

Awareness Raising Tool

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About

How to seize the opportunities of what the digital has to offer and help teachers create inclusive excellence in digital learning, in various contexts? This requires more than just shifting offline learning activities to online settings. It requires an enhanced understanding of what inclusion means in fully online, hybrid and blended learning environments, for varying groups in varying local or national settings.

The question of what inclusion means in the context of online education, and how to best establish this, is yet unclear. And since inclusion often is not even a primary focus of in-person, conventional education, it often is also not written into the core of digitised education.

We depart from the following view on educational inclusion:

- **Inclusive and enriching for all students with specific attention for underserved and minoritised students in vulnerable situations:**

The aim of 'inclusive education' is to enhance the access, belonging, self-efficacy, and study success for all students, and enrich the learning experience for every one of them while respecting and acknowledging their diverse identities.

- **General principles & tailored to the context:**

What makes education inclusive is context-dependent. This, for example, depends on the educational setting (e.g. online versus offline environment), the national context, ablebodiedness, neurological diversity, identity and minoritized position, but also on the discipline being taught, the teacher, and the specific class. This requires a toolkit that provides guidance and practical inspiration while at the same time leaves room for tailoring solutions.

- **Exposing the norm instead of fixing the 'other':**

Making a classroom inclusive does not mean that students from a disadvantaged background are 'helped' to fix their presumed deficits and assimilate into the invisible educational norm. It means that the existing norms are made visible, discussed and changed to include more diversity (in talents, learning preferences, background, ethnicity, experiences, perspectives, etc). This requires awareness of the teacher's own assumptions and identity, and how these play a role in the classroom dynamics.

ART in context of e-Inclusion

This Awareness Raising Tool (ART from now on) is one of four outputs of a broader research-informed inclusive excellence toolkit. The toolkit consists of separate building blocks for teachers to develop inclusive online education that is tailored to specific phases, aspects, and contexts of inclusion.

- [Output 1](#): Handbook for Inclusive Digital Education
- [Output 2](#): Micro-Learning Modules
- [Output 3](#): Online Course Design on Digital Inclusion
- [Output 4](#): Awareness Raising Tool

What is the purpose of ART?

The ART facilitates users in exploring and recognizing their personal positions in specific social situations, to acknowledge and address their implications. The tool offers two parts that shape awareness in an individual as well as in a group context, and forms a starting point for e-inclusion.

The first part of the tool guides the user in their personal, individual reflection process, via a journey through seven engagements that takes the participant through various insights and scenarios. Besides relevant concepts for e-inclusion, the engagements explain the role of overlapping contexts in social dynamics. This journey can be done individually and asynchronously.

The journey through 7 engagements can be found on the website.

To advance the journey, the second part of the tool offers the outlines of a group workshop but can also be followed as separate modules. They can be organized online or offline, for example with a teacher team or with another group of interested educational professionals.

ART set-up: how to use this Awareness Raising Tool

Workshop

This is the second part of the Awareness Raising Tool. It is an outline for a synchronous group workshop where educational professionals engage in group reflection and exchange perspectives, insights, and strategies for developing (self-)awareness about e-inclusion among educators. The workshop can be organized, for example, for teacher teams or for interested individuals who are concerned with digital education. Additionally, it is possible to follow the modules separately.

In an effort to make the tool accessible for groups where there is not (yet) someone who can take the lead in their context, the workshop was designed in such a way that does not require the involvement of an 'expert'. It is set up as a collaborative exploration and is chiefly aimed at creating a space for dialogue between individuals who are willing to jointly explore their own perspectives, positions, and context, guided by modules. The workshop is thus a collective endeavour and appeals to all participants to embrace it as such.

During the session, in various modules, participants reflect on their role in reproducing or challenging inequalities in digital education. A combination of exercises, concepts, and exchanges among participants offers a knowledge base that can be used to assist educators in understanding their role as facilitator of a diverse, dispersed classroom with each member coming from different backgrounds, facing different challenges, and having different needs.

