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21st Century Relational Backgrounding for Technical and Professional Communication

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Abstract

An approach to technical and professional learning that recognizes and makes use of the social and material contexts of participants as well as the contexts of technical and professional content in the learning environment can be seen to cater to the '21st century skills' that are 'needed most', according to the World Economic Forum (Soffel, 2016) at this time of great change (Schwab & Malleret, 2020). Such an approach will be presented here: drawing primarily on epistemic fluency (Markauskaite and Goodyear 2017), but also scientific autobiography (Goetz, 2019), ethics (Gardner, 2019), critical pedagogy (Freire, 2005), hermeneutics (Ricoeur, 1991), and a work of conceptual art (Micu, 2014). The approach is connected to technical and professional communication by its focus on the relational skills that facilitate and enrich work conducted in multiple contexts. It is distilled into three categories that present the epistemic tasks and tools that can be applied as backgrounding to learning environments. These categories are: creative relational skills, conscientious direction, and dialogic curiosity. Practical application is then illustrated through three examples of TAPP collaborations.

Keywords: *epistemic fluency, relational skills, collaborative learning, conscientious professionalism, dialogic curiosity, creative coordination*

Introduction

The intercultural communication that characterizes technical and professional communication in what the World Economic Forum (WEF) has called the 'great reset' of the 21st century (Schwab & Malleret, 2020) will be defined as the trans-professional 'ability to communicate effectively and appropriately in various cultural contexts'. Key components of this ability 'include motivation, self- and other knowledge, and tolerance for uncertainty' (Jones, 2016). Given the great professional restructuring that is foreseen, and that the social and material context of communication can become automatic, it is necessary to 'look again' (Cooper in Goetz, 2021) at technical and professional communication, specifically in terms of its relation to epistemic fluency. The latter is the 'deep understanding of how knowledge works, the capacity to participate in the creation of actionable knowledge and a sense of how to reconfigure the world in order to see what matters more clearly and enable oneself, and others, to

act more knowledgeably' (Markauskaite & Goodyear, 2019).

While language for specific purposes (LSP) has traditionally focused on developing professional language skills, the guidelines set out by the WEF as 'needed most' in the 21st century workplace are not necessarily those that have been learned (Sorrel, 2016). Exploration of knowledgeable action and what matters is most effective if individuals see they are implicated in and responsible for outcomes, including the possibility for co-individuation (Stiegler, 2018). How can individuals come to see their co-entanglement in the social and material context that is 'the very matter … through which … objects come to life' (Markauskaite & Goodyear, 2017), even where this is merely the backgrounding to a primarily technical and professional focus?

The conceptualization behind such an approach can be illustrated by a work of conceptual art (Micu, 2014) featuring a large open book with an arm protruding from it. The book, through stop motion, changes position 'as if by itself' – reflecting the popular, if inaccurate, understanding of algorithms (O'Neil, 2016) that are changing the landscape of the workplace. As this open book continues to change its appearance depending on the changing background (perspective, materials, lighting, human figures...), it lends insight into the unstructured game of the great reset.

In a world where the background to how we live keeps changing, it makes sense to develop the skills and tools that enmesh us. To this end, 'extra work' (Goetz, 2020) must be done to present the technical and material context as matter through which expression and coordination is achieved. This extra work is central to the 21st century skills the WEF recommends (Sorrel, 2016). The skills range from scientific and cultural/civic literacy to creativity and communication to curiosity and grit – which have long been features of collaborative project-based work.

What is less discussed is how the trans-professionalism of 21st century skills is also characteristic of the professional practice of epistemic fluency, which is defined as both knowledgeable action and the expertise that allows specialized knowledge to be shared and exchanged. Reflective of both definitions, 21st century skills could be shorthanded as conscientious correlationalism: the ability to relate epistemic and cultural contexts and resources through the diligence of 'soft skills'. These skills had their contemporary origin in uncertain situations (Burger, 1972). The great reset is an uncertain situation: an unstructured game. Unstructured games are 'open-ended' and usually require a great investment of time before results can be achieved. In such situations, mere technical proficiency is not enough and the legitimacy of doing the 'extra' work of relational backgrounding can be better understood.

