Part VI

Focus on the language classroom
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Introduction

It has become customary to describe all kinds of different domains of language learning and teaching as ‘complex’. However, the term complex has a very distinct meaning in complexity theories that does not mean the same as complicated. If something is complicated, it means that it may be composed of multiple components, but these can be separated into distinct parts. An example often given is of that an airplane engine, which is highly complicated, but which can be taken apart and reconstructed by experts. In contrast, something that is ‘complex’ makes sense as a whole and cannot be taken apart and put back together again. Instead, its character emerges from the unique interaction of its multiple components, rather like a holistic, organic view of a human being. In this chapter, we are concerned with aspects of language teaching that are complex, not just complicated.

Increasingly, academics and researchers are recognising and addressing complexity in learning and teaching a foreign language. Essentially, the field of ELT has been moving towards complexity perspectives for several years, making current developments perhaps less of a ‘complexity turn’ (Mercer, 2013) and rather more indicative of a growing sensitivity to complexity. What is new, however, is the more frequent explicit use of frameworks inspired by complexity theories to understand ELT learning and teaching contexts and processes.

In this chapter, I will refer to a range of complexity theories, first highlighting their diversity and then focusing on the key theoretical frame underlying this chapter, namely, dynamic systems theory. In the main part of the chapter, I will consider the ways in which ‘systems thinking’ might be employed in ELT and how this can be adapted in ways sensitive to the specific characteristics of the field. In particular, I will focus on possible implications of systemic frameworks for reflection and participant inquiry. I will also consider the potential implications of complexity thinking for the relationship between theory and practice and thus between practitioners and researchers. The chapter will conclude with a discussion of the challenges complexity theories pose for ELT and other cautionary warnings.

Complexity theories

Complexity theories are not covered by one single, unified theory. There are many interrelated branches across a vast range of disciplines, each of which has slightly differing foci and
understanding of terms and processes. However, this diversity of theories is perhaps merely symptomatic of the inherent nature of complexity and the “inability of any single approach to capture what scientists mean by complex” (Page, 2010: 24). As Byrne and Callaghan (2014) suggest, complexity theories themselves are diverse and dynamic, and, whilst holding core characteristics, they can change according to their context of use. In this way, there may be a need for adaptations depending on contexts and domains in which the theories are employed. Various distinctions between the different theories have been classified as to whether they are seen as ‘hard’, ‘restricted’ and strongly mathematical, or ‘softer’ and more metaphorical, as has been the case in areas such as the social sciences and education (see, for example, Richardson and Cilliers, 2001; Morin, 2007; Byrne and Callaghan, 2014). From my own perspective as a teacher and researcher, I have found the most useful, readily accessible and intuitively appealing frames to be those concerned with ‘complex dynamic systems’ (CDS) and, indeed, this has perhaps been one of the most common approaches in ELT. For these reasons, I will concentrate on CDSs in this chapter.

‘Dynamic systems theory’ (DST) offers a theoretical framework for examining the nature and behaviour of complex dynamic systems (also known as complex adaptive systems, depending on the emphasis of the perspective taken (Larsen-Freeman and Cameron, 2008: 2); note that this is not a distinction of relevance in the context of this chapter, however). There is no single definition of a CDS, so instead they are often described in terms of their core characteristics. It is important to note that a system needs to exhibit these core characteristics to be defined as a CDS; otherwise, whatever is under consideration is simply perhaps complicated, as opposed to ‘complex’, as the term is understood in DST.

