

# Between Skills and Success: Developing Workers' Dispositions for Applying Skills in an Uncertain, Disruptive World

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**Abstract.** Dispositions—what people tend to do with their skills when the occasion calls for it and how—are a vital link between having a skill and effectively applying it in real life. During the pandemic, we saw that inculcating skills for a particular role was not enough to prepare workers for economic inclusion under turbulent workforce conditions, as the individual's dispositions oftentimes determined that person's response to the disruptions. Adding dispositions to current models of capacity building may make a crucial difference in workers' responses to this turbulence. To this end, immersive technologies can potentially improve dispositional training efforts and assessments. The simulated settings can vary in context and complexity to more closely depict the diversity experienced in real life, allowing learners to perform and be evaluated under wide-ranging circumstances. The current use of immersive media in resilience training for military and healthcare personnel serve as potential paradigms for application in education and workforce development. To verify these potentialities, we recommend additional research in the development and testing of scalable curriculum and measurement strategies for dispositions related to vulnerability and turbulence.

**Keywords:** Dispositions, Workforce Development, Immersive Media.

## 1 Introduction

Approximately 114 million people worldwide lost their jobs in 2020 alone [1]. Millions of others experienced extensive transformations to their roles and workplace conditions. Some of these workers and professionals successfully pivoted, while others struggled to adjust to the new circumstances.

Even in the wake of virtual schooling, some teachers and school leaders who had previously excelled in their roles struggled to effectively deliver, while others quickly transitioned their practices to online environments [2]-[3].

A major factor that differentiated between these two responses may be dispositions, such as a growth mindset, adaptability, and resilience [3]-[6]. During the pandemic, we noticed that inculcating skills for a particular role was not enough to prepare workers for economic inclusion under turbulent workforce conditions. Whether a worker also possessed the associated dispositions that encourage and enable using those skills determined the extent to which that person felt empowered or paralyzed by the disruptions.

Over the coming half-century, forecasts suggest continued rapid changes in jobs and employer needs [7], [17]. Though these future shifts might not occur as dramatically or as suddenly as COVID-19, they will no doubt impact the education and workforce sectors. Thus, adding dispositions to current models of capacity building may make a crucial difference in workers' responses to this turbulence.

The objective of this presentation is threefold. First, we will highlight the importance of training for dispositions, particularly those valuable during disruptive periods. Second, we will inform practitioners and leaders about six ways that they can support learners in fostering helpful dispositions. Lastly, we will suggest the suitability of immersive media to facilitate rich, authentic dispositional training and assessment at scale and propose further research in this area.

## 2 Significance of Dispositions

Dispositions—what people tend to do with their skills when the occasion calls for it and how—are a vital link between having a skill and effectively applying it in real life [8]. As the definition implies, dispositions require the necessary skills or abilities—the competencies to express a certain behavior or perform a specific type of task, physical or mental, at some level of proficiency [9]. In addition, dispositions hinge on a person's

inclination, the intention to engage in the behavior; sensitivity, the probability of noticing occasions to engage in the behavior [8], [10]; and appraisal, the understanding of how much of a behavior is appropriate for the situation [11]. All these elements of a disposition must be present for it to be successfully expressed.

When we train for skills and deem learners prepared to exercise those skills when they pass our assessments, some learners' skills will still remain latent unless the training also builds the related dispositions for the expression of those capabilities.

### **3 Inculcating Dispositions**

Dispositions can be triggered, obstructed, enhanced and delayed by contextual factors such as educational interventions and workplace culture. For a disposition to be enhanced, learners must understand the meaning of the skills and dispositions they are honing, feel intrinsically motivated and build the situational awareness to apply them, recognize the costs and benefits of deploying a disposition, and possess the metacognitive abilities to reflect on their skillfulness and areas for improvement [8], [12]-[14].

Existing frameworks suggest that practitioners and leaders can create the curriculum and culture to support learners in fostering helpful dispositions. Specifically, they can:

1. Explain what the disposition under consideration means and what its associated skills encompass,
2. Present examples,
3. Encourage students to treat the examples as models to be analyzed and followed,
4. Justify the exemplified behavior,
5. Develop authentic scenarios and exercises for practical application and prompting student reflection, and
6. Cultivate an overarching culture of dispositional excellence [9], [13].

### **4 Immersive Media for Inculcating and Assessing Dispositions**

Immersive technology holds the potential to improve dispositional training efforts and assessments for workers and professionals.

Given the contextual nature of dispositions, inculcation needs to leverage situated, authentic practice, which we can now do at scale through immersive environments like virtual reality. The simulated settings can vary in context and complexity to more closely depict the diversity experienced in real life, allowing learners to perform under wide-ranging circumstances.

Moreover, assessing learners in diverse simulated experiences improves our ability to evaluate whether they will react appropriately when a similar set of conditions present themselves beyond the simulation. Current assessment methods (e.g., self-reported surveys) fall short of evaluating the transfer of disposition attainment across situations. Trainees who appear to possess a disposition in one context might not express that disposition in another, a disconnect we cannot capture with current evaluation methods. By crafting a multitude of environments and scenarios that closely resemble real-life situations, putting individuals in the scenarios, and seeing first-hand if they display the disposition(s), immersive media can potentially bridge this gap.

The use of immersive media (e.g., virtual reality) in resilience training for military [15] and healthcare [16] personnel serve as potential paradigms for application in education and workforce development. To verify these potentialities, we recommend additional research in the development and testing of scalable curriculum and measurement strategies for dispositions related to vulnerability and turbulence.

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