Module

Each module describes an exercise that helps trigger reflection about elements of inclusive or exclusive online education. These reflections help to engender an awareness of what it means to foster inclusive digital education. The modules are designed for a group format that can be done in an online or offline setting.

Learning objectives

This section provides the learning objective for the module and what competences participants will gain from it.

Preparation & materials

This section indicates what materials and resources are needed in preparation for the module.

Set-up

This section chronologically explains the different steps for the exercises in the module. It includes the different actions for the proceeding of the module, as well as concepts, prompts and guidance recommendations for the group following the module.

Debrief & takeaway

This section has directions for wrapping up the module with final thoughts and reflections about the activity.

For your consideration

Specificity of contexts

The Awareness Raising Tool is designed to assist educators in understanding their role as a mediator and facilitator of a diverse classroom, with each member coming from different backgrounds, facing different challenges, and having different needs in relation to the specific educational (online, blended, hybrid) setting. The tool is intended as a basis for a pathway to inclusive pedagogies for digital education. It follows *the principle of Maslow before Bloom*, entailing that teachers must consider that effective learning can only occur if the basic and safety needs of students are met (Netolicky, 2020). An inclusive climate means that every student feels safe enough to engage in learning. This is not to say that the learning as such cannot be uncomfortable, as that is often naturally part of the process.

It is important to note that while this tool has been developed in the context of a rapid transition to online education due to emergency remote teaching, its insights and lessons are suitable for everyone who is committed to creating inclusive digital educational environments as part of their profession.

The contents of this tool set out a template for exercises that trigger the reflexivity necessary to do the work of inclusion. In other words, it inspires the awareness of how one's personal perspective influences seemingly neutral processes, such as decisions made for the set-up of a particular course. This means that the contents of the tool are meant to help you shape your awareness and ideas that are applicable in your unique context. When preparing the workshop, it is therefore highly encouraged to consider to what extent the examples are relevant for your particular context or phase; and make adjustments accordingly. To accommodate a degree of flexibility, the workshop may also be done as separate modules, adjusted timewise to be shorter or longer, and embedded into other activities.

Assessment

This Awareness Raising Tool sets out learning objectives but does not provide specific means for assessment, because each context has unique circumstances and challenges. It is therefore up to each individual and group to decide for themselves whether the learning objectives have been achieved.

Workshop

Before you begin

Broaching complex subjects

When we talk about diversity, some of us tend to avoid emphasising the differences that exist amongst us. In fact, sometimes people prefer not to discuss certain issues at all because they stir complex feelings. This is a 'colourblind' view that might be based on good intentions, but does not have the desired equitable effect, as it avoids acknowledging the problem of inequality. The 'colourbrave' approach does address issues of inequity. As this can sometimes be difficult, foreign, and uncomfortable, this requires becoming comfortable with being uncomfortable (Lillie, 2014). Colourbrave is an approach to the subject of race and ethnicity but can also be applied to other elements of our identity. In the context of online education this approach can be useful to analyse and mitigate barriers in relation to digital literacy, internet access, and privacy, by frankly opening up possible barriers for discussion and dialogue.

Broaching sensitive and complex topics also requires the formation of a social 'interspace' (Ghorashi & Ponzoni, 2014), in which participants feel safe (and brave) enough to be vulnerable and share personal experiences and insecurities. This is a space where we do not react to each other instantly based on our implicit and explicit assumptions, but where we park our judgements and approach each other with open curiosity, willing to understand each other.

Module 1: Developing a Shared Vocabulary

Learning objective

You are able to develop a shared vocabulary in order to facilitate constructive dialogues in a group setting.

Preparation & materials

In-person: Pens or markers, flipchart paper.

Online: (web-based) video conferencing software that allows to form breakout groups, web-based collaborative document or whiteboard.

