Learning journeys with digital whiteboards

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Abstract

Neues Lernen ist selbstorganisiert(er). Die Lernenden übernehmen selbst Verantwortung für ihr Lernen. Lehrende werden zu Lernbegleiter:innen und geben Impulse und unterstützen den Lernprozess. Um Lernszenarien zu gestalten, die auch hybrid und asynchron funktionieren, ist der Einsatz von digitalen Whiteboards oder Pinnwänden empfehlenswert, denn diese ermöglichen nicht nur das strukturierte Hinterlegen von Material, sondern sind auch Basis für Gruppenarbeiten und Brainstormings oder Austausch. Kollaboration wird immer wichtiger, deshalb ist es sinnvoll, dies bereits innerhalb des Studiums zu ermöglichen und auch zu üben. Die passive Teilnahme an Vorlesungen wird durch interaktive Formate abgelöst, denn viele Inhalte können die Teilnehmenden sich mit Hilfe von Büchern, Beiträgen im Internet, Videos oder Podcasts außerhalb der Lehrveranstaltung selbst aneignen. Die Kuratierung des vielfältigen Materials ist Aufgabe von Lernbegleiter:innen. Digitale Whiteboards oder Pinnwände geben Struktur und bestenfalls sind diese ansprechend als eine Art Lernreise aufgebaut, so dass Teilnehmende das Lernen positiv verknüpfen. Wichtig im New Learning ist, das Zusammentreffen der Lernenden und Lernbegleiter:innen in einer Lernveranstaltung dem Austausch, wertvollen Diskussionen und Übungen zu widmen.

New learning is (more) self-organised. Learners take responsibility for their own learning. Teachers become learning guides and provide impulses and support for the learning process. In order to design learning scenarios that also function hybrid and asynchronously, the use of digital whiteboards or pinboards is recommended, because these tools not only enable the structured storage of material, but are also the basis for group work and brainstorming or exchange. Collaboration is becoming more and more important, so it makes sense to facilitate and to practise it even during your studies. Passive participation in lectures is being replaced by interactive formats, because the participants can acquire much of the content themselves outside the course with the help of books, contributions on the internet, videos or podcasts. The curation of the diverse material is the task of learning guides. Digital whiteboards or pinboards provide structure and, ideally, are designed attractively as a kind of learning journey so that participants positively link learning. In New Learning it is important to dedicate the meeting of learners and facilitators in a learning event to exchange, valuable discussions and exercises.

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1. Self Organized Learning

How can learning be designed in such a way that creativity, collaboration and also the joy of learning come into focus and the pure transfer of knowledge does not take up the entire learning space?

This is a question that concerns us at DIU Dresden International University because, on the one hand, we mainly help part-time students to develop and they are open to flexible learning models alongside their work, which can be fun. On the other hand, it is important to us to promote togetherness, which can then in turn flow into everyday working life in order to set impulses for a WE feeling there as well.

The principle of learning journeys supported by digital whiteboards is a good solution for our learning events. We have summarized our experience with it below.

2. What is a learning journey?

By learning journeys, we mean a guide through the learning event with a start, various stages and group or self-learning goals, an end, and in between and as conclusion, retrospectives to learn also from looking back. A learning journey combines synchronous and asynchronous phases.
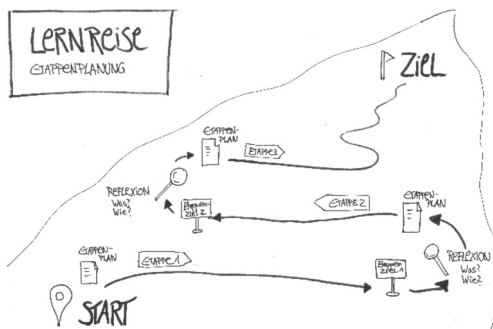

Fig. 1: Learning journey [1]

The beginning of the journey

Every journey begins with an introduction of the learning group and the definition of the goals. The purpose of the journey must be clear to everyone so that participants do not get off track during the journey.

First, participants and learning facilitators get to know each other. The focus is not necessarily on technical knowledge, but rather on the people who are embarking on this journey together. As with a vacation trip, an appreciative and happy atmosphere should be able to arise.

