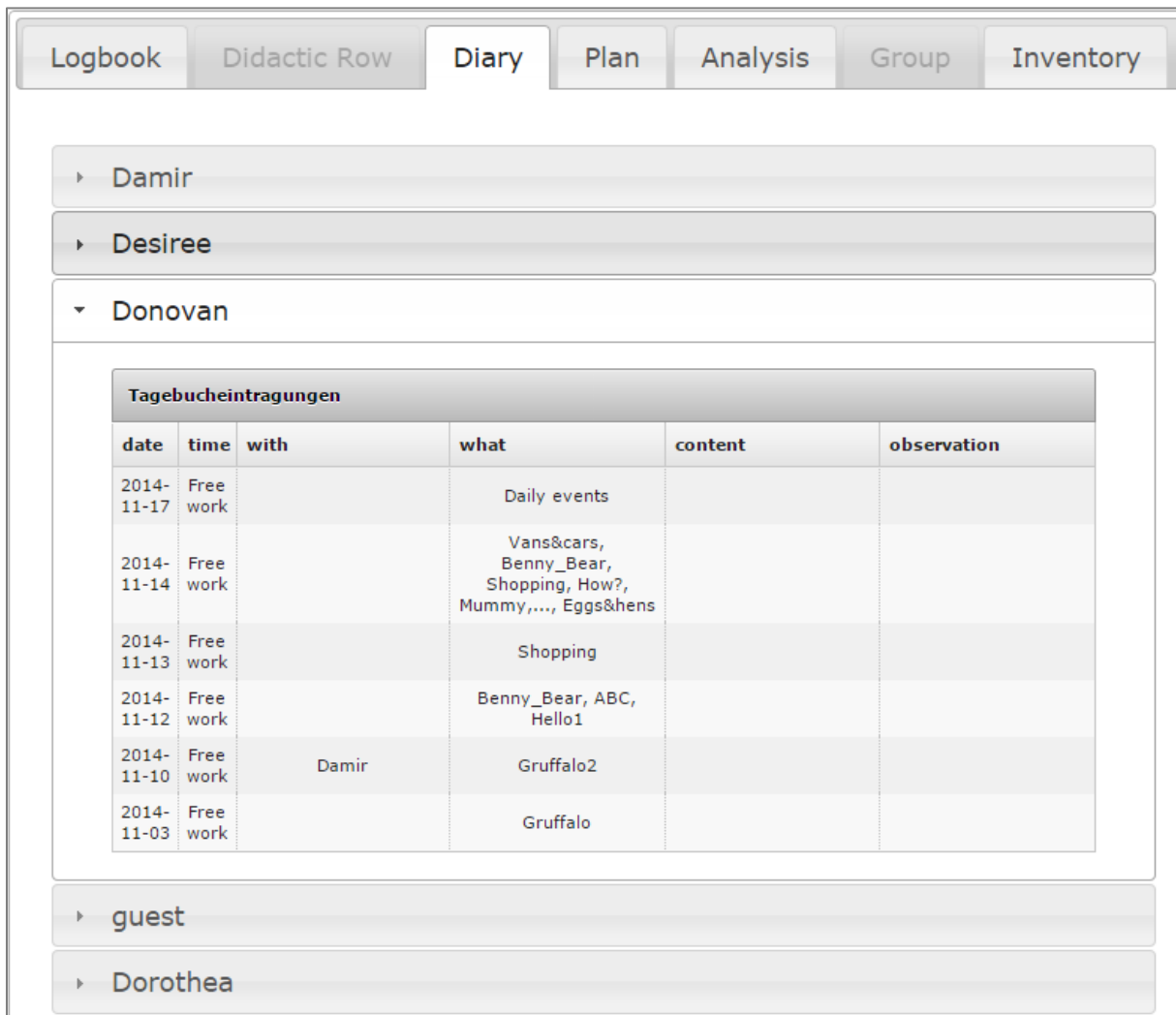
## 2.3 Editing and deleting existing data

The edit-icon (paper and pencil) at the right side of the list opens the entry and allows changing it. This has proved to be an extremely useful feature - especially observations tend to be added or changed some time after the original entry was created.

