


# How to Structure Data for Humanitarian Learning

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## INTRODUCTION

### What is Learning?

Several basic approaches can be taken towards learning. The direction in which one understands learning predetermines the learning setting considered as optimal. Consequently, it is a prerequisite to reach clarity about how one might understand “learning”. This chapter proposes:

- learning as mental structural change (psychological approach)
- learning as leapfrogging biological and evolutionary cycles (evolutionist approach)
- learning as creating new (mental, existential) spaces by reflection (ontological approach).

In any case, it will be useful to keep in mind both *learning of individuals* and *learning of society*.

### Learning is Mental Structural Change

According to a psychological approach, learning is understood as *mental structural change* that leads to change in real-world behaviour. In this view, learning would be only successful if it results in changes of the person’s real actions. Let us undertake a “tour d’horizon”, in which contexts we may find a similar viewpoint and how fixed or loose border conditions for such learning should be:

Here we examine any type of learning, especially life-long learning for adults (Chen & Gao, 2021, Eynon et al., 2021, Sieglöva & Stejskalova, 2021, Cheng et al., 2012, King, 2002, Shapiro et al., 2017) and we draw conclusions from decades of our own teaching, learning and training experience in both roles, active and passive. Often, learning is most productive when taking the role of a trainer. We adopt a constructivist stance, under the philosophical auspices of John Dewey’s *Pragmatism* (Maboloc, 2021, Pyysiäinen, 2021, Racine et al., 2021, Waight, 2021, Ahamer, 2008, Berding, 2000, Haack, 2004, Grippe, 2002). In the resulting picture, in order to reach the mentioned structural mental change, the *core action is dialogue and exchange of views in a discourse*, constituting Dewey’s “education for responsible democracy”.

As does democracy, education deeply involves ethics: it is based on the “principle of responsibility” (Insanguine Mingarro, 2020, Mourelo, 2021, Jonas, 1984, Stähli, 1998, 2005, Werner, 2003). Here, preference is given to *teleologic* (target oriented) ethics as opposed to *deontologic* (duty oriented) ethics – stressing the result of any human action as preferred to theoretical and subjective conviction.

For facilitating such dialogue, a very helpful approach is: “learning through gaming” (Prensky, 2001, Ahamer, 2013d, 2019: ch. 9, 25, Croxton & Kortemeyer, 2018, Padmanabhan et al., 2019, Ryu, 2013,

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Shirsekar, 2019, Soneji, 2019, Venter & Coetzee, 2014, Viola et al., 2021, Volejnikova-Wenger et al., 2021). Symbolically, a gaming setting means to leave a “play” in the rigid mechanisms of traditional reproduction of content by allowing for trial and error in a modelled (“game”) scenario. Coherent with the affiliation of the authors, such endeavour of responsibility-oriented teaching encompasses both the area of e-learning and (human) geography (Popke, 2003: 298, Cloke, 2002: 589). An “*ethics of encounter*” (Popke, 2003: 300) is both facilitated by *e-learning tools* and *geo-referenced* in a multicultural sense. Supported by web-based tools and e-learning didactics (and especially by planet-wide data structures: Ahamer, 2013a), we are led to say: “out of sight, but *in mind*”.

Let us consider another perspective on learning: according to design literature, iterative oscillation occurs between the *problem* space and the *solution* space (Maher, 2003; Dorst & Cross, 2001: 434). Such loose type of oscillating interaction between the two “spaces”, namely to act and to reflect, is also well characterized by the pedagogic concept of “*reflection-in-action*”, a pedagogical and managerial principle combining sequences of contemplative and actionist aspects (Cattaneo & Motta, 2021, Jung et al., 2021, Schön, 1983, 1986: 62, Lawless & Roth, 2001) that has been applied to learning individuals but also to learning organisations.

In an influential article that has prompted a series of responses and comments, Roth et al. (2001) instead propose the notion of “*Spielraum*” – a word that the Canadian authors import into English language from German. It has the meaning “room to play” both in the sense of game-based learning (Ahamer, 2012a, Ahamer & Kumpfmüller, 2013) and in the sense of machinery as the desired clearance a joint has in order to allow for motion. So, there should be a playful element or “game” in learning in both senses. The symbolic usage of the word “play” suggests allowing students to enjoy a near-to-real-life situation without fearing the merciless real-world sanctions of suboptimal behaviour (Fresner et al., 2007: 21).

Concluding from the above, “leeway for wits and senses” (Tröhler, 2007) should be allowed in any learning setting. *Spielraum* is “elbow room” (an effective existence radius of the self) according to Jaros (2007) who stems from spatial planning and argues that “the self depends for its ability to recognise itself primarily on collisions that suspend the flow of spatialised complexity”.

After decades of classroom experience narrated in vivid examples, Roth et al. (2001: 183) “propose ‘*Spielraum*’ as room to manoeuvre, as a concept that describes the reality of teaching much better than reflection-in-action, especially when there is no time out for reflection.” They “therefore see [themselves as teachers] always at some point in time and space which means for them to take into account the specific individual situation of students in the given classroom. Readiness for appropriate action, whatever the unfolding events, means that the agent has *Spielraum*, the room to manoeuvre appropriately in the current situation. According to Heidegger (1977), *Dasein* (being here) “combines self and world into a single irreducible entity, being-in-the-world, in the face of all the contingencies real-time interactions pose to the participants involved” (Adani, 2021, Brito et al., 2021, Grollo, 2021, Perinán, 2021, Pirc & Weber, 2021, Ross, 2021, Rouse, 2021, Roth et al. 2001: 186) and “constitutes the location from which a person negotiates the world” (Popke, 2003, 302). Not the teacher’s but “the students’ own questions guide or scaffold students because they always test the outer edge of their students’ current reality. The questions therefore can neither be completely in the teacher’s reality nor completely internal to students’ reality, but always along the interface of the two. Students are the builders of their own reality” (Roth et al., 2001: 186-201).

Summing up this above subchapter, readers may believe that the following views are helpful:

1. learners construct their own reality
2. learners benefit from less pressure of real-life consequences

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