There are many methods and tools for a good start. One example is a combination of the Impromptu Networking method from the Liberating Structures method kit - see also https://liberatingstructures.de/liberating-structures-menue/impromptu-networking/ with the website https://www.checkin-generator.de/.

In Impromptu Networking, there are three rounds, each with a different grouping of two, who each spend four minutes exchanging ideas on a question that is quickly found with the help of the CheckIn generator. The method works both in analog and digital setting, and the possibility of automatic breakout rooms in video conferencing tools such as MS Teams or Zoom is very supportive. With the push of a button, groups are randomly thrown together and also automatically brought back into the plenum.

Tip:

The first two questions in Impromptu Networking can be warm-up questions from the generator such as "What was the worst movie you have ever seen?", because the initial aim is to get to know each other in as relaxed an atmosphere as possible. We recommend formulating the third question in such a way that it either already asks about expectations for the learning journey or leads to the topic of the journey. To conclude the method, depending on the size of the group, impulses from the small group can be brought into the plenary, orally or in writing. Digitally, we like to use a chat storm for this. For a chat storm, the participants write their contribution in the chat, but only send it on command. This prevents copying.

It is important in the getting-to-know-you round that all participants feel included and that a cooperation at eye level can develop.

The point of getting in the mood for the journey is to build trust and to see what the participants have in common.

We would advise against rounds of introductions in which each participant says a few words about him or herself. This is a lengthy process, especially in larger groups, and the participants probably don't even remember a quarter of the people and quickly lose track of their thoughts. A variation that is quite practicable in smaller groups: Groups of two are formed and the participants briefly introduce themselves to their counterparts. In the plenary session, the participants then each briefly introduce their counterpart. Give this a try. In our experience, this leads to a very pleasant feeling for all participants.

After everyone has gotten to know each other a little, it is very helpful to anchor a few short keywords on the whiteboard as well. The participants "make" virtual name tags and attach a photo, hobbies, and, if desired, links to social media profiles such as LinkedIn or Twitter or similar interesting information about the person. The criteria are best established in advance. The travel group is now ready to go and ready for their learning adventure.

The goals of the journey are formulated so that the framework is clear to everyone. We borrow the SMART formula from project management here:

Specific
Measurable
Attractive
Realistic
Timed.

The travelers therefore know the framework conditions for their journey and can start well equipped and self-organized.

Stages

A learning journey may consist of several stages. Groups can devote themselves to different topics, which they then present in plenary. Just like a journey, where some just walk to the viewpoint, while others ride the rental bike to the harbor. This is the self-learning time and - to stay with the image of "traveling" - the time that is individually available to explore the respective destination by oneself. One can freely decide whether to do this (partly) alone or with others.

Each stage ends with a retrospective - the findings become visible to all, so the participants figuratively show the photos of their journey and give recommendations on what could be optimized on the route.

We like to compare this with the evening interactive social program, where travelers get together, tell about their experiences and share what they have seen (learned) in a cheerful mood.
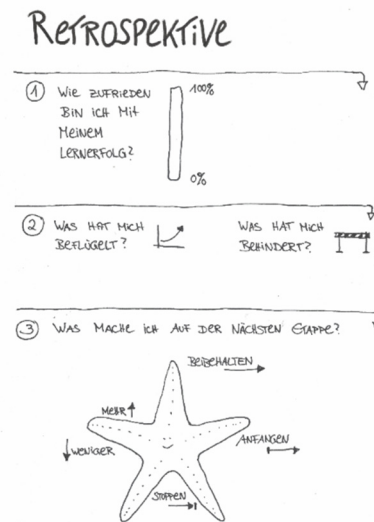
Fig. 2: Retrospectives [1].

Conclusion

Once the stages have been completed successfully, the end of the journey is in sight. After the predefined time, everyone comes together for a final celebration. The core of the event is to have achieved something and to be appreciated for it.

Therefore, the journey itself is rather individual, but the (intermediate) goals are clearly defined. An environment for collaboration is created, but no compulsion for group work is built up. It is important to always arrange regular meetings with all participants to provide support if necessary, because self-organized learning naturally also has pitfalls.

