

# Unlearning in Project Environments

Bassam Hussein

Norwegian University of Science and  
Technology (NTNU). Trondheim, Norway

# Goal

- Motivation: Curiosity
- An attempt to explain unlearning
- Impact
  - **Project-based Learning** is well covered topic in project management literature, **Unlearning** on the other hand is less dominant notion in project management literature.
  - We know the **whats** of unlearning but little about the **hows, whens, whys of unlearning**

# Unlearning in PM

Summary Reference Word Tree				
File Name	In Folder	Referenc...	^	Coverage
(ASCE)0733-9364(199...	Files	1		0.01%
0021886399351009	Files	1		0.01%
1-s2.0-S026378630200...	Files	1		0.01%
1-s2.0-S026378631400...	Files	1		0.01%
1-s2.0-S026378631400...	Files	1		0.01%
1-s2.0-S026378631630...	Files	1		0.01%
1-s2.0-S026378632100...	Files	1		0.01%
1-s2.0-S092552739700...	Files	1		0.01%
10-1108_IJMPB-03-202...	Files	1		0.01%
10-1108_IJMPB-11-202...	Files	1		0.01%
8756972818786661	Files	1		0.01%
8756972819870343	Files	1		0.01%
87569728221095473	Files	1		0.01%
An_Organization_Learn...	Files	1		0.01%
Creativity-and-technolo...	Files	1		0.01%
Developing-a-Multidime...	Files	1		0.01%
Developing-a-Multidime...	Files	1		0.01%
Examining-the-drivers-a...	Files	1		0.01%
Examining-the-drivers-a...	Files	1		0.01%
Exploration-and-project...	Files	1		0.01%
From-potential-absorpti...	Files	1		0.01%
Knowledge_manageme...	Files	1		0.01%
R D Management - 20...	Files	1		0.01%
Role-of-Performance-F...	Files	1		0.01%
The-Influence-of-Projec...	Files	1		0.01%
1-s2.0-0263786395956...	Files	2		0.02%
1-s2.0-0956522195000...	Files	2		0.02%
1-s2.0-S026378631630...	Files	2		0.01%
1-s2.0-S026378631100...	Files	3		0.03%
1-s2.0-S026378631300...	Files	3		0.03%
Organizational-learning...	Files	3		0.02%
To-learn-or-not-to-lear...	Files	3		0.03%
Toward-Error-Managem...	Files	3		0.03%
Shaw-2017-Managing p...	Files	4		0.04%
1-s2.0-S02637863990...	Files	8		0.13%
(ASCE)CO.1943-7862.0...	Files	60		0.54%
1-s2.0-S026378631100...	Files	86		0.87%

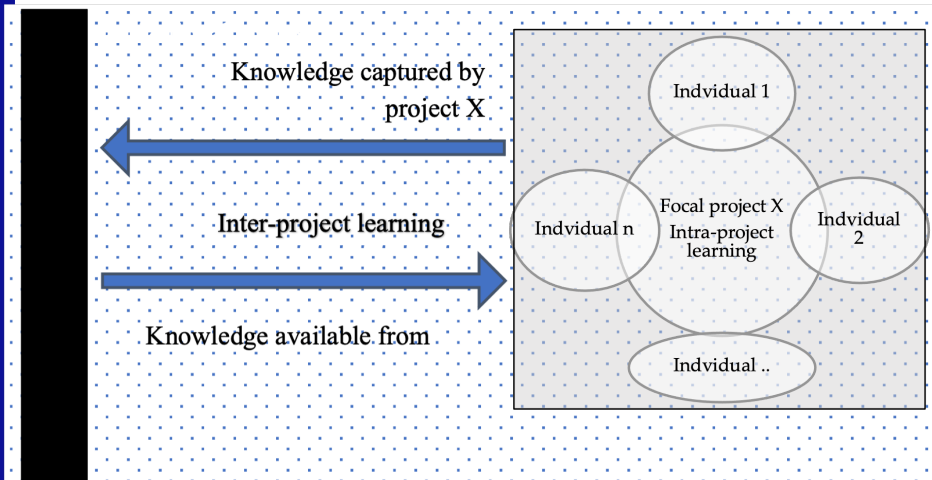
- In project management literature out of 203 articles that contain learning in the title, abstract or as a key word only 12 articles contain the word unlearn or unlearning in the text. And only one paper has unlearning as the central subject of the study

# Many questions

- What to do to prompt unlearning?
- How unlearning differentiates from learning?
- What should we unlearn to facilitate learning?
- Do we need to unlearn when we exploit previous knowledge? Or unlearning is only useful when we explore new ways of doing things?
- How learning is different than unlearning?