The trashcan next to the edit-icon allows to delete the entry.

## 2.4 Diary

The diary shows the whole history of all entries for a selected student (see fig. 3).



Tagebucheintragungen					
date	time	with	what	content	observation
2014-11-17	Free work		Daily events		
2014-11-14	Free work		Vans&cars, Benny_Bear, Shopping, How?, Mummy,..., Eggs&hens		
2014-11-13	Free work		Shopping		
2014-11-12	Free work		Benny_Bear, ABC, Hello1		
2014-11-10	Free work	Damir	Gruffalo2		
2014-11-03	Free work		Gruffalo		

Figure 3 - the whole history

The table looks similar to the one next to the calendar at the bottom of the log - again, there are the columns "what", "content" and observation. For convenience, it is located on an own tab.

The diary has proved to be extremely useful for planning as well as for talks and reflection with students and parents.

## 2.5 Plan

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The tab "Plan" looks exactly like the Diary - but displays only those entries that were marked as "Planning" (see fig. 1 - social setting).

### 3 Analysis

The analysis makes it possible to follow up on the activities on a broader level than just one entry. On top of the screen there are various possibilities to define which data should be used in the analysis ("filters"). At the bottom, a list of students allows to "open" the data for a student. (see table 2)

**Filters:** which data should be included into the analysis?

- social setting
- domain
- material's language
- time (sliders to set begin- and endtime)

Logbook Didactic Row Diary Plan Analysis Group Inventory

Free work Test Presentation Assignment Coaching Others Planning

Math Science Language Music Tinkering Arts Sports Outdoor Other

DE EN FR SL HR CS HU IT alb bos tur RU

14/15 [47] Mo - 14/15 [45] Mo

▶ Damir

▶ Desiree

▼ Donovan

**was wann**

**material**

Table 2 - Analysis

#### 3.1 Analysis per student

When choosing the name of an individual student the user is presented a list of graphic images which visualise different aspects of the student's learning process.

Some important aspects about the graphics:

- Colors represent different subjects (default: blue for language, red for math, green for science)
- "missed parts": for each item of the list of social settings, the system checks if the student has the same number of entries as the other students have. E.g. If a student has no entry "free work" on a day where at least one other student has "free work" , then this is marked as "Free work-missed".
- The saturation of the color reflects the accurateness, thus entries that are older have paler colors.
- "Maximum value line" in some graphics ("material" and "categories") there is a black line that indicates the maximal value of a bar. If the actual bar is below it, this means that not 100% of the time was used for this activity (e.g. because 2 activities were documented on the same day). This is an indicator to how much students are focussed on their work.
- "n/a" stands for entries for which the system does not find any metadata, thus cannot connect it to a subject.
- The label always belongs to the left edge of the bar.

We present the graphics here in the same order as they appear online:

### 3.1.1 What? When?

In this category the user has an immediate overview of what the student did and how work in different subjects was done in different school weeks. To achieve this LIP offers two graphics here. The first one shows the distribution of the activities to the subjects. The second part shows the distribution of these activities time wise. Each beam represents one week.