There is a reason why there are formats such as Working Out Loud or lernOS, which provide for regular meetings (for 12 weeks for one

hour each week) and self-learning phases between the meetings. After all, self-organized learning does not mean doing everything individually, but rather that the learner learns in the way that suits him/her best in terms of time, frequency, format, or the like.

3. Why whiteboards?

So how can digital whiteboards support such a learning journey?

They not only serve as a creative visualization of (partial) goals, they also provide a basis for information material provided by learning guides, which can be accessed flexibly and clearly arranged on the board at any time. In addition, whiteboards are a good way of documenting results, collecting and evaluating ideas, being creative and exchanging ideas collaboratively. The great advantage of digital whiteboards are the numerous functionalities from writing sticky notes to embedding images and icons to linking to websites or to other whiteboards or specific areas in the whiteboard. The voting function can also be very useful. A whiteboard can be built and designed to match the objective, stimulating creativity and setting a framework for the learning journey with colors, shapes and structure.
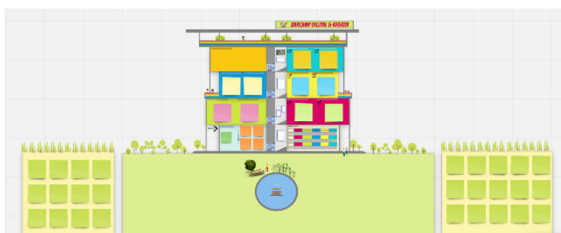

Fig. 3: Example Miro board for a creative barcamp

For digital whiteboards from Mural or Miro, for example, there are free education licenses for teachers:

https://miro.com/education-whiteboard/
https://www.mural.co/education
Conceptboard is GDPR compliant:
https://conceptboard.com/
Digital whiteboards are very similar in terms of handling, but there are also differences, however, these are usually only of importance when there is a requirement to support more extensive projects with a digital whiteboard.

Whether to use Mural, Miro, Conceptboard or rather digital pinboards such as Padlet or Taskcards is hard to decide if you don't look at the tools beforehand and don't know exactly what is possible with them.

Therefore, we have compiled some tips on Miro whiteboards below.

4. Tips for Miro boards at a glance

Miro is our whiteboard of choice, so we'd like to share our learnings from using it in a variety of contexts here.

Part I - Structure of the learning journey
Once you have built a whiteboard for the learning journey, it can be used again and again as a ready-made personal template. The structure can be quite elaborate and complex. This is also conducive to one's own creativity. Each structure should follow a clearly recognizable and comprehensible structure.

Think carefully about what you want to use the board for, what colors, images, and frames you need, and how you will connect them so that participants can find their way around. Arrows and connectors and unique icons can be very useful here. A layout that matches the theme of the learning journey can be inspiring. Or how about the idea of recreating the university building in the Miro board?

There are already many good templates, but they are mostly in English. For example, we like to use the template "Sticky Pack" (stacks of sticky notes), so you can always provide a stack right away at every corner where sticky notes are to be used.

Ask yourself specifically which elements need to be anchored so that participants can no longer change them (lock) and which elements should be editable.

Which board section should the participants see when they land on the board (start view)?

Use the "Link to" function if you want to link. This way, the links are always accessible, even if someone else is blocking the element with the link. Participants can always tell that a link has been created by the symbol in the top right corner of the respective element.

If you have already created a PowerPoint presentation for your course that you would like to use, you can upload it to the Miro board and extract all the pages there with one click so that they are displayed one after the other as images. You can also assign frames to the individual pages for questions or further information.

Think carefully about perhaps building multiple boards and linking them together.

Sometimes it makes sense to do this, if a part should better not be editable and therefore can be set to "View", while other frames should be changed during the event (e.g. areas for documentation of group work or a feedback and support corner).

For very complex boards, it is recommended to create a short explainer video for introduction. For this, we use OBS https://obsproject.com/de and record the screen while explaining what we show on the screen.

