

Acquisition and participation metaphors of learning



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Introduction

A wealth of research has been devoted to the goal of understanding an array of different theories of learning which have emerged within the last 50 years. The focus of this paper is to address two specific paradigms, within which learning is now understood. These consist of the acquisition metaphor and the participatory metaphor of learning. The relative merits of each paradigm, has been evinced through a coalescence of scientific research, appropriating findings from an array of emerging fields of inquiry. Greeno (1997: 14) notes that progression in the field of cognitive science has illuminated our understanding of the “ processes of problem-solving, reasoning, understanding and memory”, whilst advancements in understanding social interaction are derived from “ ethnography, ethnomethodology, symbolic interactionism, discourse analysis, and sociocultural psychology.” In broad terms, these two distinct lines of inquiry have fuelled the alternate metaphors of acquisition and participation, as ways of thinking about the nature of learning. When paradigms such as these develop, they bring with them the distinctive array of terminology characteristic of the intellectual currents, which spawn them. Griffin (2003: 68) helpfully acknowledges that the reason in part why the lines of inquiry about learning have been divergent is that “ different authors have used different terminology to describe the types of learning that they have studied.” Greeno (1997: 14) rightly concedes that the “ prospects for theoretical advancement” are improved if the scientific agenda prizes synthesis. The proverbial maxim that ‘ iron sharpens iron’ is relevant here, where the two metaphors of learning have lived through an intellectual period in binary opposition, illustrated by

aspects of Brown, Collins and Duguid (1988); Andersen, Reder and Simon (1996) and Greeno (1997). Indeed, as Greeno (1997: 15) notes in his concluding remarks, “ the cognitive and situative perspectives are both valuable for informing discussions of educational practice, but in rather different ways.”

The prismatic-like dimensions of learning have allowed it to be categorised variously, reflective of a variety of operating paradigms. Binary categorisations including “ single or double loop” (Argyris and Schön, 1978); “ maintenance or innovative” (Botkin et al 1979); “ banking or problem-posing” (Freire 1972); “ reflective or non-reflective” (Jarvis 1992); “ formative or transformative” (Mezirow 1991); or “ surface or deep” (Marton 1982); are all noted by Griffin (2003: 68-72). These theoretical constructions of learning, can be in part at least, subsumed within the ambit of the two metaphors in question, namely learning as ‘ acquisition’ or learning as ‘ participation.’

Jonassen and Land (2000: 28), note that “ Resnick (1987), in her presidential address to the American Educational Research Association, examined the practices in schools, which are predicated most strongly on the acquisition metaphor, comparing them to how individuals learn and use knowledge outside of schools. Her analysis focused attention on the collaborative, contextualised, and concrete character of learning outside of school, as opposed to the individual and abstract character of learning that occurs inside of school. Arguably, it was this analysis that served as one of the principal stimuli for the development of the participatory perspective with its emphasis on situated activity.”

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The Participatory Metaphor

While the field of cognitive psychology is well established, the fields of social psychology and cultural studies are emergent fields. The participatory metaphor of learning has grown out of these more recently emerging psychological and sociological disciplines. Brown, Collins and Duguid (1989) observed that methods of learning that try to teach abstract concepts independent of authentic situations overlook the way understanding is acquired and developed through continued, situated use. These researchers also assert that “ understanding is reliant upon complex social interactions and negotiations”. Brown, Collins and Duguid’s (1989) assertion that the nature of language acquisition is analogous to the nature of all knowledge acquisition is a useful interpretive device. Language vocabulary acquisition is a relatively rapid and efficient process when learners are participants in ‘ authentic situations’, in this case explained as situations where a genuine functional need for language acquisition exists in order for individuals to participate in the flow of real life conversations. Herein, learners are active participants with ‘ practitioners’, indeed ‘ cognitive apprentices’ as Brown, Collins and Duguid (1988) postulate. An authentic language acquisition environment, encourages the awareness of nuance and the practice of negotiation to promptly deal with uncertainty, an option, arguably not as available to students in conventional classroom settings. By way of contrast, Brown, Collins and Duguid (1989) describe typical language acquisition approaches in schools as extremely inefficient, due to the level of contrivance, belying the value of formal definition and memorisation without regular practice.