First, perhaps the most crucial characteristic is that the system is composed of multiple interrelated elements which, when viewed together, have collective emergent properties. As has been endlessly cited in relation to CDSs, ‘the whole is more than the sum of the parts.’ This means that the whole system cannot be understood by simply breaking it down into its component parts but has a quality which only ‘emerges’ and makes sense when the system is viewed as a whole. Another key characteristic, as the name suggests, is that a CDS is dynamic and constantly in a state of flux. This means it is continually adapting as a system and changing into a continually emergent state. This is reflected well in a core definition offered by Larsen-Freeman and Cameron (2008: 29), which explains that a dynamic system is “one that changes with time, and whose future state depends in some way on its present state”. However, change may not be radically different in terms of the system state, but change can take the form of what is known as ‘dynamic stability’ (Larsen-Freeman and Cameron, 2008) or ‘homeostasis’, which means the system is continually changing but always retaining its overall composition and form. An example often used to explain this is that of a bath being filled with water. If the plug is taken out but water is going in at the same rate at which it is going out, the water will be moving in flux, but it will essentially maintain the same form. Another characteristic of a CDS is that change is not easily predictable and is not linear in nature. Given the highly interconnected nature of all the components of a system, this means that change in one part of a system is likely to lead to change elsewhere in the system, often in ways that are hard to predict. Furthermore, it is rarely one single cause that triggers change, but, rather, change can be due to a combination of factors or an accumulation of adjustments. Sometimes, however, dramatic changes can take place in a system emerging from small actions, depending on the system’s state conditions at a certain point in time, in a process widely known as the ‘butterfly effect’. Finally, a CDS typically tends to self-organise, meaning that the internal organisation of the system is not imposed on the system by an outside element or elements but that the system adjusts and organises itself into its typical functioning state.

It is important to note that not everything can be viewed as a CDS. If, for example, something contains multiple elements interacting but in a way in which they can be taken apart and
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re-connected together in a meaningful way, the elements may be classed as complicated but not complex, such as in the example of the airplane engine at the outset of the chapter. We must also remember that what is conceptualised as a CDS depends on the perspective taken. A CDS is not a ‘real’ thing, but we conceptualise a system as representing something real. We must not forget that the system remains a frame of perception in which the boundaries are imposed by our way of perceiving reality, and these may not necessarily reflect actual, real-world boundaries (Checkland and Poulter, 2006). We must also keep in mind that many examples of CDS are taken from the natural world and from mathematical processes. However, language education is special, as it involves humans, who have the unique capacity for conscious reflection and agency (e.g. Vallacher and Nowak, 2009; Easley and Kleinberg, 2010); thus, our understandings of CDSs in ELT must remain inherently social, accounting for our human capacity to reflect and deliberately and consciously act upon our understandings and experiences.

The history of complexity theories in SLA and ELT began in 1997, when Diane Larsen-Freeman introduced the idea of systems theory to the broader field of second language acquisition (SLA) with her paper entitled “Chaos/complexity science and second language acquisition”. In it, she revisits conundrums in SLA and views them afresh through a complexity lens. Since then, there has been quite a large body of complexity-led research in the fields of SLA and first language acquisition (see, for example, special issues in Developmental Review (2005), The Modern Language Journal (2008) and Language Learning (2009), amongst others). However, the take-up across broader areas of the field of applied linguistics, including ELT, was perhaps triggered by the 2008 publication of the Larsen-Freeman and Cameron monograph Complex systems and applied linguistics. Following the publication of that book, work employing explicit complexity theory-based frameworks, in particular systems theory-based work, has emerged in diverse areas of SLA research beyond language acquisition studies, including language motivation, self, autonomy, classroom dynamics, teacher cognition, innovation etc. (see, for example, Feryok, 2010; Finch, 2010; Burns and Knox, 2011; Mercer, 2011a, b, c; Dörnyei et al., 2014; Kostoulas, 2014; Sade, 2014). A closely related, comparable body of work can be found in ecological perspectives on language learning and teaching typified by work in applied linguistics by van Lier (2004) and Kramsch (2008). These approaches also stress contextual diversity, the interaction of individuals and contextual factors, and the dynamism of those relationships and characteristics of factors across time and place. In particular, the foreign language classroom is seen as an ecological system nested within a hierarchy of other larger/broader systems such as the school, educational system and national and societal cultures (see, for example, Bronfenbrenner, 1979), and it is the interactions of all these layers of systems that generate unique conditions and settings.