Including the link to the video conferencing tool or the information about the learning journey exclusively on the Miro board can cause difficulties. Some participants are not (yet) familiar with Miro and will not be able to find the link and other information. So send another message shortly before the learning journey with all relevant links and information and, ideally, also a One-Pager or link to the explanatory video explaining the whiteboard and plan time after the welcome for a short introduction on the board (tour with split screen). Assume that there are both beginners and experienced participants in your learning group when using whiteboards. To keep the pros from getting bored, think of a small exercise on the board that they can do during the introduction. The beginners stay with you in the main meeting, and the experienced participants are sent to a breakout room so they can share ideas without having to listen to the introduction.

PART II - during the learning journey

Use the "Hide collaborators cursors" function, otherwise it can become confusing, especially if there are a lot of participants.

Use the "Bring everyone to me" function so that all participants are always exactly where they are supposed to be working.

If all participants are beginners, post the link to the board via the chat only after the introduction, so that the participants do not access the board while you are still making the introduction. In this way, you avoid chaos and questions because one or the other would rather try out the board instead of concentrating on the introduction.

Feel free to use the Miro whiteboard as a presentation replacement as well. You can simply jump from frame to frame or use the presentation mode and thus move to the frames one after the other, which you have previously arranged in the correct order.

For group work, in which the various groups should not initially see what the others are visualizing or writing down on the whiteboard, it is a good idea to create separate whiteboards for each group and to send the respective link to the groups. In order to bring them together again, an area can be set up in advance in the main board that contains all the links to the group boards. This can be set to "invisible" before and during the group exercise. This functionality is very easy to use, especially with Miro, by clicking on the eye symbol that is open or closed as shown in the image below. This function is also useful if the participants do not yet see all the content, but should be able to work on the individual areas gradually.
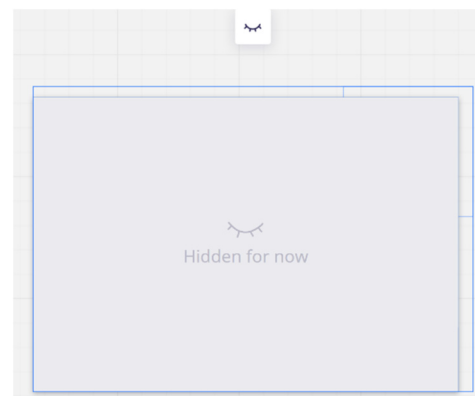

Fig. 4: "Hidden for now" functionality in the Miro board

Part III - after the learning journey

The export function makes it possible to save all results as PDF or PNG and to make them available to the participants afterwards.

If you want the Miro board to remain visible but not editable, it is possible to set the board to "View" mode. In this way, participants can use all links, but otherwise no longer change the board. In "Comment" mode, comments are also possible.

5. Whiteboard vs. pin boards?

Pin boards are ideal if you do not need a complex structure, but rather want to collect ideas or only provide material. Whiteboards can do much more, but are also initially more confusing to use and definitely require an introduction before use, so that there is no chaos and some participants become nervous already at the beginning.

Widely used and popular is the use of Padlet https://de.padlet.com/, because here participants can simply add a new card with a click on a + symbol and intuitively fill it with the desired content.
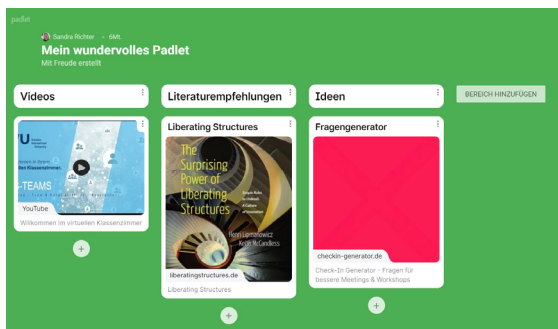

Fig. 5: Example of a padlet

As a GDPR-compliant alternative to Padlet, we recommend using Taskcards https://www.taskcards.de/. A big plus is that Taskcards was developed by a Schmalkalden-based company.
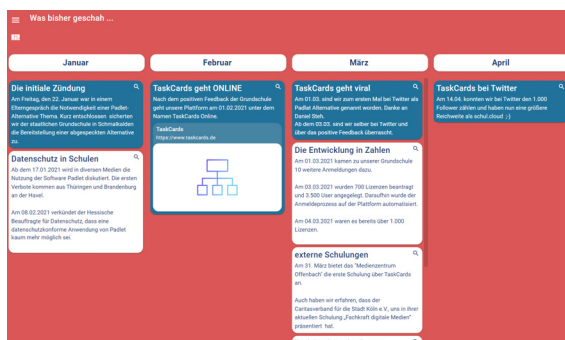
Fig. 6: Example of a pinboard of taskcards

Designing a complex learning journey is useful when you want to creatively and collaboratively guide the learning group toward a goal over an extended period of time.