According to Brown, Collins and Duguid (1989: 1), knowing ...is inextricably situated in the physical and social context of its acquisition and use.” This representation of knowing resonates with Jonassen and Land’s (2000: 28) comments that, “ knowing about refers to an activity – not a thing. Knowing about is always contextualised – not abstract; knowing about is reciprocally constructed within the individual-environment interaction – not objectively defined or subjectively created; and knowing about is a functional stance on the interaction–not a ‘ truth’.” Participatory advocates underline the “ inseparability of knowing and doing”, an assertion, which, if widely true, raises enormous challenges for schools and other formalised educational institutions.

Brown, Collins and Duguid (1989), explore the enticing notion of ‘ cognitive apprenticeship,’ positioning teachers as masters of apprentices, who utilise authentic domain activity. They make the astute observations that, “ social interaction, social construction of knowledge is significant, therefore conversation, narrative and anecdote, should not be dismissed as noise.” Furthermore, they assert ‘ legitimate peripheral participation’ is significant for it often involves apprentices, attempting to enter the culture. This articulation of genuine learning imbibes the sociological significance of the learning framework. The participatory metaphor of learning empowers the individual and the social group within the learning context. Other common terms noted amidst situated cognition adherents, terms such as participatory, brokering and negotiating, elevate the status and significance of the learner within the learning environment, implying an active, engaged and enculturated role on behalf of the learner, in relation to the learning

process. These concepts indicate the premise that learning is an active process, and certainly not an inert, static product, such as an intact body of rarefied knowledge, permanently beyond dispute or modification. This framework for understanding learning has real currency at a time when geopolitical shifts in an increasingly globalised world and village, exposes the tentative nature of knowledge, which may have been perceived as immutably fixated in previous centuries. The elevation of the learner's status in relation to the act and process of knowing, is an appealing way to view the nature of learning.

A logical extension of this interpretation of learning, is its predilection according to Brown, Collins and Duguid (1989), for “ collective problem solving, enacting multiple roles, confronting ineffective strategies, and utilising collaborative work skills.” The corresponding conviction, that learning is a transaction, also pinpoints a false assumption. In this light, it is deemed to be false, “ that knowledge is individual and self-structured, that schools are neutral in terms of what is learned in them, that concepts are abstract and immutable, and are independent of the context in which they are acquired, that (JPF) behaviour should be discouraged.”

Johansen and Land (2000: 84) notes ‘ situated cognition’, (or SitCog to its pundits), while holding some advantages over previous foundations, does not presently offer a comprehensive account of cognition. “ For SitCog to fully serve as an integrating framework, a means of accommodating multiple perspectives needs to be developed, to allow inclusion of selected ideas and practices from behaviourism, symbolic cognition, and other theories, both psychological and non-psychological.”

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Johansen and Land (2000) note that SitCog also presents an opportunity to define the designer's role in new ways. The design task is seen in interactional, or participatory (rather than rational-planning), terms. They assert that (2000: 84) " design and control become situated within the political and social context of actual learning environments. Rather than applying the best learning theory, designers and participants of learning environments honour the constraints and affordances of the local situation. A situated view of design, then, is one that supports the worthy practices of participants and stakeholders, using whatever theories, tools, or technologies at their disposal."

New situations continually recast concepts in a more densely textured form- concepts are ever evolving. Concepts are always under construction and defy categorical description

Brown et al (1988) provide a clear account of situated cognition, a term noted frequently in the literature review which draws attention to the critical role of situation or context in the process of learning. The concept of situativity, is a key component of the participatory metaphor of learning. It asserts that knowledge is a product of a specific learning situation, embodying a set of cultural assumptions, which facilitate the cultural construction of knowledge

The researchers advocate the " inseparability of knowing and doing", which has enormous implications for education and learning, if their further assertion is incorrect, thanconventional educational settings and theories of mind, disassociate knowing and doing as two distinct practices.

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This conceptualisation of learning acknowledges the significance of the activity, whereby authentic activities are defined as ordinary activities of the practitioners of a culture. Brown, Collins and Duguid (1989), indicate school activities are hybrid- framed within the values of one culture- school, (while attributed to the culture of another domain, such as that of the historian or the mathematician). Proponents of the need for authentic learning activities, applaud the participatory metaphor of learning. These researchers desire learning activities congruent with what practitioners do, a noble aspiration embracing the insights of the apprentice model of admission and enculturation, into the beliefs and practices of particular learning communities. The corollary, amongst some situative theorists, most notably Lave, is regrettably a fairly strident expose of the limitations of schooling, since knowing becomes transmuted within school contexts, so school culture replaces, rather than allows access to the authentic domain of knowledge.