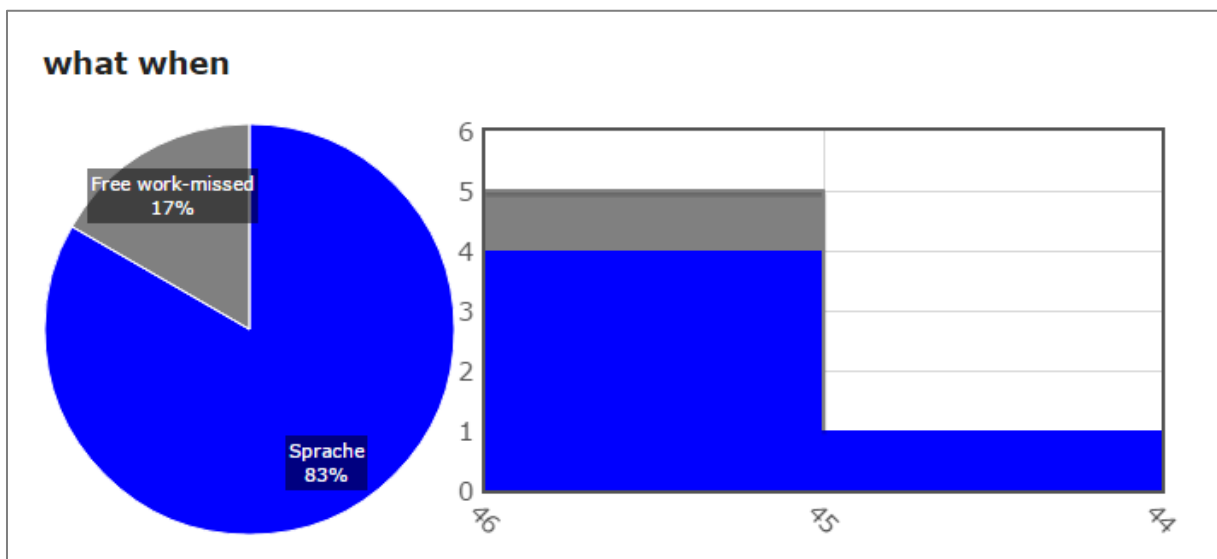


Figure 4 - What? When? Example 1

Interpretation of fig. 4:

Donovan had 5 entries in calendar week 46 and only one in calendar week 45. In calendar week 46 at least one other student had 6 entries "Free work", thus Donovan had missed one (which makes about 17% of total time). All of Donovan's entries are linked to the subject "Sprache" ("language").

The more data and the more different subject are available, the more colorful the graphics gets (see fig. 5).

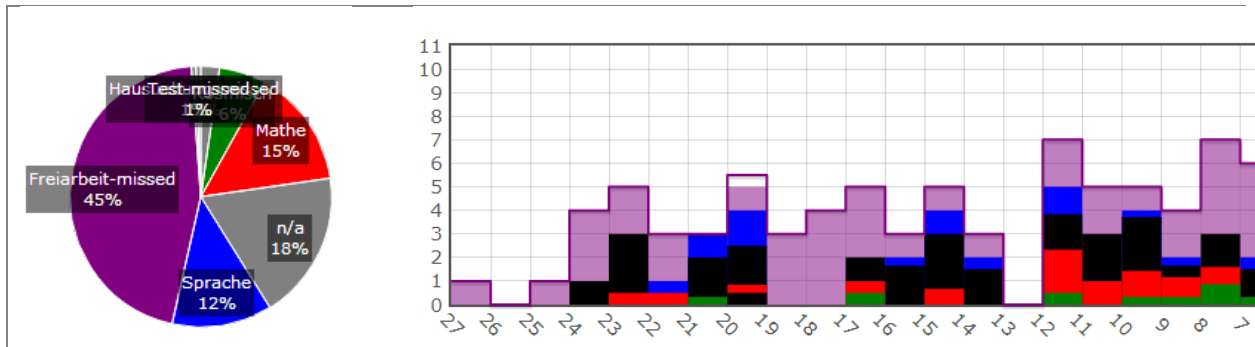


Figure 5 - What? When? Example 2

Finding a good granularity of data and documentation process that results in not too little and too much data (make data easily readable!) is a challenging task when setting up LIP - and an eternal field of communication and reflection for the involved teachers!

### 3.1.2 Material

This graphic shows with concrete materials the student has used how often.