Complexity theories and research in ELT

For researchers, working with DST empirically is challenging. In the past, often for empirical ease and in line with certain prevailing concepts of validity, research studies have often been designed to simplify and ‘reduce’ the complexity of language learning contexts and processes. To do this, fragments of the bigger picture of language classrooms and learning and teaching process have tended to be examined in relative isolation. The aim of such studies has typically been to generate more generalisable insights applicable to a wider range of settings. Whilst such studies have made valuable contributions to the knowledge base of ELT, there is increasing recognition of the value of additionally looking more closely at the complexity and inherent ‘messiness’ of real-world learners, teachers and classrooms (see, for example, Ushioda, 2009) by taking a more holistic view of processes and contexts. In order to ‘embrace’, rather than reduce or ignore
complexity (Trueit and Doll, 2010), particular empirical approaches are required, for which more qualitatively oriented research designs are ideally suited.

Given the history of the field, ELT is already familiar with and open to qualitative, situated research, which tends to examine diversity, situatedness and uniqueness and which frequently takes a more holistic view of learners and settings. An important characteristic of qualitatively oriented studies is that their aim is not usually to generalise but rather to generate deeper, more nuanced understandings which meet the criteria of ‘transferability’. This refers to the recognisability and applicability of insights to other contexts. In ‘transferring’ qualitative research findings, individuals who read a study interpret how and in what ways the findings are appropriate for their own setting, just as teachers can critically evaluate general principles of pedagogy for their specific contexts and purposes. As Larsen-Freeman (2013) notes, albeit in respect to learners, teachers do not simply ‘transfer’ or ‘export’ knowledge from one setting to another; rather, they ‘transform’ knowledge across contexts by interacting with it through the lens of their own interpretations of their situated experiences, reflections and co-constructed understandings.

The challenge for those researching within ELT has been how to research a CDS effectively, systematically, consistently and in a way that retains and reflects the system’s core characteristics. One of the main challenges for any CDS study is therefore to define and set the boundaries of the system under investigation at the outset. The quest is to avoid reducing the system to distinct, separate variables (fragments of the whole) and also to retain a meaningful degree of holism and set of interrelationships as far as is empirically feasible. In this respect, Larsen-Freeman and Cameron (2008) suggest setting the boundaries of systems in terms of ‘functional wholes’, collective sets of variables which together function as a CDS in a meaningful and recognisable way. For example, a classroom, a language or a person’s embodied psychology can all be seen as examples of systems that function as wholes and cannot easily be separated into component parts without losing some of the overall quality and meaning of the system.

Another important point to note here is that explicitly choosing to research from a DST perspective does not mean rejecting other types of research as invalid (Mercer, 2015). To do so would be extremely short-sighted and, as Block says (1996: 78), language learning is far too complex to be understood by one theory alone. Instead, complexity theories can serve as one more valuable tool and perspective to add to our existent research repertoire. To date, there have been some exciting developments and examples of innovative approaches to researching through this new lens requiring a fresh innovative set of empirical tools (see Dörnyei et al., 2014; see also MacIntyre, Gregersen and Clément, this volume). However, all research from a complexity perspective faces a major challenge. Whilst it can perhaps reflect reality more closely than more reductionist approaches, in an applied discipline such as ELT, we must ask what the added value of this perspective is for both the field as a whole and for practitioners, especially if practitioners already intuitively recognise many dimensions such as complexity, dynamism and systemic behaviours. Given the inherent underlying assumption that we cannot make predications and generalisations based on CDS research, what then is the useful output from such studies? How can researchers avoid their work being greeted by the ultimate ‘so, what?’ response (de Bot et al., 2005)?

