

Harnessing the Power of Reflection for Learning in the Workplace

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Bringing Next Level Learning to Practice
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What do we mean by reflection?

We often use reflection in teaching and learning.

However, what we mean by reflection matters a lot for how effective it is.

We often tell learners to **think**, and sometimes we tell them to **think about their thinking**, but without explicit guidance, what typically gets communicated?

This is not your best thinking. You can do better than this.

Think! You have to use your head.

You haven't put enough thought into this.

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Incorporating reflection into internship programs

- Structured workforce development programs often incorporate reflection exercises as part of the learning experience
- This provides a helpful mechanism for feedback/assessment, and can be habit-forming
- However, the quality/effectiveness of these types of reflection activities is variable



Implementation challenges



Reflection exercises are valued in theory but not prioritized in practice



Interns and supervisors are often unclear about their purpose

What do effective reflection
activities look like?

They are truly
"meta"

They require
dedicated time

They are
expansive

Features of effective reflection activities

Using reflection to support “contextualized agency”

- The features of effective reflection exercises have already been demonstrated through prior research
- Our work is interested specifically in context, and how it can be modified to support learning and performance





What if we asked interns to not only look backward, but also look ahead and plan how they could use what they learned from this reflection in the future?



Could we encourage them to think about how they could modify their own thinking/behavior as well as their contexts to improve their learning and performance?

Incorporating reflection into an existing internship program

- Large, multi-city US program run by international consulting firm
- Provides early career exposure for young adults from underrepresented or underprivileged backgrounds from over 30 nonprofit partners in the US
- Program runs for 8 weeks in the summer; interns are full-time employees for the duration of the program



Incorporating reflection into an existing internship program

- Program offers structured sessions to support interns' learning and development, but does not include an explicit focus on reflection/metacognition
- Within the scope of the program, we piloted the introduction of reflection surveys and collected the participants' responses as data



Study Design

- Two versions of an online reflection survey (control and intervention)
- Both versions of the survey were specific, modeled effective approaches to reflection, and provided rationale for the value of the exercise
- Variation in the nature of the questions and what they encourage the intern to reflect upon

Reflection Surveys

[Control Version]

Reflecting on Your Internship

This reflection activity is designed to help you think about your experiences in your internship. Reflection can help us become more aware of our thoughts, feelings, actions, etc. For instance, imagine that you are reflecting on a team meeting. You might realize that you were so overwhelmed by all of the information being discussed that you forgot to ask an important question about a project you have been working on.

Think about some things that happened in your internship this week, such as tasks that you completed, skills you are trying to learn, problems that came up, and conversations that you had with peers or supervisors, etc. Choose one to focus on that you think is interesting or puzzling in some way. Please do not share information that you think will be embarrassing or that would be damaging for you to share.

Reflection Question #1

Consider the particular instance that you have chosen.

What happened?

Tell in a few sentences what happened or what was going on and who was involved.

For example: "I felt confused and anxious about an important work project this week. I had to read a big report and create a slideshow presentation about it for a team meeting. I've made presentations for school before and I am pretty good at that, but I had never created a slide deck for work before and I wasn't sure how to structure it or what information to include."

My reflection (write three or more sentences):

[Intervention Version]

Reflecting on Your Internship

This reflection activity is designed to help you think about your experiences in your internship. Reflection can help us become aware of and manage our thoughts, feelings, actions, etc. It can also help us to identify changes that we can make to our behaviors and to the context around us to improve our learning and work performance. For instance, imagine that you are reflecting on a team meeting and realize that you were so overwhelmed by all of the information being discussed that you forgot to ask an important question about a project you have been working on. Recognizing this, you might choose to write down your questions in advance of the next team meeting so you don't forget to bring them up, or request separate one-on-one time with your supervisor to discuss questions that are specific to your work.

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My reflection (write three or more sentences):

Reflection Surveys

Reflection Question #4

Now that you have had the opportunity to reflect, **has your thinking or feeling about this instance stayed the same, or has it changed at all?** If it has changed, in what ways?

My reflection (write three or more sentences):

Reflection Question #5

Could you see yourself using a reflection exercise like this at work in the future? If so, how would you use it? If not, why not?

My reflection (write three or more sentences):

Reflection Question #6

Is there anything else you would like to add?

Reflection Question #4

Is there anything that you did to manage your thinking; feelings; actions; motivation; knowledge?

How did that go? What else might you have done?

For example: "Toward the end of the week, I did devote longer stretches of time to the project and tried to really dig into the work. I started to get a sense of what was being asked of me, and I felt better at those moments. But then I found myself getting distracted and pulled toward other tasks that felt easier to complete, instead of staying with this project even though it was difficult."

My reflection (write three or more sentences):

Reflection Question #5

Consider the environment including your mentor/supervisor/others in the workplace and their connection to this instance.

