



**Towards a science of learning through practice:  
Bases, factors and elements**  
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There is a need for a science of learning through practice. Current conceptions, norms and practices associated with learning are overly premised on and shaped by precepts of educational institutes, their provisions and discourses. Yet, these precepts are in many ways shaped by the needs of a hybrid setting, which unlike any other setting, have as their sole purpose as the promotion of learning. Yet, learning co-occurs with practice in all settings, not just in these institutions. Therefore, to elaborate what constitutes the processes and outcomes of learning in the circumstances of practice, how it might be improved and to overcome the societal privileging of education institutions and practices in any 'era of schooling', there is a need for a science of learning in the circumstances of practice. Such a science will likely have dimensions of purposes, practice based curriculum and pedagogy and epistemological actions of learners. Drawing upon historic accounts from Europe, Imperial China, Hellenic Greece and more recent accounts that lead up to the industrialisation and the formation of modern states, and those from anthropology that identify the development and learning of culturally important capacities through engagement in practice, some premises for the ways in which learning through practice has occurred before and outside of the 'era of schooling' are advanced. Then, and drawing upon more contemporary accounts from psychology and cognitive science, some sketching of the architecture for how individuals' learning has and is being organised in practice settings, the ways in which those experiences are being enriched and the substantive premises for claims about the potency of learning through practice settings (i.e. authentic experiences). Together, these contributions are then used to set the stage for the development of a science of learning through the circumstances of practice. In concluding, the key elements of what might constitute such a science of learning: curriculum and pedagogic practices, learners' personal epistemologies as well as a range of cultural, societal and situational factors are then elaborated.

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Dr. Stephen Billett is Professor of Adult and Vocational Education in the School of Education and Professional Studies at Griffith University, Brisbane, Australia. Stephen has worked as a vocational educator, educational administrator, teacher educator, professional development practitioner and policy developer within the Australian vocational education system and as a teacher and researcher at Griffith University. Since 1992, he has researched learning through and for work and has published widely in the fields of vocational learning, workplace learning and conceptual accounts of learning for vocational purposes. His sole authored books include *Learning through work: Strategies for effective practice* (Allen and Unwin 2001); *Work, change and workers* (Springer 2006) *Vocational Education* (Springer 2011) and edited books *Work, Subjectivity and Learning* (Springer, 2006) *Emerging Perspectives of Work and Learning* (Sense 2008), *Learning through practice* (Springer 2010) and *Promoting professional learning* (Springer 2011). He is currently preparing a manuscript entitled the *Integration of Practice-based Learning in Higher Education Programs*. He is the founding and Editor in Chief of *Vocations and learning: Studies in vocational and professional education* (Springer) and lead editor of the book series *Professional and practice-based learning* (Springer) and lead editor for the forthcoming *International Handbook of Education on Research on Professional and Practice-based Learning* with colleagues from Germany. He was awarded a 2009-2010 Australian Learning and Teaching Council (ALTC) National Teaching Fellowship that identified principles and practices to effectively integrate learning experiences in practice and academic settings. In June 2011, he commenced a four-year Australian Research Council Future Fellowship on learning through practice.