Relational thinking

Relational expertise is the ability to see 'things from a different perspective and meshing other perspectives with one's own', not merely 'mastering the rules of discourse games' but 'juxtaposing tools, agendas, perspectives and practices and assembling an environment for joint epistemic work' (Markauskaite & Goodyear, 2017). It is a form of conscientious correlationalism. This type of learning, which extends to the entire environment, is illustrated in the work of conceptual art cited above (Micu, 2014), in which the subject changes how it appears depending on its context.

Relational thinking can be addressed by a project or course through periodic exploration of the mental models, theories, and concepts (representations of how things work, cf. Munger, 2011) adopted in the subject(s) being practised or taught. Mental models could be presented not only as epistemic artefacts but as points of departure for intercultural, interdisciplinary dialogue. Examples of prompts to help such dialogue include: What are the similarities, shared tendencies? What are the differences; what do some maps contain that others don't? What do the maps emphasize/minimize? Are there values that underlie the ordering of the presentation of the work? Participants engaged in networked, interdisciplinary collaboration could be asked to explain how they come to certain conclusions, and thereby explore a procedural approach. Students or project participants could draw mind maps and compare them. A project or course could use a mind map to illustrate an activity-centered view of a learning situation, focusing on the tasks, tools, people, activities, and outcomes involved (Markauskaite & Goodyear, 2017).

Conscientious direction

Just as 21st century skills can be said to be characterized by conscientious correlationalism, epistemic fluency can be described as conscientious inhabiting, wherein mind, body, perception, action, and matter are creatively assembled in fine-tuned coordination. This means having the ability to act 'with senses that are fine-tuned to notice what is important, what should be cared for and what is worth doing' and is important to both sense-making and pragmatic action (Markauskaite & Goodyear, 2017).

Similarly, the purpose of literacy according to Paolo Freire (2005) is to be able to stand back from the flow of trends and momentum of history and reflect on our position in the world so that we become cognizant of our creative potential to direct our actions. This ability returns to us the power of our choice. The relation between text and action in Freire's important insight can be further compared with Paul Ricoeur's hermeneutic arc (1991), which relates the world of the text with the world of the interpreter. The hermeneutic arc moves between naive and in-depth understanding through distanciation, appropriation, explanation, and interpretation. Distanciation is key.

Conscientious direction can be established through drawing explicit attention to

'thinking under the influence' of assumptions and encourages the revision of previous assumptions where distanciation shows them to be inaccurate.

An intercultural networked course can identify a point of difference to use as provocation for distanciation, allowing for a new perspective on an initial position. It is noted that this technique has been used to great effect in very simple ways, e.g. in the YouTube series Middle Ground, which seats people with diverging views in a room with the purpose of establishing dialogue. This type of experience can further cultivate the type of courage required to enter unknown situations (Jones, 2016).

Making space for such dialogue also provides an opportunity for the development of anxiety coping mechanisms. The source of tension can be articulated in terms of helpful and unhelpful thoughts (Moodjuice, n.d.,) or broken down into a series of actionable tasks (Allen, 2001). Such an approach can help students or project participants develop a sense of co-individuating empowerment.

When it comes to breaking down tasks on the collaborative level, different approaches can be taken to brainstorming activities to promote conscientious direction, relational thinking, and dialogue, such as variations on reverse brainstorming or the round robin. In the latter, during a short, timed interval to reduce overthinking, individuals can think of their own ideas of how to break down a task, then present and compare them (Barber, 2021). Outcomes can be augmented by exploring how conscientious, curious dialogue can be curated in a given social and material context.

Dialogic curiosity

A sustainable way to promote exploration, dialogic knowledge construction, and the grit listed among 21st century skills is through dialogic curiosity. Intercultural projects or courses in technical and professional communication can develop this by drawing on scientific autobiography, which can model how to frame compelling guiding questions (Goetz, 2019).

Inquisitive autobiographic or narrative models can provide support for continuous learning and adaptation, which is central to epistemic fluency, as well as character building and creative perseverance in the face of challenges and adversity (Pupin in Goetz, 2019). They also provide examples of humility or of admissions of professional culpability for outcomes (Feynman, 1974).