While it is safe to assume that in everyday interactions, we use a common vocabulary to communicate, there are instances where we are unaware of different meanings, associations, or definitions that others have of particular words. It is therefore important to discuss definitions if we want to have productive dialogues. This is an aspect that we tend to take for granted in conversations with each other – especially if there is a disagreement. In such instances it can be useful to take a few steps back and start from the beginning. You can be discussing a particular topic, but are you talking about the same thing? There is a saying that expresses the importance of perspective: *it is not what you look at, but what you see*. Because we each have our own associations to certain concepts, especially ones that are tied to personal experiences such as ‘inclusion’ and ‘exclusion’, it is important to develop a shared vocabulary with each other if we want to further explore these concepts in dialogue.

As mentioned before, terms such as ‘diversity’, ‘inclusion’, and ‘exclusion’ mean different things to different people. To facilitate a constructive dialogue throughout the workshop, it is necessary to reach an agreement on the generally accepted definition of certain terms in your group. In this module, you along with the other participants will take an active role in discussing the definitions of these terms. The goal is for each participant to actively contribute to a collectively definition for the term and establish a shared vocabulary. It is important to note that these definitions are not static. As we learn and discover more about these themes – and ourselves – our understanding of them will also expand. It is therefore good to revisit these every once in a while as you continue to explore this theme more in-depth.

If you feel that there are other important terms missing, discuss this with the group and explain why you think this is of added value. While there are many terms that can be interesting to discuss, it is recommended to not include more than 5 terms in total. This leaves enough time for an in-depth discussion and is less overwhelming. It is always possible to add more terms at a later point if there is a need in the group to do so.

Set-up

1. For each term that will be discussed, there will be an empty sheet of flipchart paper plus one additional empty sheet. We need at least one person to volunteer to annotate each sheet of flipchart paper. (5 min)

Online: Repeat the same steps but use the collaborative online document or whiteboard to make annotations.

2. The volunteers will start by writing the term in the centre of the sheet in a size that is legible for everyone. This is the beginning of a mind map: a visual diagram that shows associations around a central idea. Assign a number to each word according to their alphabetical order. For example: diversity (1), equity (2), and inclusion (3). (5 min)

3. Before you begin, use the additional empty sheet to write down some ground rules for the dialogue in order to make sure that these are clear to everyone and to be able to hold each other accountable. A few examples are:

- Respect each other's opinions and differences
- Be aware of how much speaking time you take up and leave space for others to contribute as well
- It is okay if someone has a knowledge gap, we are here to learn together
- Speak for yourself and do not invalidate others' experiences

Try not to get lost in the process of establishing these ground rules because it is okay to come back and add to them at a later stage if necessary. Once there are no more additions, you can continue to the next step. (10 min)

4. The person who wrote down the ground rules will divide the participants into smaller groups; the number of groups should equal the number of terms. Each group will sit together and discuss the assigned term, while the volunteers take notes. The same person who wrote down the ground rules will keep track of the time for all participants to ensure that everyone rotates on time. (15 min)

Online: For this portion, use breakout rooms to divide the groups. Make sure to set a maximum time of 15 minutes for the breakout room.

5. After the 15 minutes are up, each group will rotate chronologically to the next number and repeat the exercise. If you are at the last number, then you go to the first number. Keep rotating until you are back at the starting position.

Once everyone has had a chance to discuss the terms in the smaller groups, there is space for a break. It is recommended to continue after a break of no more than 10 minutes to not interrupt the flow.

6. Read the rubric below before moving on to the next step. (5 min)

Threshold concepts

The terms diversity, exclusion and inclusion are part of colloquial, everyday language but in the context of inclusive education they signify concepts that can be difficult to grasp. Such concepts are also sometimes called *threshold concepts*. A threshold concept is a concept that, once understood, transforms the way that someone perceives, engages with, and thinks about a subject. According to Meyer and Land, threshold concepts “can be considered as akin to a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress” (2003, p1).

They describe five key characteristics of threshold concepts:

- Threshold concepts are transformative. Grasping them involves a significant shift in perspective and understanding of what you know.
- Threshold concepts lead to transformations which are difficult to unlearn. Your understanding of it can be refined, however.
- Threshold concepts are integrative, it reveals new connections, associations, and interrelated ideas.
- Threshold concepts are conceptually bound, in that they are linked to a demarcated subject or specific field.
- Threshold concepts can be troublesome for learners. They can involve concepts which are counter-intuitive, difficult to grasp, and even nonsensical to you at first. This can make the process of learning uncomfortable.