**Implications and relevance for ELT**

In suggesting a role and aim for complexity-informed research, approaches such as appropriate methodology and postmethod pedagogy can perhaps give us some ideas of ways in which the theory can also be useful for practice (see also Mercer, 2013). For example, in Holliday’s (1994) work on appropriate methodology and social contexts, he argues that each classroom is
unique in its composition due to the interaction of multiple cultures, such as national, societal, institutional, subject and personal cultures. He suggests that whilst we may be able to make generalisations in terms of certain principles – for example, we know that classroom cultures are influenced by cultures outside the classroom – it is not possible for us to generalise about the precise nature and characteristics of a specific classroom (ibid.). This means that although it can be helpful for teachers to understand general principles, in practice, teachers have to work in ways that are ‘appropriate’ for their own settings and thus develop their own specific methodologies (see also Holliday, this volume).

In Kumaravadivelu’s (2001, 2006) ‘postmethod pedagogy’, he questions the validity of prescribing fixed methods of how to teach, given the diversity, complexity and uniqueness of teaching and learning contexts. Instead, he suggests teachers should be empowered to critically reflect on and evaluate their own practice in sustainable ways, so that teaching can be sensitive to the local context and setting. He sees teachers not as being dictated to by theories and prescriptions from the academy but rather as constructing their own ‘personal theories’ based on their critical reflection of both ‘professional theories’ and their own experiences in practice (O’Hanlon, 1993, cited in Kumaravadivelu, 2006: 172). This means that “the thinking teacher is no longer perceived as someone who applies theories, but someone who theorizes practice” (Edge, 2001: 6, as cited in Kumaravadivelu, 2006: 172; see also Hall, this volume, ch. 15 for further discussion of postmethod pedagogy).

Together, these approaches point to the inability to easily predict what will happen in classrooms and thus also the difficulty of making pedagogical prescriptions applicable to all settings. Instead, collectively, they suggest the value of proposing a series of principles to guide pedagogic practice, thereby recognising some of the patterns in teaching encounters and yet the ultimate uniqueness of each experience and setting. They also all ascribe a central role to teachers, who are encouraged to critically engage with and evaluate ‘global’ or ‘public’ principles and theories in relation to their own specific practice (see also Mercer, 2013, 2015).

In other words, this perspective implies that the aim of research is not to provide prescriptive recipes for practice based on models of prediction but to offer principles to guide practice based on models of detailed understandings and possibly patterns. Indeed, whilst CDSs behave in unpredictable ways, this does not mean that ‘anything goes’. There is not an infinite number of possible outcomes of a system’s development, as the past development of a system already limits the total range of possible outcomes (Byrne and Callaghan, 2014: 197); however, the exact and precise nature of the development of the system cannot be straightforwardly predicted. Instead, at most, we can search for patterns in systems and their behaviours, perhaps thinking, as expert teachers reportedly do, in terms of prototypicality (see, for example, Berliner, 2004). This means that one tangible and realistic practical output for research of a CDS could be to generate guidelines or principles based on deep, nuanced descriptions of systems and systemic behaviours in ways reminiscent of case study research based on qualities such as transferability.

Such an approach also assigns a critical role to teachers as autonomous, reflective agents making principled pragmatic decisions as appropriate for their unique needs and settings (see Adamson, 2004). It implies that being an effective teacher is not just about having a broad body of knowledge but depends vitally on understanding how to apply that knowledge in ways sensitive to the specific context they work in. One key skill in developing such sensitive understandings is the ability to reflect effectively. As teachers, we can not only reflect on our own actual teaching practice but also on ‘public’ theories and other people’s reported experiences (Williams, 2001: 26–27). This means teachers can be encouraged to critically reflect on insights and principles stemming from studies based on complexity theories, as well as on their own practice using the theories and related frameworks themselves.
Different degrees and types of reflection are suitable for different stages in a practitioner’s career (Griffiths and Tann, 1992, cited in Williams, 2001). In respect to trainee teachers, I would agree with Tudor, who argues that we should be aiming to “empower trainee teachers with confidence to engage with and acknowledge complexity without fear of failing to meet idealised, neat conceptions of supposed teaching practice” (Tudor, 2001: 209). To do this, a valuable component of teaching training programmes could be to include a complexity framework as a basis to reflect on and discuss classroom-based scenarios including trainees’ own actual practical experiences in the language classroom. Clearly, there are challenges inherent in teacher training programmes which require a balance. Naturally, early stage teachers want and need clear definitive instructions of how to teach and concrete ideas for methods to work with. However, as with postmethod perspectives, I feel we would be somehow selling them short if we only provided them with such prescriptive recipes. Our current trainees will be teaching in a future filled with technological, linguistic, cultural and contextual developments, constraints and parameters we currently cannot as yet even imagine. Thus, whilst some degree of fixed support and specific ideas are necessary, teachers also need to develop the skills to reflect critically on their practice throughout their future careers. In this sense, it could be useful to work explicitly with complexity-informed reflective frameworks to promote trainees’ critical reflective skills.