What are ways that support from them might be helpful?

What are ways that you can communicate your needs for support?

For example: "I can try asking my supervisor to give me some interim deadlines or check-in points. This will encourage me to get started sooner and catch any places where I am feeling stuck while I still have time to ask for help. I can then post a timeline to the wall next to my computer so that I am reminded of the different aspects of the project and each of the due dates."

My reflection (write three or more sentences):



Week 3

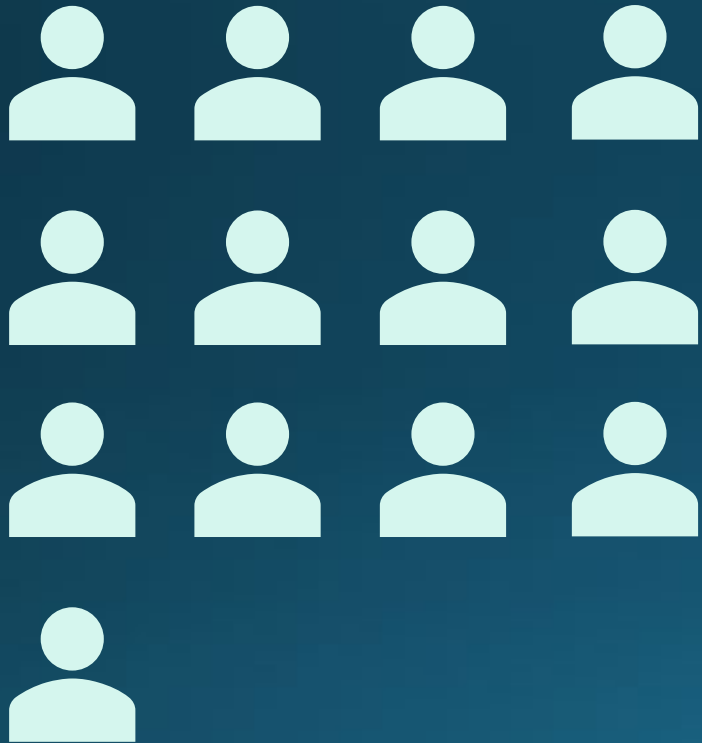


Week 5

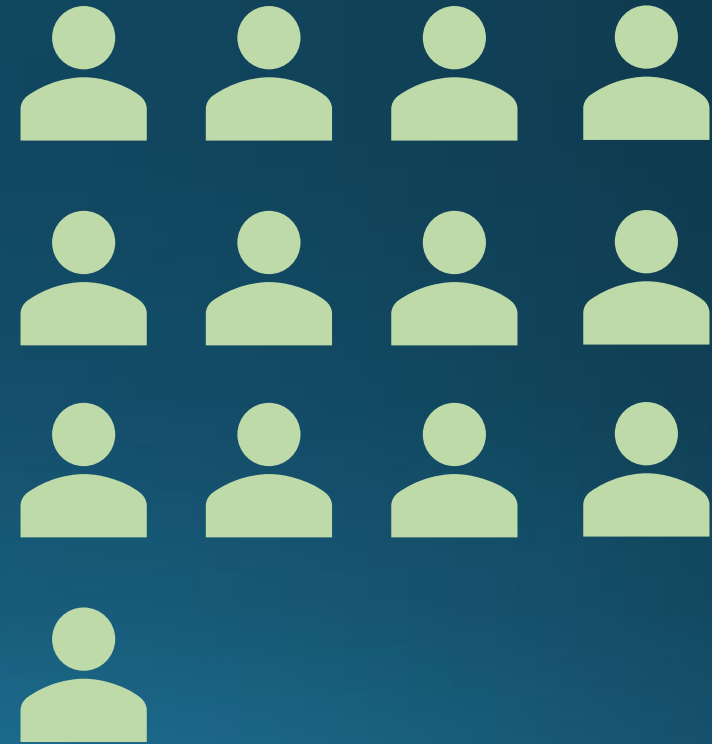


Week 7

Control



Intervention



Research Questions

1. What themes emerged across interns' reflections when they were given metacognitive support for thinking about their internship experiences?
2. In what ways did the type of metacognitive support matter? What differences could be discerned between the reflections of learners whose reflection prompts focused on their own thinking, feelings, and knowledge and those whose prompts also included attention to the physical, social and cognitive contexts and strategic use of the prompts?

What themes emerged across
interns' reflections?

Interns used the surveys as an opportunity to identify and reflect on their state of mind.



I felt nervous entering a meeting with a project leader. I kept messing up on words, and I could myself sweating with anxiety. I thought that maybe I was not well prepared for the meeting.

- 101S, Survey 3 (Control)



I definitely felt unmotivated and overwhelmed initially with the amount of things that I had to do and learn, especially since most of it was new, however I felt excited and grateful, that I am able to learn new experiences and develop new knowledge and skills.