Using whiteboards to their full potential is initially very complex. Setting up a reusable template that maps a learning journey with various synchronous and asynchronous self-learning and collaborative learning phases must be well thought out. A comprehensible structure is essential. Links must be correct and recognizable as such. Fixed content must be fixed in such a way that it cannot be changed or even deleted by the learners. Consequently, a lot of time, energy and concentration goes into building a complex board. This should not be underestimated. However, a whiteboard can also be designed gradually, so that not every possible hurdle has to be considered from the beginning. When building a structured whiteboard for the learning journey, you keep learning and developing yourself and the board.

It is important to provide a detailed introduction to the tool and the structure of the learning journey so that all users can easily find their way around. This is also a challenge that takes time and energy, because what seems logical to you is not necessarily comprehensible to others. Patience is required here. In the beginning, there will probably still be some difficulties, which is why we recommend not choosing a hybrid setting for the introduction to the board, as it is important to reach everyone equally.

Tip:
Find out who is directly comfortable on the board and who is not. Form mixed peer-to-peer learning groups as a first exercise after the introduction, as participants feel more comfortable asking comprehension questions in a smaller group.

6. Obstacles

Especially in the asynchronous self-learning phases, good planning is necessary, because self-organized learning is not infallible. We all know the procrastination of rather disagreeable tasks, the flood of information that threatens to overwhelm us or the many distractions that lurk in everyday life.

Fig. 7: Obstacles to learning [1].

A learning journey is always structured in such a way that all participants regularly meet synchronously and exchange ideas. This way you can see who is still on the right track, who may need support or a little motivation boost. These regular meetings should be anchored directly in the calendar.

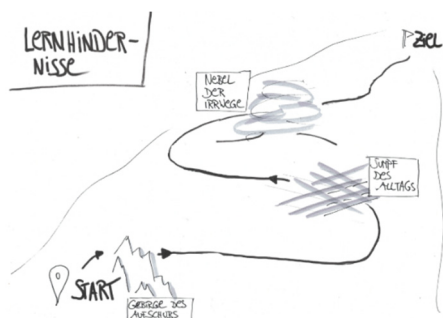One tip for the self-study phase is to keep focus time free in your calendar for this as well, so that distractions can be kept to a minimum and you can consciously embark on your learning journey.

In addition to synchronous learning events with a learning guide, learning circles can be encouraged. Learning circles consist of a maximum of 5 participants who meet regularly, for example for one hour a week, in analog or digital form, and discuss the tasks of the self-learning phase (similar to working out loud). Under certain circumstances, this helps to keep up with the topics.

7. Learning effect through sharing knowledge

DIUtalk is a regular exchange format for and with DIU faculty. Every other week, we meet for one hour, discuss and learn in a relaxed atmosphere.

In DIUtalk Deep Dive, our tool workshop format, we have already taken a closer look at Mural and Miro whiteboards, Padlet pinboard, and Taskcards with participating DIU lecturers and continue to offer regular two-hour workshops on a wide variety of tools. In addition, we have expanded our fortnightly DIUtalk to include DIUtalk Best Practices, in which lecturers present how they proceed methodically and what tools they use to support them. We have

established a [community for teaching and learning in LinkedIn,](#) and there, helpful information and links to exciting blog posts or tools are shared.

Sharing knowledge, however, not only helps the consumer, but also the writer. They sort out their thoughts, summarize them, focus information and additionally may develop the good feeling that these references will be useful to someone. At this point, social media should be mentioned as a platform to share knowledge outside the learning journey. Twitter in particular, with its challenge of writing down the essence in 250 characters, is a wonderful way to focus on the essentials. It cannot be underestimated how many valuable impulses are shared via social media on a daily basis. The option of following certain hashtags or people, or even hiding topics, ensures that the flood of information is contained.