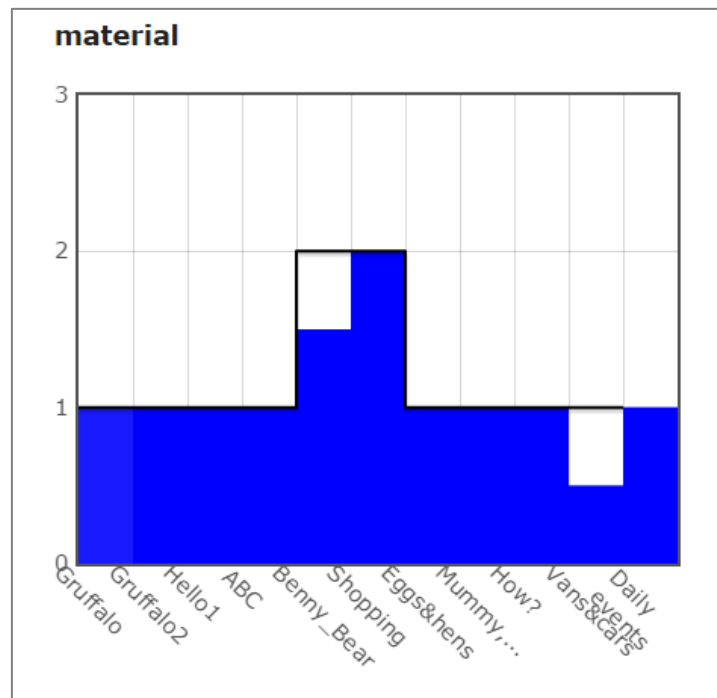


Figure 6 - Material - Example 1

Interpretation of fig. 6:

Donovan used 11 different materials, most of them only once. He did the "Shopping" twice. At one day he used "Benny\_Bear" he also did something else, thus didn't devote his whole time to Benny\_Bear. Same is true vor "Vans&cars", which he used only once.

Fig. 7 shows a more colorful example - including the typical shades of saturation, which indicate the age of the data.

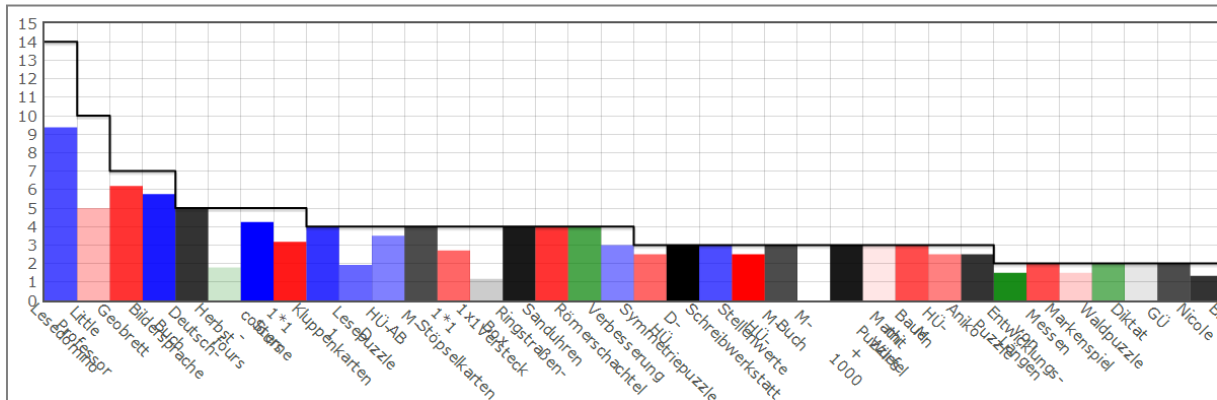


Figure 7 - Material - Example 2

### 3.1.3 Categories

Each material belongs to exactly on category. Typically the category would either be topics within a subject (in user-defined granularity) or it would refer to the type of material.