# Reminder: Project-Based Learning

- Two dimensions
  - **Intra-project learning:**  
Learning that takes place within projects. The goal of intra-project learning is to go beyond what is already known to lead to new products, processes or insights. Learning is a result of exploring own ideas and experiences
  - **Inter-project learning**  
(learning cross projects, subsequent transfer of knowledge to other projects, so that others can exploiting this knowledge to avoid the risk of reinventing the wheels. Learning is a result of re-use of others experiences



Where unlearning fits into this picture?

# Unlearning

- Definition: Discarding, abandoning beliefs, practices and knowledge that are no longer helpful or does not fit with the challenges at hand
  - Beliefs are about conviction, often going beyond empirical evidence and are subjective
  - Practice is about the consistent action or implementation of certain methods or rituals
  - Knowledge is about information, facts, descriptions, or skills

# Unlearning in literature

- In organizational unlearning literature there are two schools:
  - Learning and unlearning are linked (learning requires unlearning first).
    - Organizations must unlearn first in order to learn. Unlearning is linked to change management.
  - Unlearning is an independent concept and not always followed by learning.
    - Organizations attempts to unlearn without intending to learn. Unlearning is linked to performance management.

# Methods

- Study 1: qualitative collecting insights on factors that prompts learning and unlearning
  - Data collected from a mega project
- Study 2: Experimental / Qualitative to collect perceptions on difference between learning and unlearning, identifying dimensions of unlearning.
  - *Data collected from 35 project assignments in master course at NTNU*
  - *Student groups work together to deliver an authentic product. Each group was asked to reflect on learning and unlearning and their impact on project success*



## Study 1. Mega project

- **Extreme time pressure and a very tight market situation.**
- Interviews using bottom-up approach
- Nvivo software was used to analyse contents and builds codes and themes

# Findings from the first study: Prompting unlearning

- Right and duty to question established truths. (encourage **doubt**)
- Recognition of interdependency between teams (encourage a **broader outlook**)
- Encourage openness to new idea. (Persuing the unfamiliar, **curioisity**)
- Set goals for daily improvements is not only helpful in creating sense of purpose and unity, It creates more **appreciation** to the role of **unlearning** in the project.

# Promoting Learning within teams

- Recognition of interdependency between teams/groups (**support integration of knoweldge**)
- Recognize own limitation (support knoweldge seeking)
- Set goals for daily improvements is not only helpful in creating sense of purpose and unity, It creates more **appreciation** to the role of **learning** in the project.

# Conclusions from the first study



Turbulences, crises, setting goals for improvements, demands or external pressures prompts unlearning



**Actively promoting doubt and curiosity facilitate unlearning**



**Recognizing own-limitation appears to be critical factor that facilitate learning**

## Study 2:

- Experimental / Qualitative to collect perceptions on difference between learning and unlearning, identifying dimensions of unlearning.
  - *Student groups work together to deliver an authentic product. Each group was asked to reflect on learning and unlearning and their impact on project success*

# This study



Main research questions:



*How unlearning differentiates from learning?*



*What should we unlearn to facilitate effective learning?*

*Research method: Active research. Student groups work together to deliver an authentic product. Each group was asked to reflect on learning and unlearning and their impact on project success*



*Data collected from 35 project assignments in master course at NTNU*

# Study 2: Example

Group	Reflections on learning	Reflections on unlearning
1	<p>The group's diverse backgrounds led to exploring individual skill sets and assigning roles accordingly, fostering collective learning. They emphasized both technical and soft skills during the learning process. Technical skills included scheduling, risk management, preparation and planning, reporting, literature review, research methods, and integration. The group also recognized the importance of soft skills like leadership, teamwork, and communication, which were especially crucial given their diverse cultural backgrounds. They believed that these soft skills played a more significant role than technical skills in the project's success.</p>	<p>In contrast, the group realized that not all team members needed to be competent in all project-related areas. They also found it unnecessary to have a project manager with traditional responsibilities, opting instead for a leadership approach where all team members were responsible for the results. Lastly, they let go of conventional project management methods, like the waterfall model, in favor of newer approaches such as agile methodologies. In essence. Both processes were crucial for the group's growth and the project's success.</p>
2	<p>The project offered substantial learning opportunities for the group, particularly about the construction industry and its approach towards recycling and reuse of materials, a sector previously unknown to them. Their understanding of the industry's</p>	<p>In terms of unlearning, the group realized that their common practice of conducting team meetings as "checkpoints" and then primarily communicating via technological platforms such as Teams wasn't effective for</p>

# Findings from the second study:



Unlearning is more visible along beliefs and practices dimensions and less on knowledge dimension. Unlearning is broader and has *diverse character*

Practices and beliefs that hindered groups to collaborate or taking decisions.