However, Hardman (2010) reports that experienced teachers can also find working with a complexity framework useful and comforting as they recognise the messiness from their daily practice reflected in and explained by these frameworks, potentially both when reading about others’ experiences with them as well as reflecting on their own practice from within such a perspective. A particular form of complexity-informed reflection that all levels of teachers could work with is ‘systemic thinking’. This is defined by Armson (2011: 288) as “a style of thinking that attends as much to the connections between things as to the things themselves, and to the connections between things and their wider context, and looks at things and their connections from more than one perspective”. Systemic thinking tends to take a holistic view of a situation that can be conceptualised as a system, although it can also involve looking at a detailed aspect of the whole whilst being mindful of the bigger picture. It is a way of thinking that gives structure and boundaries to a ‘messy’ situation but retains the complexity without oversimplifying reality as it is perceived. Rather than being a particular study or intervention, systemic thinking should reflect more general ‘habits of mind’ (Booth Sweeney and Meadows, 1995: 1). It is not intended to find solutions to problems but is meant to be a way of being which seeks to continually improve a situation. Thus, embracing systemic thinking becomes a way of being in the classroom, not a short-termed intervention. (There are several excellent books on systemic thinking, which can provide inspiration for ELT-based approaches, for example, Booth Sweeney and Meadows, 1995; Meadows, 2009; Armson, 2011.)

Example of a complexity-informed reflective framework

Before working with any systemic reflective framework, we must firstly define what we mean by a CDS in the specific instance under consideration. Although we often highlight the fact that systems thinking closely reflects reality, we must remember, as noted above, that this is a lens that we bring to bear on a situation and serves as a frame through which we see it. A CDS is not reality per se but, as Checkland and Poulter (2006: 151), explain, systems are “social constructs”, not “maps” of any kind of “real territory”. In ELT, the system could be, for example, an international ELT organisation, a school, a classroom, a learner, a teacher, a language and so forth. To illustrate systemic thinking in this chapter, I will consider the ELT classroom as a CDS, as others have already done (e.g. Finch, 2010; Bowsfield, 2004; Burns and Knox, 2011; Mercer, 2013).
Considering the ELT classroom in this way, we are aware of the multiple nested layers (such as the institution, culture, family etc.) and different facets and perspectives involved in language learning processes and classroom interactions (e.g. teacher, learner, curriculum etc.). In particular, it draws our attention to the centrality of group dynamics, the quality of relationships within the classroom, the nature of different temporal and contextual dynamics, and non-linear causality, as well as the strong interconnections between life inside and outside the language classroom (see Mercer, 2013, 2015).

Here, therefore, are a series of illustrative reflective questions inspired by systemic thinking, soft systems methodology and systemic research across a range of disciplines (in particular I have drawn upon Armosn, 2011, but also Booth Sweeney and Meadows, 1995; Checkland and Poulter, 2006; Mason, 2008; Meadows, 2009). This basic framework can clearly be extended and adapted as appropriate to specific contexts, and it is by no means intended to be comprehensive; however, it is hoped these questions will help illustrate some of the types of thinking that could be prompted by reflecting on the ELT classroom as a CDS (see also Mercer, 2013, 2015):

1. If we think about the ELT classroom as a dynamic system, what other larger systems is it nested within? (e.g. the national culture or the school itself as a CDS). What smaller systems are nested within the classroom (e.g. an individual learner or a specific group work activity)? How do these multiple systems interact and define each other? How is life in the ELT classroom as a CDS connected to other systems beyond the classroom and school? How is life in the classroom as a whole defined by the behaviour of the various other systems nested within it?