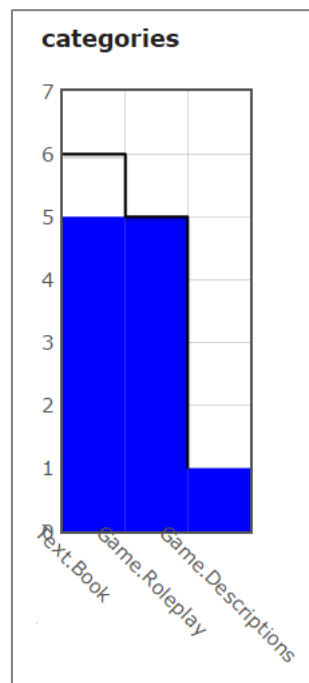


Figure 8 - categories - Example 1

The first example (see fig. 8) shows types of material: Game.Descriptions, Game.Roleplay and Text.Book. These categories are a big help when new material must the entered into the system: Just

tell the system that the new material has the category Text.Book and all the linking to competencies happens automaticall.

The graphic shows the distribution of usage of materials that belong to certain categories. The black "maximum value line" has the same semantics as in the graphics before.

In the second example (see fig. 9) the categories are used to express topics.

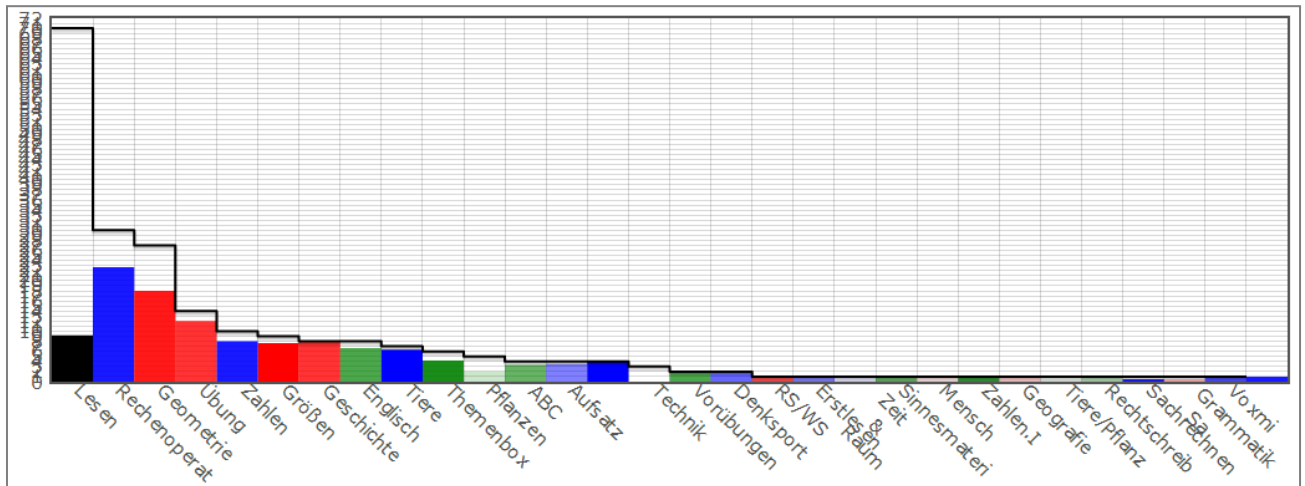


Figure 9 - Categories - Example 2

### 3.1.4 With (with whom)

Since interactions form a central component of learning processes and influence these strongly, LIP also includes a visualization of the social component, showing with whom the student spent most of his learning time with.