- 104K, Survey 2 (Intervention)



Interns used the surveys to reflect on the social context and their relationships with colleagues (supervisors and/or peers).



These past few weeks have been pretty nerve-wracking because it was my first time being in a professional setting. I had imposter syndrome since I felt like I was underqualified compared to my peers. I took a gap year recently, so academically, I'm not as advanced as my fellow interns, and I'm not as experienced with coding as well as them. Regardless, my team members in my project made me feel very welcome and always encouraged me to participate and seek help whenever I need it. Because of this, I had a great start towards my internship.

- 119D, Survey 1 (Control)



Most interns demonstrated a “learning stance” in their reflections.

- Evaluating prior actions and planning forward



Part of the problem was that my task was in excel, and I am not used to a PC. I am used to different programming languages that I assumed were more complex. I went in too confident. Asking for help was the best thing I did and I wish I had done it sooner. Knowing which questions to ask is more difficult and I need to figure out how to have more help initially in a project.

- 116U, Survey 1 (intervention)



Most interns demonstrated a “learning stance” in their reflections.

- Evaluating prior actions and planning forward
- Acknowledging the value of feedback



When my supervisor gave me feedback about condensing several slides in to one about the actual work I was prepped and told him how that is just a step in the journey I made this summer and that the presentation was less about the project and more about me. He quickly adapted and then provided great feedback about transitioning from the work we did to my personal and professional growth. I was so nervous about confronting them and it was not a big deal at all!

- 116U, Survey 3 (Intervention)



Most interns demonstrated a “learning stance” in their reflections.

- Evaluating prior actions and planning forward
- Acknowledging the value of feedback
- Considering future career trajectory



This internship feels like the start of something. When stuff got hard, I thought this was just level 1, and what comes next is level 2, and so on. My actions now will help me do better in the future.

- 107K, Survey 3 (Intervention)



Interns reflected on the extent to which they felt a sense of agency within their role in the program.



Being that I had not worked in PowerPoint I was feeling overwhelmed and nervous. I expressed my issue and the team here at [company] was wonderful with connecting me with someone on the team to better help me and teach me the tools that was need to get the presentation together.

- 127D, Survey 2 (Control)



Interns reflected on the extent to which they felt a sense of agency **(or lack thereof)** within their role in the program.



I feel very unmotivated right now because my steps come only after others do testing, which even though we have started I can't learn anything just yet.

- 102K, Survey 2 (Intervention)



Most interns described at least one instance of managing or modifying aspects of their learning/performance context.

- Emotions
- Motivation
- Cognition/thinking
- Social context
- Environmental context (distractions, physical space, etc.)
- Bodies/energy levels



This past weekend I rearranged my apartment so that the office portion has better lighting and is farther from the windows where there is construction going on. I hope that this allows me to concentrate further and be distracted less. I also got a more comfortable chair. I have placed a whiteboard that has a schedule that I can easily see and be reminded when to stop and take a break or move to a different project.

- 116U, Survey 2 (Intervention)



The biggest takeaway was learning how to effectively communicate with individuals. While people might've been unresponsive when I sent messages within our group chat, I realized that if I messaged each of them individually and tried to be positive, they were a lot more receptive. I realized that by putting in some extra effort and cultivating an environment of support, people were much more willing to communicate with me regarding any confusions they had for the tasks at hand.

- 112U, Survey 3 (Intervention)



What differences could be discerned between the two groups?

