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Critical incidents and language learning: Sensitivity to initial conditions

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Abstract

Critical incident theory has helped teachers to reflect on their teaching practice and elicit ways of improving it through identification of preconceptions and through reflection on the significance of unplanned incidents. This paper adapts these ideas to the perspective of language learners, in order to promote awareness and development of learning through conscious reflection. Recognizing that language learning is a complex, dynamic process, with numerous interacting and often unpredictable factors, the research incorporates aspects of complexity theory, according to which, apparently insignificant 'initial' events can determine the way in which global structures (e.g. learning) 'emerge' over the long term. Awareness of this concept can enable students and teachers to facilitate positive critical incidents and avoid harmful ones. In investigating the significance of 'sensitivity to initial conditions' in terms of language learning, this study invited graduate and undergraduate students to reflect on their learning over a semester and to identify critical incidents from their previous elementary and secondary schooling. Analysis of their responses led to the conclusion that sensitivity to initial events (critical incidents) does occur in language learning, but that the learner needs to 'notice' the incidents for triggering or realization to take place and to influence subsequent learning.

Keywords: Complexity; Critical incidents; Emergence; Noticing; Sensitivity to initial conditions

1. Introduction

In the drama of existence we are ourselves both players and spectators. (Heisenberg, 1958, p. 57)

Critical incident theory has been effectively employed by teachers and teacher-trainers as a means of improving teaching through reflection on classroom events (Farrell, 2008; Thiel, 1999; Tripp, 1993) and the identification and examination of these incidents has become part of 'reflective practice', a common component of many language teacher education programs, helping trainee teachers "to think about what happened, why it happened, and what else could have been done to reach their goals" (Cruickshank and Applegate, 1981, p. 553). This paper builds upon critical incident theory by introducing the concepts of 'sensitivity to initial conditions' (Byrne, 1998, p. 19) and 'emergence' (Larsen-Freeman, 1997, p. 154) from complexity theory (Waldrop, 1994), along with that of

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'noticing' (Robinson, 2006; Schmidt, 1995; Truscott, 1998). The investigation into critical events is carried out in this study from the point of view of the student, rather than the teacher, with the aim of promoting student autonomy, learning strategies and responsibility for learning. This student-centered view of the learning process and the learning environment views critical events, ideas and 'aha moments' (Koestler, 1967) from the learner's perspective, identifying the types of incidents that students find critical, and examining how these influence their learning development.

2. Critical incident theory

Farrell (2008) states that, "A critical incident is any unplanned event that occurs during class. […] if trainee teachers formally reflect on these critical incidents, it may be possible for them to uncover new understandings of the teaching and learning process." (p. 3). Brookfield (1990) adds 'perception' as a defining factor, seeing a critical incident as any "vividly remembered event which is unplanned and unanticipated" (p. 84), while Richards and Farrell (2005) state that such an event should "trigger insights about teaching and learning" (p. 113). Tripp (1993) takes a more "interpretative" approach. Acknowledging that "normal, everyday events" (p. 40) can be made critical, he emphasizes that they are not intrinsically so: "The point is that incidents only become critical because someone sees them as such" (p. 27). A critical incident (or event) is therefore not only an occurrence that has significant potential for influencing major change, but it is also perceived as such by the observer/participant. Such perceptions are important in language learning, since "learners hold their beliefs to be true and these beliefs then guide how they interpret their experiences and how they behave" (Griffiths, 2008, p. 121; cf. Farrell, 2009, p. 221). Because of this, critical events cannot be objectively identified, measured, or predicted, but are dependent on the awareness and willingness-to-observe of the observer.

> Critical incidents are produced by the way we look at a situation: a critical incident is an interpretation of the significance of an event. (Tripp, 1993, p. 8)

The perception of any incident is, therefore, responsible for the significance ascribed to it and this significance varies from observer to observer. Thus, the 'critical' occurrence is the 'noticing', which Schmidt (1995, p. 29) refers as "the conscious registration of the occurrence of some event" (p. 29). Koestler (1967) places such moments in a 'haha' (humorous), 'aha' (scientific), and 'ah' (artistic) trilogy of creation: "Gestalt psychologists have coined a word for that moment of truth, the flash of illumination, when bits of the puzzle suddenly click into place – they call it the AHA experience" (p. 185). Whatever the prior knowledge, expectancies and experiences which set off these moments, awareness of their existence can help learners to reflect on what are often seemingly minor occurrences, just as trainee teachers can be taught to "analyse critical incidents that occur while they are teaching" (Brennon and Green, 1993; Farrell, 2004 cited by Farrell, 2008, p.3). Such encouragement can be explicit and formal (Richards and Farrell, 2005; Thiel, 1999; Tripp, 1993), or implicit in the lesson materials (Finch, 2004a). In this way, language learners can be encouraged to discover "new understandings" about the learning process (Richards and Farrell, 2005), providing an additional dimension to the practice of reflection (Farrell, 2004, 2007, 2009). This focus is referred to by Tripp (1993) as "the original historical sense of the term, because it could mark an important change or turning point in this learner's biography" (p. 9). Critical incidents can therefore include events or realizations that occur outside the classroom, either as delayed reactions to lesson content, or as flashes of awareness that arrive in unexpected situations and locations, as a consequence of, or triggered by the learning process.

3. Chaos, complexity and language learning

> It seems that the tide of complexity is lapping at our feet as applied linguists, making it timely to consider how the assumptions and perspectives of our own field may be challenged by complexity. (Larsen-Freeman and Cameron, 2008, p. 5)

One of the major tenets of complexity theory is that it is "a science of process rather than state, of becoming rather than being" (Gleick, 1987, p. 5), offering an "alternative to the linear, reductionist thinking that has dominated science since Newton" (Larsen-Freeman, 1997, p. 142) and has been responsible for the "assumption that by studying influences on the process in a piecemeal fashion, and then aggregating the findings, we would be able to explain the