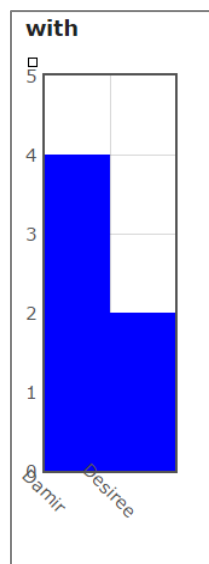


Figure 10 - With whom - Example 1

Fig. 10 shows that Donovan had worked 4 times with Damir and 2 times with Desiree. In the second example (see fig. 11) we see that the color-coding of subjects is also used in this graphic.



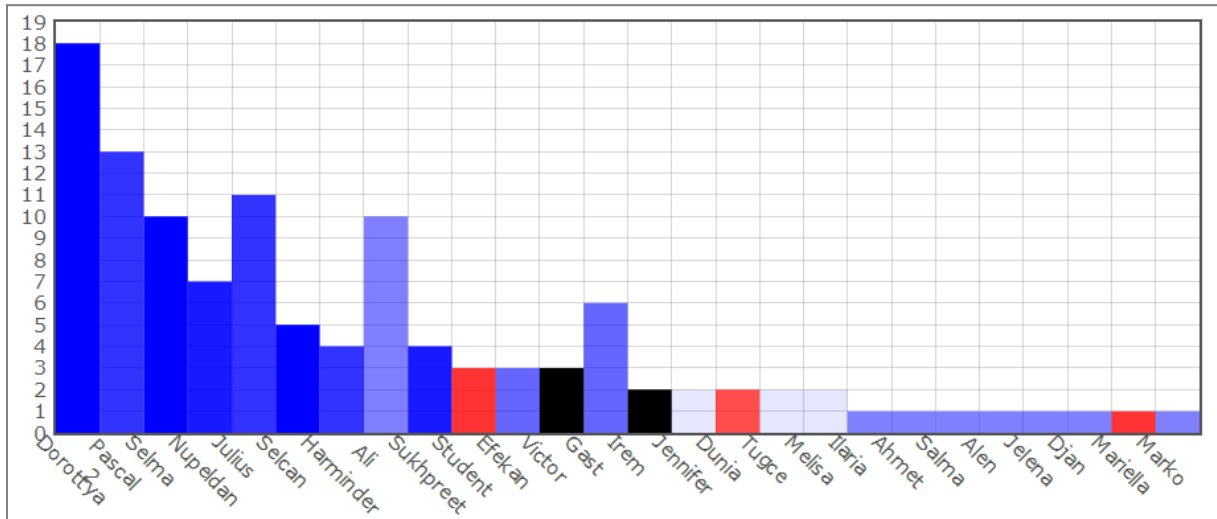


Figure 11 - With whom - Example 2

### 3.1.5 competencies

The current version of LIP (V1.1) does not show any analysis of competencies itself, as it is part of the nextTRACK package. It exports data about competencies via myClass to the OLM - for further analyses.

Please refer to chapter 5 (and further to the "Initial Configuration Tool") for more information!

## 4 Administration

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### 4.1 Creating groups, students and competencies

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The current version of LIP (V1.1) handles the creation of groups, students and competencies via the "Initial Configuration Tool".

For more information please check out its manual!

### 4.2 Inventory

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The link to a material (the "what"-field) is one of the most important sources of data for LIP. Therefore LIP must make sure that data of material is available in good quality.

"Inventory" provides two main functions:

1. Create a new material, that is then available for all schools
2. Pick an existing material and make it usable for the school of the current user (put it into the users "inventory")

If text is entered in the field "originalname", then the system searches its materials for a match. If there is no match, then a NEW material will be created and in the same step be made part of the inventory of the current school (case 1).

If the originalname does already exist (the user picks an item from the suggested list), then the data of this material will be loaded. The user can then change the data (e.g. give the material a new name, tell in which room it is located, etc.). SUBMIT will then create this material in the user's inventory.

The "inventory" function can provide reports about the complete list and broken material (at the bottom of the form) and it can trigger printing QR codes for the material.

