Workshops

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Reflection On Your Personal Perspective Through Other Perspectives. A Step In Dealing With Wicked Problems

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Reflection on your personal perspective through the perspective of others.
A step in dealing with wicked problems.

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Abstract

Don't we all sometimes seek the perspective of someone unrelated to our work, to get unstuck, or when we seek creativity? Engineers, educators, and students put their trust into science, protocols, procedures and models. Rightfully so, from the perspective of the laws of engineering this makes sense. This also explains why when people deal with challenges, they often tackle them (consciously or unconsciously) with their preferred strategies (Hayashi 2018) (Mezirow 2000). However, these preferred strategies might offer a false sense of security because they oversimplify the complicated nature of the challenge. People might focus on a part of problem which is easy to solve rather than addressing the bigger networked problem (Kahneman 2013).

In dealing with complex problems, it is helpful for engineers to become aware of habits and open eyes to other ways of seeing and doing, as solving (today's) multidisciplinary wicked problems often require that. (Braun 2021; Braun and Kramer 2015; Kramer and Braun 2018; Seniuk Cicek et al. 2021; Veltman, Van Keulen, and Voogt 2019). Recognizing one's own perspective is the first step towards valuing other perspectives or approaches to a problem. By understanding 'our own eyes', we can connect with and value other perspectives and alternate ways of doing something.

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This workshop introduces reflection through third person perspectives, to help participants recognize the habits that are embedded in their own perspectives. Participants can later apply the method and material used in the workshop in their own educational context. It is suitable for students, researchers, and teachers.

Learning outcomes

- Participants will become aware of their perspective in a safe and interesting way.
- Participants will experience that their own perspective impacts the way they approach (work) situations, by reflecting on these situations through others' perspective.
- Participants will receive access to the material so that they can use the format of the workshop as a tool to use with their students or peers.
- In the final conference proceedings, we will include the type of insights participants found through our workshop, what they might expect the value to be for (their) students, the impressions of the participants about what worked well and how participant intent to use it in their context.

Workshop Setup

After introductions and addressing context of this workshop, participants form groups of 3-4 persons, and they receive a template with reflective questions to use throughout the workshop. Together, they select one of the given examples of day-to-day situations in engineering education practice. First, the participants individually determine how they would respond in that situation. Next, when comparing their responses in the group, the first insights in their habits might occur.

After that the 'guests' arrive in the workshop and every group chooses which two to three guests to invite. The guests are well known actual and fictional characters that people can attribute certain characteristics to. Examples might be Pippi Longstocking, Barbie, a dictator or a puberal adolescent. To empathize with the character more easily, props that represent them are present. The questions in the template create a dialogue between participants and guests. In this way, the guests can provide their unconventional, outsider perspective on the chosen situation, because Barbie or an adolescent will respond differently.

When comparing the quest's perspective to the individual response the next insight in their personal habits is obtained. Finally, when combining the perspectives of all guests, their peers and their own, insights emerge that highlight some of the underlying patterns that are relevant in work.

In the last step of the workshop, participants transfer their self-insight to their actual work context to understand the relevance.

The workshop is closed by together reflecting on the experience and discussing its value for themselves and students.

Workshop Rationale

The workshop is playful and light-weighted. Via an indirect route we uncover underlying patterns. Doing that playfully is safer than answering questions directly.

The 'guests' are a slightly arbitrary selection of well-known characters that people can attribute certain characteristics to. Because of the high number of characters present and the need for a maximum of three per group, there is enough choice to make this work. Participants have freedom to choose other characters if preferred. Using well-known characters is inspired by role play and serious game design. When adopting a role, players of a game adopt the characteristics of that role as well as their behavior (Renger and Hoogendoorn 2019).

The use of a third person perspective to unveil behavioral insights is inspired by drama therapy where this creates a possibility to externalize inner subjective reality (Smeijsters 2008).

The given situations that participants choose from are common situations that are relatable but not considered personal. For example: you meet a colleague at the coffee machine that you haven't seen in a long time, but you are in a rush, what do you do? Or: you feel under the weather but have a lot of deadlines coming up: what do you do? By starting with a situation that you can relate to, but that does not feel personal, participants can be themselves without the need for role playing and social safety is created. Offering a variety of situations and characters invites participants to engage while experiencing autonomy in the choices.

Workshop takeaway
Participants gain personal insights and a practical tool for application in your professional context.
Designed for engineering education professionals, the workshop offers a reflective experience using a formatted 'conversation' with alternative playful perspectives. The tool and materials can be used to reflect on projects, collaborations and learning by yourself or peers or can be adapted for student use, helping them recognize their own perspectives.
Overall, incorporating new perspectives is valuable in addressing complex problems, and educating engineers with these techniques can better equip them to tackle the wicked problems of society.

Participants' Insights and Experience

The Perspective workshop sparked genuine interest among attendees due to its unconventional format, resulting in a fun and thought-provoking experience. Participants literally sat down with Barbie, Hulk and many other characters from around the world and thought what would they do in a weirdly specific work-related situation. Attendees found the structure of the workshop playful yet profound, allowing them to freely explore thoughts and behavior and collectively create meaning. They contemplated the actions of each 'guest' as well as their own personal perspectives.

Throughout the entire activity, attendees were not passive recipients; they actively engaged in conversations. One participant noted that the scaffolded design of the workshop was much appreciated as it led participants to introspection in a safe and lighthearted manner. This was the intention behind the format of the dialogue between perspectives: to make it accessible to everyone, regardless of their background or expertise, to explore their thoughts and actions playfully.

Implementation
One of the most rewarding insights was participants envisioning where they could use the dialogue between perspectives in their personal contexts. Some of them speculated about its applications in various scenarios, ranging from team dynamics, where it could foster understanding and collaboration, to senior academic groups, improving departmental relationships. After the workshop, attendees received a version of the templates that can be quickly adapted to fit the needs of the groups they want to use it with. By sharing the digital template under creative common license, this intervention is available beyond SEFI2023 and provides them with a flexible tool to be used in their institution.

Significance to Engineering Education
In the realm of engineering education, giving insight on diverse and personal perspectives stands as a valuable asset not only for students but also for academic staff and management. It facilitates a process that allows individuals to gain a better understanding of their own positioning and provides an opportunity for transformative insights regarding one's practice, as well as the ability to acknowledge and value different viewpoints. This skill, relevant in social constructivism theory, is helpful for engineers in navigating the intricate web of multiple truths, enabling them to balance diverse stakeholder perspectives with finesse and understanding or collaborate in multidisciplinary teams.

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