2. What interconnections, relationships and interdependencies are there in relation to the ELT classroom as a CDS? This means focusing on all kinds of relationships, not only interpersonal ones (e.g. what relationships are there between learners, between learners and the teacher, between learners and the language, between learners and the coursebook, between teacher and the coursebook etc.). We can also consider relationships across domain boundaries reflecting on relationships between English and other school subjects and how these interconnect (e.g. the relationship of the learner or school or national culture towards English, or the relationship between English and other foreign languages or other subjects in the curriculum).

3. In particular, as teachers, we serve as a key point of influence within the classroom system. What relationships do we have in respect to and surrounding the classroom as a system? How might our relationships be affecting the system? Which of our relationships could we work on in order to improve the system as a whole (e.g. our relationships to our learners, to the school, to our colleagues, to the textbook, to the curriculum, to the classroom space etc.)?

4. Accepting the fundamentally dynamic nature of the ELT classroom as a system, what are the key drivers of change in the system? What things are likely to have a bigger effect on the system as a whole given their centrality in the system? How can we avoid thinking in terms of straightforward simplistic linear cause-and-effect such as ‘if I do this, then that will happen’? What combined factors or what accumulated processes can lead to change? What things are especially dynamic or particularly stable? What changes in the system would we like to see, and what relationships could we focus on to potentially trigger these sorts of changes?

5. In evaluating our actions, we can reflect on both short-term and long-term as well as possible unanticipated outcomes of our actions. If we take a particular course of action, what would be the immediate as well as possible long-term effects of this (e.g. if we let a
moment of an individual’s bad behaviour pass without comment, what are the short-term
and possible long-term effects of this on the individual and class as a whole?)? What other
relationships or aspects of the system might be affected by the action; in other words, what
could be the knock-on ripple effect of the action?

We know within a CDS that sometimes small things can lead to big effects and changes
through the ‘butterfly effect’. We can ask ourselves what small changes could be made which
may lead to bigger effects (e.g. reflecting on the use of teacher language, altering seating
arrangements, redecorating the classroom, monitoring the mood, facial expression and body
language of the teacher etc.)?

Complexity is also about multiple perspectives. How can we view life and experiences
in the language learning classroom from multiple perspectives? What is our position from
which we view the classroom? How is the way we are looking at our situation affecting how
we act in the system? Is there a different way of interpreting a particular experience? Might
other perspectives reveal different facets of classroom life and actions?

A final dimension to reflect on is the complexity and perpetual dynamism we engage with
daily as English language teachers. This is what makes teaching both exciting and challeng-
ing. What about the diversity, uniqueness, complexity and dynamism of our setting can we
not only appreciate but employ positively to further enhance the quality of the relationships
in the classroom and the learning?

**Systemic action research**

Experienced practitioners may also wish to engage in more advanced professional development,
and, here, ideas from systemic action research (e.g. Burns, 2007) may be useful. In general edu-
cation, some scholars argue that an action research model is inherently a key methodological
framework for embracing complexity (Phelps and Hase, 2002; Phelps and Graham, 2010), given
that it allows for a practice-based approach to inquiry embedded in the real-world complexity
and ‘messiness’ of actual classrooms. These authors assert that, in their conceptualisation, action
research complements core understandings from complexity theories such as an acceptance of
the unpredictability of open, nonlinear dynamics, the inseparability of contexts from the system
and an interest in uniqueness and ‘exceptions’ as well as an embracing of reflective processes and
feedback mechanisms.

A related approach is ‘soft systems methodology’ (SSM) (Checkland and Poulter, 2006), which
is also in turn closely connected to systemic thinking. Whilst systemic thinking, systemic action
research and SSM differ to various degrees in the specifics of the structured approach proposed,
they all involve similar or comparable stages and stress their flexibility and responsiveness for
individuals working with them. For the purposes of this chapter, I will offer an overview of the
key stages typically involved in all three strands without any discussion of the particularities and
differences between these specific approaches.