There is quite a lot of information that can be stored about a single material - see fig. 12:

Logbook
Didactic Row
Diary
Plan
Analysis
Group
Inventory

▾ details

**originalname**

**short name** (optional)

**part of material** (optional)

**tag**

**ISBN or EAN nummer**

**inventory-status** for material is

**room**

**language**

**content** category

**media type**

**duration**

**how many** can collaborate?

**class level**

**level of difficulty**

**standard assignment**

**remark**

Figure 12 - Inventory

- originalname: the name of a new material, or the name that is used for this material by the current school
- short name
- part of material: some materials belong together (e.g. multiplication board and index cards with exercises)

- tag: the tag is created by the system; as soon as a material has a tag the system can print a label as QR code for it
- ISBN or EAN number
- inventory-status: if status is set to "broken" then the report of broken materials will include it; if status is set to "print sticker", then the function "print sticker" will include this material
- room
- language: this field stores the language OF THE material (is the book written in English or French?), not the language that a material might be able to teach
- content category: depending on the teachers needs, this can be either the topic or the type of material (e.g. book)
- media type
- duration: how long do students typically work with this material? (this might be valuable information for analysis: what does it mean when a student masters material that is meant to last hours in minutes?)
- how many students can collaborate with this material ?
- class level: from preschool to 13 (select one or many)
- level of difficulty: e.g. levels A1 to C2 in CEFR
- standard assignment: if no assignment is entered in the 2nd field of the log form, then this assignment will be stored
- remark

## 5 nextTRACK: LIP, myClass and the OLM

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### 5.1 myClass

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myClass is a tool developed by the Technical University (TU) of Graz as part of NEXT-TELL to achieve a similar aim like LIP: supporting teachers in documenting what happens in their classrooms. What makes it different from LIP though is that the teachers themselves are asked to enter the competencies. myClass is based on ProNIFA, another tool developed by the TU Graz during the NEXT-TELL project. Using ProNIFA makes it possible to define knowledge as knowledge space (networks of competencies) and to calculate the current state of competencies based on pre-defined rules. Theoretically this stems from the knowledge space theory („Wissensraumtheorie“).

For more information - please check out documentation on [www.next-tell.eu](http://www.next-tell.eu).

### 5.2 OLM

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The Open Learner Model (OLM) was developed in the context of the NEXT-TELL project by the University of Birmingham. It serves to visualize competencies and their developments and, among other features, collects competencies that have been entered in other places and displays them in a central spot – e.g. for LIP.

For more information - please check out documentation on [www.next-tell.eu](http://www.next-tell.eu).

### 5.3 nextTRACK

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LIP, myClass and OLM are integrated into the package "nextTRACK" - one of the result packages of the NEXT-TELL project.

In nextTRACK, competency data from LIP is transferred via myClass to the OLM - thus the OLM visualises LIP's competencies.

Please check out the documentation of the "Initial Configuration Tool" to learn more about the integration of LIP, myClass and the OLM!

## 6 Future prospects

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The aim of LIP is to provide the learner with a road map about his learning and providing him with possible future educational paths. With this we expect to create a more reflected, motivated and efficient use of learning resources – to put it in a nutshell: more successful learning.

In the background we wish to include different models of competencies and curricula in the system, as well as catalogues of learning materials. Through the connection of the documentation with these models we hope to create new, powerful insights for learners, educators, industry (e.g. publishing houses) and authorities.

### IMPORTANT NOTE

If you are interesting in using LIP in your classroom (or need more information), please contact [info@talkademy.org](mailto:info@talkademy.org).

We will

- set up your own private LIP instance on our server (or the server of your school)
- help you with importing data (students, competency models, material, activities) into LIP
- **set up your individual linkage between observations and competencies (the "evidenceList")**
- help you to integrate LIP in your daily school routines
- share our experience and
- welcome you to our user group of LIP users!

**We wish to thank our project partners and funders, whose support  
has made this project possible!**