Beliefs regarding volume of information needed, team structure and overconfidence of their abilities.



Learning is more visible along the knowledge dimension. Learning is contextualized and dependent on product or project needs

*acquisition of knowledge and technical skills related to the project's domain or developing proficiency in project management practices.*



# Types of unlearning



***Unlearning can be either permanent or temporary.***



***Permanent unlearning occur when individuals or groups break free from the constraints of old methods and begun explore new ideas, technologies, or strategies.***

*This permanent unlearning can lead to more creative and effective solutions to project challenges (double loop learning).*

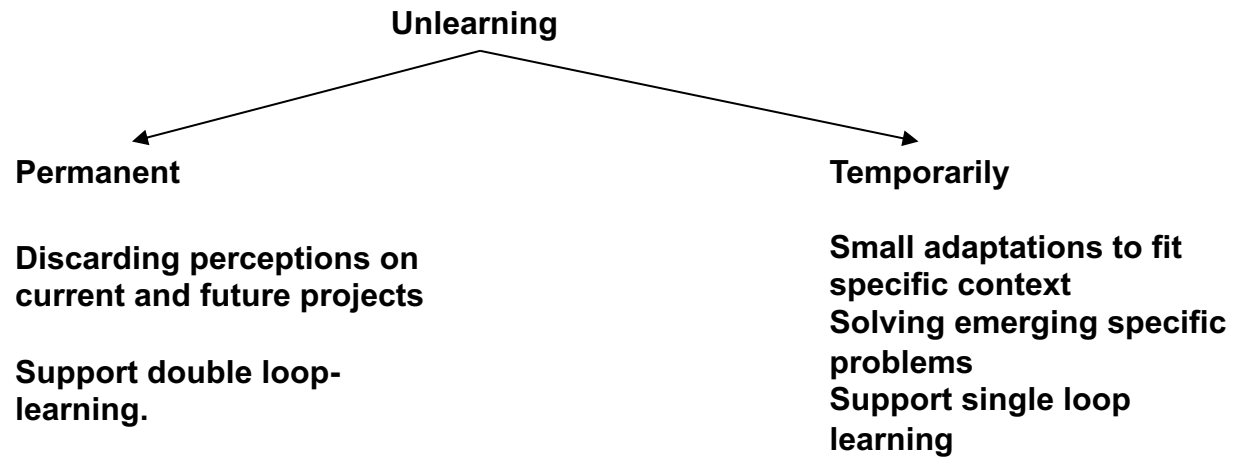


***Unlearning can also be temporary, when groups or individuals recognize that their existing approaches do not align with the requirements of a particular project.***

*This type of unlearning might therefore be important to support adaptations to achieve desired performance.*



***Unlearning requires reflection***



## Next

- *Factors facilitating both permanent and temporary unlearning remain unclear and warrant further study.*
- *An area of ambiguity is how team members decide what should be permanently discarded versus what should be temporarily shelved.*
- *The level of certainty in their judgment also needs exploration.*

## Further readings

- [Contrasting Learning and Unlearning in Project Environments](#) (pre-print)
  - [https://www.researchgate.net/profile/Bassam-Hussein-3/publication/373871569\\_Contrasting\\_Learning\\_and\\_Unlearning\\_in\\_Project\\_Environments/links/650c36a482f01628f034a808/Contrasting-Learning-and-Unlearning-in-Project-Environments.pdf](https://www.researchgate.net/profile/Bassam-Hussein-3/publication/373871569_Contrasting_Learning_and_Unlearning_in_Project_Environments/links/650c36a482f01628f034a808/Contrasting-Learning-and-Unlearning-in-Project-Environments.pdf)
- Exploring Measures to Promote Learning and Unlearning in Projects.
  - <https://www.sciencedirect.com/science/article/pii/S1877050923004891?via%3Dihub>