Often, such forms of reflective systemic inquiry begin with an exploratory phase to observe
and find out about the nature of the situation, frequently involving a modelling stage in which a
model of the system is created and, perhaps, a visual is drawn. Next follows a discussion stage in
which multiple participants and perspectives discuss the model and its connection to reality, and
then a particular action or an improvement to the system is proposed. This action is also debated
in relation to the actual situation (rather than ‘just’ the situation conceived as a system), and then
the action is taken. Then the cycle of feedback and reflection recommences (see Checkland and
Poulter, 2006).
Whilst some teachers may find this form of reflective inquiry and systemic action research useful, we must exercise caution, as not all teachers may feel they have the time and resources to do so (Borg, 2007). Nevertheless, if systems thinking can become a way of being in and reflecting on our teaching contexts, working in this way need not necessarily add any additional time constraints if it were to be a habitual way of thinking about classroom life.

The relationship between theory and practice

Whilst teachers may wish to conduct their own research using systems thinking, approaches such as SSM also emphasise the benefits of multiple perspectives and dialogue, and thus perhaps some teachers may also wish to engage in collaborative projects with learners, colleagues or academics. As already noted, dynamic systems thinking reflects some of the features that many teachers already recognise intuitively from their practice, and now many researchers are starting to work with explicit frames and theories of CDSs. This could mean that teachers find and recognise their realities in the work of researchers and theorists more easily than was perhaps the case with more reductionist or abstracted frameworks, or statistical models. This offers the potential for practitioners and researchers to share conceptual understandings from complexity perspectives, which in turn could facilitate a shared discourse space for increased dialogue and cooperation for working together.

If dialogue and cooperation between practitioners and academic researchers is to function effectively, it needs to be based on a fundamental respect for each other, with neither party being perceived as having superior or more worthy forms of knowledge but rather as being genuine equal partners with a shared goal of seeking to improve classroom practice and language learners’ learning. With such shared goals in mind and a common understanding of the nature of the classroom as a CDS, research could be done collaboratively with both parties sharing their insights, knowledge and expertise in a manner reminiscent of elements of ‘deliberative dialogue’ (see, for example, Schoem and Hurtado, 2001). The aim of deliberative dialogue is not to solve a problem but rather to give all participants a better sense of the situation and a deeper perspective on issues involved and possible solutions. The participants deliberate together, and discussion is aimed at finding the best course of action to continually improve practice. Thus, as London (n.d.) explains on his website (http://www.scottlondon.com/reports/dialogue.html):

the objective is not so much to talk together as to think together, not so much to reach a conclusion as to discover where a conclusion might lie. Thinking together involves listening deeply to other points of view, exploring new ideas and perspectives, searching for points of agreement, and bringing unexamined assumptions into the open.

The implication is that both teachers and researchers could bring their resources, expertise and voices to the discussion of a jointly defined CDS in an attempt to better understand it with the ultimate aim of improving its functioning in practice. This means, for example, academics could bring the findings of systematic empirical research conducted from a complexity perspective to the table in the form of nuanced, detailed credible accounts of ‘systems’, drawing attention to systemic behaviour and any possible patterns. Practitioners could bring their experiential knowledge and practice-based expertise to the table, critically engaging with the research findings. The outcome of this process would thus hopefully come to reflect the combined knowledge that emerges from genuine dialogue between both parties. However, both must equally feel that they benefit from taking part in such collaboration, and both must come together with clear expectations about the nature of the partnership, the ensuing dialogue and any output from
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the process (such as classroom change, published papers or blogs, workshops with colleagues or conference presentations). However, the potential in collaborative work for enhancing our understandings of ELT would be considerable in uniting top-down and bottom-up perspectives. As Tsui (2003: 277) argues, “the theorization of practical knowledge and the ‘practicalization’ of theoretical knowledge are two sides of the same coin in the development of expert knowledge . . . and they are both crucial to the development of expertise.”