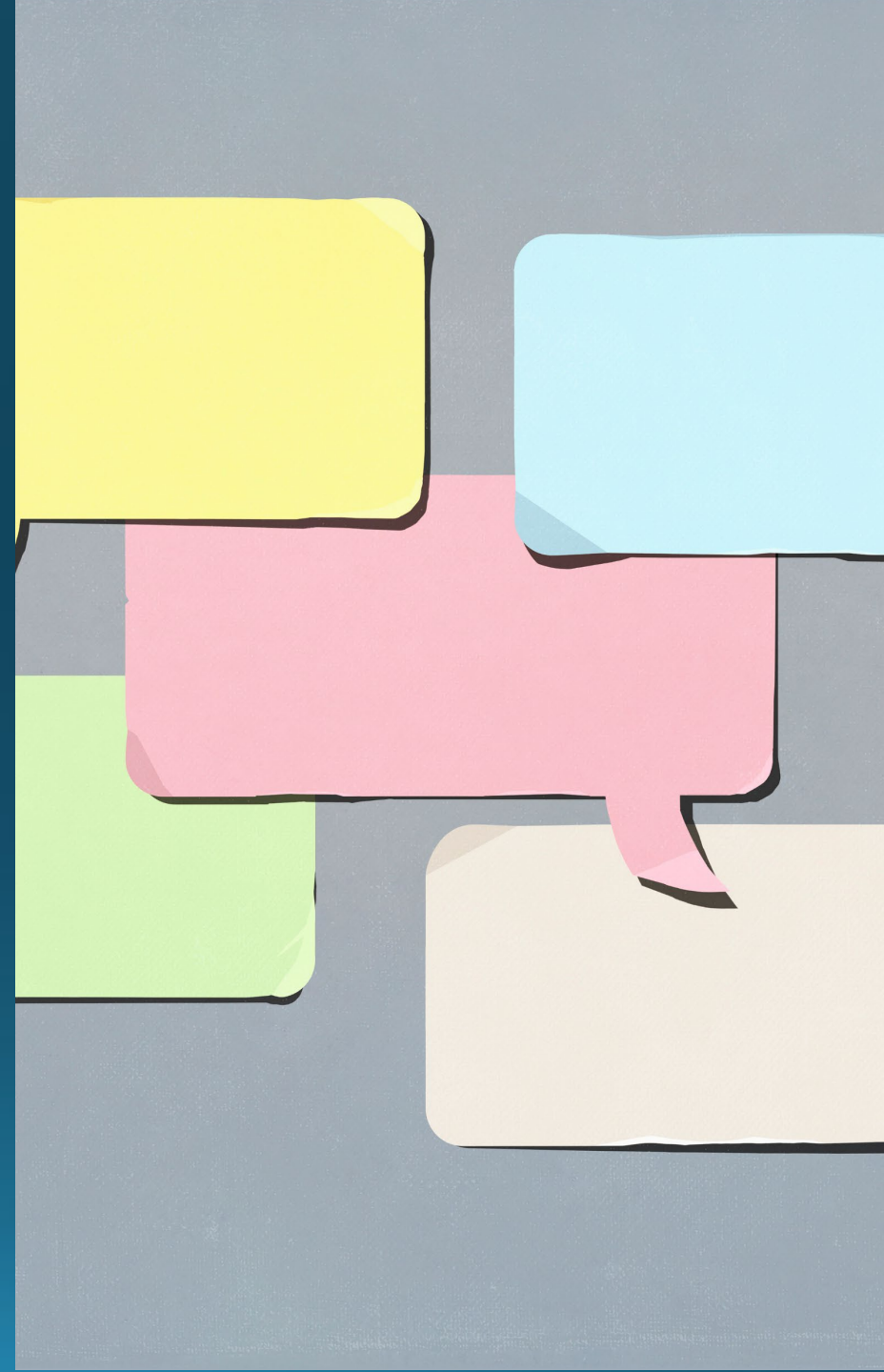
Interns in the intervention group were much more likely than interns in the control group to describe ways that they had managed/modified their contexts.



Of the 13 interns who identified actions they would take in the future as a result of what they had learned, 11 were in the intervention group.



Of the 8 interns who reflected on the value of receiving feedback, 7 were in the intervention group.



Key Takeaways



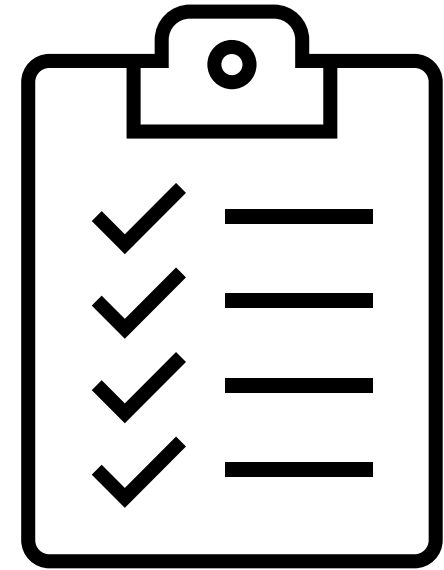
Both versions of the survey were effective at encouraging reflection and evaluation



The intervention version encouraged interns to consider strategies for managing/modifying context

Supervisor Checklist

- Did the act of reflecting lead to any observable changes in performance?
- Measured via a supervisor checklist (pre and post)
- Low participation rates have limited our analysis



Reflection Question 1

What initial reactions do you have to this study and our preliminary findings? Is anything surprising, intriguing, puzzling? What else would you want to know (either from our data or from a future iteration of the study)?

Reflection Question 2

In what ways could you see this being useful in your own work context? Are there changes you'd want to make, either to the reflection questions themselves or the implementation structure, to make it more effective for your purposes?

Reflection Question 3

What kind of supports (e.g., an intro session that explains why this is valuable/how to make the most of it, etc.) would you envision being helpful in your context?

Reflection Question 4

What barriers to implementation (motivational, logistical, etc.) do you foresee? What do you think would increase buy-in at your organization? (For instance, ties to specific outcomes or metrics? Ways to incorporate it more seamlessly to things you're already doing?)