Debrief and takeaway

7. Go back to the plenary setting and reflect on the exercises with all participants. There is now space for you to share your experience of the process with the group. Below are some guiding reflection prompts. (15 min)

- How did you experience this exercise?
- What did you learn (about yourself and your fellow participants)?
- How did your understanding of the terms change or expand?
- Even if you did not reach a consensus (which is very difficult), how does knowing your own understanding of the terms and how it differs or resembles that of your fellow participants help you?
- What insights do you take away from this exercise?

Module 2: Our Multiple Identities

Learning objective

You are aware that everyone has multiple identities which together create uniquely situated perspectives and experiences (of inclusion and exclusion).

Preparation & materials

In-person: Pens or markers, A4 paper.

Online: (web-based) video conferencing software that allows to form breakout groups, identity circle image.

Conversations about exclusion can be quite uncomfortable. Yet, if we want to be able to effectively address exclusion, these conversations are important. They help us understand how the people around us experience exclusion in different ways. It can be particularly difficult to pinpoint the ways in which students or colleagues experience exclusion in the virtual learning environment because the barriers one might encounter are not always obvious and might be even less visible in a virtual environment. Much like the barriers, people themselves can be rendered invisible or anonymous in this environment.

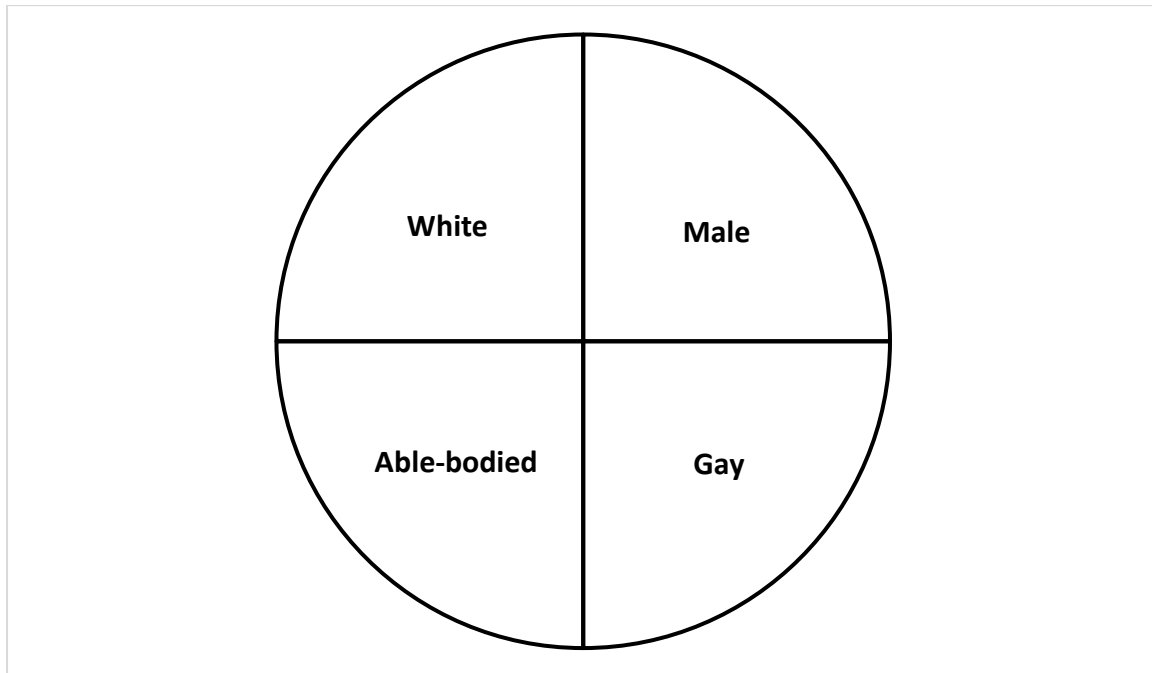
It is often hard to know what others experience, as people's perceptions, interactions and experiences are tied to their specific identities. As mentioned earlier, addressing exclusion requires us to understand what those experiences exactly are. Therefore, becoming aware of the identities that affect those experiences can help us to better understand experiences of exclusion. However, much like the barriers people experience, their identities are not always directly visible unless they communicate them. It is important to consider that in some instances, people prefer invisibility or anonymity because this can feel safer if they feel like revealing certain (parts of their) identities can negatively affect them. For example, they fear that they might be treated differently, or that this can be used against them. These fears are not always unfounded: extensive research in this area has concluded that certain identities are more likely to be excluded.

