



INTERACT: CONSTRUCTIVIST UNDERPINNINGS

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The core tenet of constructivism is that people 'will make their own sense of the ideas and theories with which they are presented in ways that are personal to them ... [and that] ... each individual constructs his or her own reality' (Williams and Burden, 1997: 2).

By and large, constructivism rests on the notion that we operate with mental representations of the world which form our knowledge, and which change as we learn. This view indicates that all learning involves relearning, reorganisation in one's prior representations of the world: 'there is no intellectual growth without some reconstruction, some reworking' (Dewey, 1991: 64).

As with most things, constructivism isn't new. In Piaget's work, mental representation or construction is the means by which we internalise knowledge and perceive the world. That explains why Piaget called upon teachers to treat children as active participants in learning, not just empty vessels to be filled with the teacher's knowledge. Vygotsky also believed that students were not mere passive recipients of knowledge but active subjects who learn best in their "zone of proximal development" - where they can, with appropriate guidance and through socially mediated interaction, learn more than they would on their own. Piaget and Vygotsky differ in the extent to which each emphasizes social context. The former stresses the importance of individual cognitive development as a relatively solitary act. For him, biological timetables and stages of development are primary while social interaction only triggers development at the right moment in time. In opposition, Vygotsky maintains that social interaction is basic in cognitive development and rejects the notion of predetermined stages.

Alongside Piaget and Vygotsky, John Dewey posits that learning is an active process whereby opportunities are created for experiential learning. Since for Dewey learning comes through experience, learners should be gathering and analyzing data and demonstrating their knowledge in a tangible way. Recent research seems to validate the concept that people use past knowledge and experience to help provide a structure for new ideas, and that people interpret new information based on their previous knowledge and experience. In other words, we create meaning for ourselves, we don't incorporate it wholesale from others.

While giving Piaget, Vygotsky and Dewey their due, we have to say that it is only in the last part of the 20th century that constructivism emerges as a prevailing paradigm which makes a strong case for the view that all human beings construct their own version of reality, and therefore multiple contrasting ways of knowing and describing are equally legitimate.

In terms of learning cycle, a constructivist view has a direct bearing on the Interact project in that it entails (a) filtering new information according to expectations and existing knowledge of the world; (b) constructing the meaning of the input; and (c) matching this meaning with prior internal representations relevant to the input.

These stages are replicated in the Interact simulations where learners actively construct and test their own representations of the world and then fit them into a personal framework. In general, new inputs and experiences may affect learners' construction of the world in two different ways. If they interpret the input to fit with their existing knowledge, then they are engaged in assimilation. If they revise their knowledge to take the input into account, then they are involved in accommodation. Therefore, change occurs as they accommodate new information, as confirmed or challenged by their interactions with other people.

What needs emphasizing time and again is the dynamic nature of the interplay between learners and their peers on one hand and their tutors and others with whom they interact, on the other. It becomes self-evident, then, that the interpersonal context in which a learner operates takes on great significance, and therefore, the interaction between learners and others becomes the focus of observation and explanation.

In the frame of Interact, before the simulations, each learner has distinctive, complex conceptual schemata relating to ways of acquiring new content. Although significant individual differences in these conceptual schemata are to be expected, large areas of commonality may also exist through the embedding of these schemata within the ideologies of specific contents. The conceptual schemata show a high degree of stability, but gradual change can and has actually occurred through the acquisition of new constructs and principles

from instruction and experience.

Based on observation and reflection on the sequence of Interact simulations, a number of conclusions emerged:

- a constructivist approach recognises the personal differences between learners;
- learning resides in the conceptual development which triggers behaviour change, not only in the behaviour itself;
- learners can learn by developing their perceptions in addition to skill training;
- feedback should focus on the thinking and the perceptions of the learners, as well as their actions;
- models need to be used for exemplification and analysis, and not merely for imitation.

The simulations served to strengthen our conviction that tutors have to work from the personal theories which each learner brings along. In a systemic approach, this in its turn justifies space in the curriculum to develop self-awareness and also to explore each learner's interpretations of input and their own learning experiences.

Equally significant for the overall Interact experience, a constructivist view confirms that the tutors' perceptions and beliefs are progressively reinforced by teaching experience, becoming increasingly central to their view of themselves as they become more and more confident in meeting role demands. More often than not, this is reflected in the ability of learners to assimilate training inputs to conform to their prior beliefs. In some cases, learners will unwittingly misinterpret the new ideas and translate them to conform to their existing routines, at the same time believing they are doing exactly what the tutor calls for. Unlike other approaches, constructivism would not view learners as 'misinterpreting' inputs, but as assimilating them, fitting them into their existing personal theories and prior experience.

This tendency to assimilate inputs indicates the need to uncover learners' implicit theories and beliefs in order to make them available for conscious review: 'While tacit knowledge may be characteristic of many things that teachers do, our obligation as educators must be to make the tacit explicit' (Shulman, 1988: 33), a statement which aptly summarizes the rationale of Interact in terms of tutors' goals.

In retrospect, one thing is certain: constructivism provides a helpful framework to understand personal change. It explains why 'each individual. ... learns different things in very different ways even when provided with what seem to be very similar learning experiences' (Williams and Burden, 1997: 2). It also highlights the need for tutors to 'start where learners are' before any attempt to bring about personal change.

The constructivist position has far-reaching implications for education insofar as it shifts the focus away from "teaching" and toward "learning". If education is to do with the facilitation of change and learning, learning how to learn is more important than being taught something from the superior vantage point of someone who unilaterally decides what shall be taught. For that to happen, facilitators must first be real and genuine, discarding masks of superiority and omniscience. Moreover, they need to have genuine trust and acceptance, and prize the other person as a worthy, valuable individual. In other words, they need to provide the nurturing context for learners to construct their meanings in interaction with others.

Without exception, every one of these aspects was clearly visible in the Interact simulations where the contexts for interaction were carefully designed with a view to creating the optimal environments and tasks for input and interaction, thus stimulating learners to create their own behaviour in a socially constructed process. Other equally important constructivist principles, such as reflection, negotiated meaning, facilitation, and trust, were all constitutive elements in the process.

To put it in a nutshell, the constructivist backbone of Interact was obvious in that learners discussed things of interest to them, each person was in control to the extent he or she wanted to be, the affective filter was down, meaning derived from within, and scaffolding clearly took place within the zone of proximal development that encompassed the Interact community of practice. On top of that, when learners eventually put their projects on a platform for people around the world to see, they did something that goes beyond training and becomes real life.

References

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