Conclusions

At present, we are only just at the outset of working explicitly with complexity theories. Only with time will we be able to more thoroughly evaluate their potential for furthering our understandings of ELT on theoretical, empirical and practical levels. However, as Hardman (2010: 6) explains, “perhaps the more immediately tangible insights come from applying complexity not to the descriptions of systems but to the limitations of our understanding.” Indeed, thus far, complexity has already revolutionised various areas of research, challenging traditional linear cause-and-effect thinking, drawing attention to continual dynamism and highlighting interconnectedness, thereby opening the way for more holistic approaches to at least complement more reductionist or abstracted ways of thinking and researching.

However, we must also ensure that we engage critically with complexity theories to ensure we exploit and develop their full potential for the field of language learning and teaching. As Widdowson (2003: 3) points out, “the value of theory is not that it is persuasive but that it is provocative. You do not apply it, you appraise it. You use it as a catalyst for reflection.” In this way, both educators and researchers should not feel dictated to by complexity theories, but they should be able to engage with them, make them their own and evaluate them in ways appropriate to their own unique experiences and settings (Mercer, 2015). Rather than seeing a theory as a ‘law’ to be adhered to and applied rigidly in a quest for generalisations and prediction, I share the view of Byrne and Callaghan (2014: 124), who see the status of a theory as ‘a dialogical’ frame for opening up conversations, reflections and discussions (see also Larsen-Freeman and Cameron, 2008). Indeed, any theory itself must also be understood as dynamic, with the potential for change and improvement. As Hardman (2010: 4) explains, “meanings shift when used in different fields” and transferring complexity theories to the field of ELT is most likely to involve change and adaptation as we become more familiar with and confident in exploring their potential for our field in ways that reflect the unique characteristics of our domain.

There remain challenges ahead to ensure that research can add to our understandings of ELT in ways that go beyond a mere description of what many practitioners, potentially at least, in part intuitively know. The way forward is likely to take inspiration from other complexity moves in the field, and these suggest some characteristics that are likely to be relevant to work from a CDS perspective. In sum, this means we must accept that top-down prescriptions are no longer appropriate and need not be the aim for research and theoretical thinking. Instead, we must find a balance between an understandable wish for simple solutions and ready-to-go recipes and, at the same time, a more realistic and honest stance which accepts the values of principles and patterns stemming from research but also the value of experiential knowledge and the importance of critical reflective skills as required for lifelong learning and practice. We need an approach which assigns a key role for autonomous, empowered, agentic, critically reflective teachers who have the skills to evaluate public theories and research findings in terms of their appropriacy for their own contexts. Both teachers and researchers can explore the rich potential offered by thinking systemically about the world of ELT in individual and collaborative ways and, whilst

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doing so, maintain a critical and reflective perspective on complexity theories and their future development and adaptation within our field.

Discussion questions

- To what extent do you agree that language classrooms are unpredictable and nonlinear? Can you think of examples from your own ELT practice of these characteristics?
- In your daily life as a teacher, what examples of systems’ characteristics can you think of?
- In what ways do you feel that understanding classroom life, using a complexity lens, might lead to improvements in teaching and learning?
- To what extent do you think that it is reasonable and realistic to expect teachers to engage in systematic action research and/or deliberative dialogue as part of their professional, working lives?

Related topics

Appropriate methodology; Individual differences; Method, methods and methodology.

Further reading

Larsen-Freeman, D. and Cameron, L. (2008) Complex systems and applied linguistics. Oxford: Oxford University Press. (This is the key book about complex systems in applied linguistics and serves as an excellent introduction.)


A special issue of the journal Revista Brasileira de Linguística Aplicada, 13/2, 2013, on complexity in language teaching. Open source. http://www.redalyc.org/toc.oa?id=3398&numero=29651 (This is an accessible and broad-ranging collection of papers applying complexity thinking to language teaching.)

References


Complexity and language teaching