Fig. 8: #DIUtalk - the community for teaching and learning on LinkedIn

8. Material for the learning journey

What works on Twitter is also relevant for other formats.

Wemay often not be able to follow long videos or to read pages of factual texts in a concentrated manner. Every learner is different in this respect, of course, but short, intensive learning sequences are generally easier to integrate into everyday life. The self-learning phase should therefore contain rather short learning bits.

The type of material should ideally be very diverse. Take advantage of the wealth of possibilities, link to an exciting podcast, explanatory videos, articles in trade journals or blog articles. Feel free to recommend excerpts from reference books, but avoid giving participants a book to read without focusing on topic areas.

Our internal DIU WIKI features short learning snacks with helpful screenshots and One-Pagers or explainer videos that are no more than 12 minutes long, or at best only 5 minutes. This was also a learning process. The first learning video created was 18 minutes long and caused complaints that this length was excessively long. So it's important to focus on the essentials and, if necessary, divide content sensibly into several formats, videos, documents or the like.

9. Hybrid learning journeys

Learning journeys combine asynchronous self-learning phases with synchronous exchange phases. In each phase, participants are free to participate online or offline, however, all participants must have portable devices that enable the use of virtual meetings and digital whiteboards.

For participation in the DIU rooms, they are equipped with mobile video conferencing technology that allows image and sound to be transmitted both into the room and out of the room to the virtual participants.

In the asynchronous group learning phases, participants are also free to choose their learning location. In some groups, they may meet in a completely analog beer garden, in others - virtually. Mixed forms are particularly interesting here as well. Good coordination is required in the groups if not everyone is at the same physical location or everyone is there virtually. This is also a competence that needs to be tried out in order to be able to move confidently in the hybrid working and learning world. With Miro boards in particular, even virtual participation with a smartphone is quite feasible, as there is a viable smartphone app.

Tips for hybrid learning and working environments:

Set concrete dates in advance for the synchronous meetings of all participants that fit the respective tasks to be considered asynchronously either self-organized or in the group. Fixed anchor points in the calendar are important so that learning is as focused as possible and participants can concentrate. Provide

a contact option for queries during self-learning time. The chat function in the board or a Q&A space per (sub-)objective is suitable for this. It should be noted, however, that you clearly regulate that you, as a learning journey guide, participate in certain appointments to look into the board to answer the questions.

Round-the-clock care is strongly discouraged. Find dedicated students who you can entrust with specific tasks, such as chat support, so that you can focus on moderating hybrid events. If you are there with participants offline yourself, while some participants join virtually, moderation is especially important. In DIUtalk, we also thought about and discussed this together. One thing was particularly important to us: Whoever speaks has the camera on. During a talk, i.e. when only one person is speaking for a longer period of time and a presentation is being shared, it's perfectly fine to turn off the camera, but when it comes to conversations, it's a matter of courtesy that the people who are talking also able to see at each other.

We have also found that, quite independently of technical requirements, the attitude with which participants and learning facilitators engage with the hybrid setting is also very important. It is easier to involve everyone in a cheerful, relaxed group. The more active the participation, the easier it is to involve all participants, no matter where they are located. So it's very much a matter of wanting to and creating settings that are interactive, creative and collaborative so that the desire to learn is not dampened by the fact that not everyone is in the same room. In any case, it helps to actively address the online participants by name repeatedly so that they do not sit back passively but participate in the learning process.

Fig. 9: Results from the DIUtalk on hybrid teaching

10. Conclusion

Learning journeys with digital whiteboards can support synchronous and asynchronous learning phases, both, analog or digital, but also hybrid. It is important to consider whether the benefits are worth the effort, or whether a digital whiteboard is too much of a good thing. In any case, whiteboards and pin boards provide a helpful basis for interactive collaboration and the documentation of ideas and results. They invite the sharing of information of any kind and thus support exchange and networking. The diverse design options can also stimulate creativity.

Literature

[1]   Sternberg, A., Fuchs, C., Urbild, J., Gehrke-Vetterkind, L., Richter, S. (2021), New Learning - your learning guide for individual learning.

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https://sandra-richter.com/Portfolio/Business-Coach/