For all those reasons, this module will guide all of you through a group exercise that is focused on the topic of *identity*, where you will learn to consider each other's identities (including your own) from different perspectives.

Set-up

1. Below you will find a simplified format of an identity circle with an example of someone's identity. On an empty page, recreate the identity circle by drawing a circle with a cross in the middle. In each part of the circle, write one of your personal identity characteristics. Read the rubric below before you begin (5 min)

A person possesses many identity characteristics which are incredibly complex and nuanced. The aim here is not to capture your entire self in a diagram but to explore jointly how our identities shape our being, perspectives, and experiences. However, if you feel that it is necessary, you can also create additional parts to write down more than four identity characteristics.



2. Think about the following topic: role models and representation. Now focus on one of the four identities that you wrote down and reflect on how this particular identity influences your perspective and experience with representation.

Then, reflect on how your perspective on role models might change if you looked at it from the perspective of one of your other identities. Below you can find an example. (10 min)

Example

As a man it is relatively easy to find other male scholars in various academic positions that I can look up to. This is also the case for white and able-bodied people. However, there is far less representation in certain academic positions for people who are gay and/or disabled.

3. Discuss your insights with a partner. During the reflection, ask for a moment when a particular identity felt much more emphasised. Why did this happen? What did you feel? (15 min)

Example

1. A few years ago, I learned about an annual LGBTQ awareness day where people wear clothing in the colour purple to show their support for this community. Despite me writing an article about it in the staff newsletter and receiving positive remarks from several colleagues, I was the only one who showed up in purple, which made me feel very alone and stand out in a way that was very unpleasant. It made me want to hide this part of my identity. Since that occurrence, I have decided not to talk about that aspect of myself anymore.
2. In the last term there was a student of mine who failed a course I was teaching, which was surprising because I know this student to be very bright and to usually obtain good marks. Despite being very busy, I decided to check on them after the

course had wrapped up. It turns out that the student had to share her laptop with a younger brother because his laptop broke and the family could not afford another one. Staying after school to use the facilities there was not an option because she had to help watch over her younger siblings when her parents worked. I was shocked because I never considered that a student would be unable to follow a course properly because of financial constraints. This made me very aware that some students are underprivileged, which can affect their performance.

Online: For this portion, use breakout rooms to divide the groups. Make sure to set a maximum time of 15 minutes for the breakout room.

4. Everyone is now invited to have a plenary discussion where you collectively reflect on these influences of our identities. You can use the guiding questions below to structure the dialogue. (15 min)

- How do these identities influence how you work?
- How do you think other people experience your identities?
- In what contexts do you communicate these identities? Why (not)?
- Does this differ between online and offline environments?

After this exercise there is space for a small break. It is recommended continue with the remaining exercises after a break of no more than 10 minutes to not interrupt the flow.

5. Read about the concept of intersectionality in the textbox below. (3 min)

Coined by Kimberlé Crenshaw, the concept of intersectionality deals with the overlapping of multiple different identities that a person has and how these 'intersections' result in specific grievances that require equally specific (legal, policy, and institutional) instruments to redress those grievances. However, the problem is that our institutional instruments are traditionally set up for disparate categories of identities and as a result marginalise people who find themselves at the intersections of these identities because they are unable to properly seek redress or appeal to particular protections and benefits. The concept was developed based on the observation that the law treated all women as white and all black people as men, which resulted in black women falling through the cracks. Arguing from an intersectional lens is crucial to ensure you take into account the different layers of identity that a person has, rather than reducing them to a single experience.