In this context, conscientious discernment deeply informs the value of action, which corresponds to the WEF's emphasis on empathy and the competence involved in making autonomous choices (Soffel, 2016). This is important in a technical landscape where some technological proponents argue that the human ability to theorize will be rendered moot by artificial intelligence (Anderson, 2008). In light of the great reset (Schwab & Malleret, 2020), the implications of these matters should be dealt with in academic settings, especially those that focus on communication, which is a medium

for action.

Howard Gardner has done much work in this respect through his Good Project research and digital aids which emphasize the meaning of good work, effective collaboration, digital citizenship, and civic participation. When evaluating intercultural projects at any phase, he suggests asking questions, such as:

Is there agreement about the vision among collaborators? Do you discuss goals and accountability to achieve these goals? Do you discuss the collaborators' own interests, needs, and values? Are all of the voices of the collaborators being heard? Are there obstacles that need to be discussed? (Gardner et al. 2019).

As dialogic, inquisitive perseverance can wane, it is up to teachers or leaders to maintain the direction of a project even when students or project participants lose their faith (cf. Jovanović & Goetz, 2021). As individuals who not only comprise part of the social and material context through which 'objects … come to life' (Markauskaite & Goodyear, 2017), teachers and leaders are tasked with the attempt to coordinate the social and material context, creatively and conscientiously.

Examples of applications to recent TAPP collaborations

Conscientious direction and creative relational skills were fostered when students taking a class on culture collaborated with students studying video production. Their joint task was to make a video about culture, sharing knowledge on ideation and editing, each learning about the others' 'expertise' by interacting with it with the aid of sample question prompts.

Dialogic curiosity was encouraged when undergraduate native English speakers paired with ESL postgraduate students to apply basic communication modelling questions to the ESL students' short academic papers in an attempt to understand the content. The native English speakers needed to phrase questions clearly to arrive at the meaning of the papers and the ESL students needed to express that meaning in simple terms – and perhaps more importantly, try to keep the conversation going.

Students in a history course collaborated with students learning about web design to make a site about the Civil Rights Movement. This was an exercise in conscientious, creative correlationalism. Students gained practice in navigating the tasks and tools involved in creative writing and web design and gained experience in navigating different cultural understandings, topical expectations, and sociocultural backgrounds.

Time is often not taken to consider our backgrounding in social and material contexts, especially where they depart from textbook examples. However, taking a cue from the WEF, it is time to expand professional learning in the 21st century to include the 'extra' work of conscientious correlationism, even where this is limited to a general backgrounding for projects in technical and professional communication. Such an

approach reveals technical and professional communication, as broad as it is, to be but a part of an even larger context.

Conclusion

There is nothing mechanical or automatic about teaching technical and professional communication, although it has generic restrictions. The point and problem of this paper is that the changing background of the great reset (Schwab & Malleret, 2020) will implicate us and our professional praxis in new ways. This paper explored how an awareness of the interrelations between professional and technical work and life at large can enhance the meaning of communication. More specifically, this was explored through the domain of epistemic fluency (Markauskaite & Goodyear, 2017) and supported by critical pedagogy (Freire, 2005), hermeneutics (Ricoeur, 1991), and scientific autobiography (Goetz, 2019). This approach was understood to have the potential to cultivate creative relational skills, conscientious direction, and dialogic curiosity, which all respond to the 21st century skills that are 'needed most', according to the WEF (Soffel, 2016). Epistemic tasks and tools that are created through such an approach include comparing actionable epistemic mind maps, prompts for professional and cognitive distanciation, empowerment techniques for getting things done in unknown situations, dialogic inquiry modeled after recognized scientists, and the fostering of digital citizenship by asking questions. The outcome is a 'deep understanding of how knowledge works, the capacity to participate in the creation of actionable knowledge and a sense of how to reconfigure the world in order to see what matters more clearly and enable oneself, and others, to act more knowledgeably' (Markauskaite & Goodyear, 2017). Experience in the capabilities and practices of different ways of knowing can be planned for and implemented as backgrounding for projects involving technical and professional communication.

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