Assert that growing body of research into cognition undermines the notion that abstract knowledge can readily be transferred from the minds of teachers to the minds of students. “ Knowing ...is inextricably situated in the physical and social context of its acquisition and use” p1 If extracted from these, it is irretrievably transformed.

Anderson, Reder and Simon (1996) attempt to distil four key claims posed by the situative learning proponents, then to systematically dismantle each one, from a viewpoint more akin to the acquisition metaphor of learning. To complicate this debate, Greeno's (1997) rejoinder, asserts that Anderson et al (1996), misreads the paradigm of situative cognition, providing an overly simplistic distillation of the case for the ' SitCogs'.

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Andersen et al (1996), state that 'sitcogs' claim all knowledge is context specific or context bound, yet this is going too far. Their rebuttal suggests research yet to be conducted may show that knowledge is made more transferable, when initial explicit instructions that transferability of knowledge concepts is articulated and value. They also found some research failed to find evidence of context specificity in relation to learning; that how tightly knowledge is bound to context depends upon the nature of the knowledge. Furthermore, they concluded that knowledge is more context-bound when taught in a single context, moreover links between school based competencies and workplace competencies show some correlation, diffusing a degree of the potency of some situated learning advocates.

The Acquisition Metaphor

The consolidated field of cognitive psychology, shaping theories of learning over several decades, has espoused the view that knowledge is a product that is capable of consumption and acquisition. This more long-standing understanding of learning has not surprisingly felt threatened by the situative cognition view. It is seen by many as a conservative or conventional conceptualisation of learning, attuned to the enculturation process of traditional schooling.

A belief from within this camp, is the notion of the existence and value of abstract knowledge; deemed to be valuable in its supposed dexterity, to be able to reappear for reapplication in relation to additional contexts in meaningful ways for learners. Greeno (1997: 15) admits that while more drawn to the situative learning paradigm, nonetheless, "the cognitive perspective clarifies aspects of intellectual performance and learning, with <https://assignbuster.com/acquisition-and-participation-metaphors-of-learning/>

its emphasis on and clarification of informational structures of skill, knowledge, strategies and understanding.”

While the situative camp has to some extent charged knowledge with an inability to be transferred, once stripped of the original context in which it is learnt, Greeno (1997), defends the participatory model. He suggests its recognition that the notion of transferability of knowledge must be examined with greater subtlety and detection of nuance. Andersen et al (1996), cites evidence of studies to show the full gamut of opinion about degrees to which knowledge transfers or not, which superficially appears to undermine the situative, participatory view, that knowledge removed from its context is diminished. The further claim attributed by Andersen et al (1996), to the situative view of knowledge and seeming attack upon the acquisition pundits, is the assertion that training by abstraction is of little use. The writers support the use of abstract instruction combined with concrete examples as a powerful approach to knowledge acquisition, citing studies which purport to demonstrate the efficacy of abstract knowledge. Finally, they pose the claim by situative proponents, that instruction needs to be done in complex social environments. To counter this, Andersen et al notes that part training is often more effective than holistic training, exemplified through tax code being better learnt whilst removed from the social context of interaction with a tax client – thereby removed from the social environment. Furthermore, cooperative, group learning studies which are deemed to be inclusive, yet studies do not categorically show group learning to be necessarily superior.

Recommendations and Conclusions

Brown, Collins and Duguid (1989) recommend that since situated learning postulates that activity and perception precede conceptualisation, they therefore need to be better understood. In line with this, key terms used to bolster both the participatory and the acquisitional metaphors of learning need more precise definition.

It seems that both conceptualisations of learning recognise much of the merit in the opposing camp, as well as (at least in an intuitive manner) the artificiality of binary opposition in fields of academic research and inquiry. The dialectical approach to research within the relevant scientific disciplines, appear to recognise the value and goal of synthesis, in order that robust progress in understanding of the nature of learning occurs.

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