This next example will concretely show how this plays out in practice: There are certain benefits and rights that someone has recourse to if they are married. In practice it is mainly the traditional heterosexual couple that is recognised as a legitimate civil partnership. What this means is that not only same-sex couples are (perhaps inadvertently) left out, but also other non-traditional household formations consisting of single parents and caretakers.

6. Continue the plenary discussion but now use the concept of intersectionality to consider how the identities that make up who you are intersect with each other; are your experiences of one identity different because of another identity you have? (15 min)

Debrief & takeaway

At the end of the module, collectively reflect on the takeaways below. Feel free to add any other insights that you discovered during the exercise. (15 min)

- How we emphasise particular identities and how these influence the way we see and shape perspectives, opinions, and views.
- When we use different identity 'lenses,' we can self-reflect on our own biases.
- Knowing what others' identity lenses are, can build mutual understanding and help create inclusive environments.

Module 3: Sense of Community

Learning objective

You are aware that it is not a given for everyone to feel invited to participate in a learning community.

You are able to create opportunities for collaborative learning that requires contributions from everyone.

Preparation & materials

In-person: No materials required for this module.

Online: (web-based) video conferencing software that allows to form breakout groups.

In the virtual learning environment, it can be difficult to establish connections between fellow learners, colleagues, and teachers. On the one hand, the relative anonymity of the virtual learning environment can be very pleasant for certain students because they can, for instance, hide certain disabilities and have access to other modes of participation. Additionally, there are other benefits such as mobility and self-paced learning. On the other hand, the flip side of the virtual learning environment is that it can be quite troublesome to navigate for some people and very isolating. While there are many ways to connect with fellow students and teachers, it remains difficult to establish a strong connection with them – or even feel like you are part of that learning community.

One of the benefits of the virtual learning environment is that, even more so than in offline contexts, people can participate together online without really knowing each other. Working together towards a common goal helps establish a sense of community. This requires even more attention of us to create collaborative online exercises where, for example, everyone must contribute to expand knowledge. When working in a group, it is important to be sensitive to who feels invited to be part of the community, who does not, and why. In this module, you will learn to consider each other's experiences of the communities in the virtual learning environment.

This exercise may feel uncomfortable for you as it involves temporarily assuming a different identity, which you may not know how to approach. The following points may help:

- 1) In choosing a different identity, you can take someone you know as a reference point.
- 2) If you don't know anyone in your area, you may have to rely on assumptions.
- 3) It is interesting to investigate these assumptions in the reflection later.

Set-up

The following exercise will be a roleplaying one which involves temporarily assuming the identity in the figurative sense. While the exercise is mostly conducted in pairs, it can be useful to formulate a central question or task for the entire group to engage with. This lends itself to a common exercise that you can jointly reflect on at a later stage and additionally can provide a concrete sketch for a situation that is a common experience among the participants. An example/suggestion would be to actively think about the problem of

barriers that (specific) people can experience in online environments – especially what the consequences are for education if we scarcely ever stop to consider this aspect. All participants could then share their unique take on this topic. Decide on how to proceed further as a group before moving on to the next step. You can use the inspiration above or discuss alternatives, but try to stay within the indicated time in the brackets. (10 min)

1. First, individually think about whether you would like to assume the position of someone else for this conversation in the form of an identity* that differs from your own. Below there are examples of how you could approach this exercise. (5 min)

* No one can be reduced to a single (part of) their identity because the reality is far too complex to be encapsulated in a singular, discrete, and flattened category. That being said, for the sake of simplicity in this exercise, the notion of intersectionality is left out. It is useful however to keep this in mind during the exercise to hold ourselves accountable for the tendency to generate stereotypes on the basis of these flattened perceptions of some identities.

In the same vein, the choice for the identity characteristics in the example below is based on the identities that tend to be the majority, dominant or the norm in many societies. Should your contexts have other norms that are more relevant, then make an appropriate selection.

Examples

- If you identify as white, you take the position of a person of colour in this conversation.
- If you identify as cisgender, you take the position of a transgender person in this conversation.
- If you identify as straight, you take the position of a gay person in this conversation.
- If you are able-bodied, you take the position of someone with a sensory, motor, or neurological impairment.

2. Next, carefully consider why you would like to further engage with this identity for the exercise. Is it because you find it difficult to connect or relate to this identity? Or perhaps you have recognised some stereotypes in your perception of this identity?

Once you have established what you want to delve into, think about some questions you would like to ask in a conversation to this person. (7 min)

3. For this part, you need to pair up with another participant – this is your conversation partner. Once you have partnered up with someone, relay to your partner the identity you selected, your motivation behind this choice, and the questions you came up with.

You are communicating this to your conversation partner because you will be using your reflections for the dialogue during the roleplaying portion of the exercise. If you found it difficult to come up with questions during the last exercise, briefly consult your partner. Perhaps they might have some suggestions and can offer a different perspective.

When you assume the position of the chosen identity, you will have a conversation with your partner where they will pose those questions back to you. You will respond from the

perspective of the identity you selected. Chose who will be acting out their identity first; the other person will give feedback. Before you begin, read the suggestions in the green box below. Switch roles after 20 minutes (40 min)

As mentioned earlier, it can be quite difficult to have to reason and feel from a perspective that is foreign to you. However, the point of this exercise is precisely to reveal your own tendencies and inclinations of thought about particular people. It is not to make you feel ashamed or put you in a position to be judged, rather a way of excavating the hidden assumptions we have about people. In order to critically engage with those assumptions by challenging them, then proceed to undo them, we must first start by uncovering them. In this sense, this exercise is only as valuable as you make it.

As a conversation partner, your role is twofold; you are an interlocutor but also a **critical friend**. As a critical friend it is not to sit in judgement but to help your partner by facilitating the reflection process through constructive feedback. It is important to show grace by maintaining open to the other person's perspective. However, a critical friend also gives critical feedback which necessitates an equally open and receptive position from the person receiving the feedback. This enables a constructive exchange between the two of you.

Debrief & takeaway

4. Now that each of you has had the chance to act out your chosen identity and assume the role of the critical friend there is room for a plenary reflection with everybody about the experience, insights and lessons learned. The reflection prompts below are a good way of starting the reflection. Please feel free to get the ball rolling by sharing your thoughts.

- What elements were important in determining your connection? How do these differ in offline and online setting or between different online formats?
- How did you experience answering questions from someone else's perspective?
- How can you use your position to increase the connection of the identity you took on for the exercise?
- How would you make changes in your course design to facilitate emotional connection for this identity? What affects has that on curriculum and teaching practices? (10 min)

Sources

Ghorashi, H., & Ponzoni, E. (2014). Reviving agency: Taking time and making space for

rethinking diversity and inclusion. *European Journal of Social Work*, 17(2), 161–174.

<https://doi.org/10.1080/13691457.2013.777332>

Lillie, B. (2014, March 20). Be color brave, not color blind: Mellody Hobson at TED2014. *TED*

Blog. [https://blog.ted.com/be-color-brave-not-color-blind-mellody-hobson-at-](https://blog.ted.com/be-color-brave-not-color-blind-mellody-hobson-at-ted2014/)

[ted2014/](https://blog.ted.com/be-color-brave-not-color-blind-mellody-hobson-at-ted2014/)

Meyer, J., & Land, R. (2003). *Threshold and : Linkages to ways of thinking and practising*

within the disciplines

Netolicky, D. M. (2020). School leadership during a pandemic: Navigating tensions. *Journal of*

Professional Capital and Community, 5(3/4), 391–395. [https://doi.org/10.1108/JPCC-](https://doi.org/10.1108/JPCC-05-2020-0017)

[05-2020-0017](https://doi.org/10.1108/JPCC-05-2020-0017)