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'Fit for change': A preliminary exploration of the relationship between academic literacy practitioners and disciplinary specialists as a complex system

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At tertiary institutions in South Africa and internationally, academic literacy practitioners and disciplinary specialists have traditionally functioned as separate communities of practice. However, research indicates that academic literacy is most successfully acquired when it is integrated into and taught within the contexts of specific academic disciplines. This article explores the transgression of the boundaries between academic literacy teaching and study disciplines, in general, and the subsequent broadening of the social structures within which academic disciplines function at tertiary institutions. The relationship between academic literacy practitioners and disciplinary specialists at Stellenbosch University is correspondingly investigated as a complex system, focusing on the variable and non-linear interaction among the co-evolving components of the system and its environment, the emergent structure of the resultant transdisciplinary community of practice, and the 'fitness' of this community – its ability to cope with the challenges and opportunities brought on by constant change. The article will demonstrate the contribution that a complex systems approach could make to the collaboration between academic literacy practitioners and disciplinary specialists at tertiary institutions, in general, and at Stellenbosch University, in particular, and subsequently, to an understanding of the collective focus on student success in these two communities of practice.

Keywords: academic literacy practitioners, disciplinary specialists, complex system, relationality, change, fitness

If things were simple, word would have gotten round" (Derrida, 1988: 119).

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As an educational developer situated in the Centre for Teaching and Learning at Stellenbosch University (SU), the author participates in a range of growth opportunities to facilitate the "professional learning" (Brew, 2004: 5) of both academics and academic literacy practitioners. She also provides academic literacy support for the teaching function of academics. From her dual position in centralised educational development and in academic disciplines, she has observed and experienced the contested nature of the relationship between academic literacy practitioners and disciplinary specialists, and the benefits and challenges that collaboration across the boundaries between these terrains and agents could hold.

This article, therefore, aims to provide a reconciliatory approach to the investigation of academic literacy at tertiary institutions, in general, and at SU, in particular, based on the transgression of boundaries between the contexts of academic literacy practitioners and disciplinary specialists, and linked to that, the relation between academic literacies and mainstream disciplines. The discussion includes the opportunities and challenges this change in approach would hold. The article is situated in the context of complexity theory which foregrounds the transdisciplinarity of relationships in particular environments, their accompanying co-evolution, and their 'fitness' or ability to cope with change.

Academic literacy: "Radical relationality"

Dillon (2000: 8) defines the natural and the social world in terms of "radical" relationality, stating that "nothing is without being in relation". This relationality entails that components from different systems can be combined to create new systems, implying change in the connected systems. Relationality is, therefore, by proxy, transformative. However, at the opposite end of the spectrum, the relationality of systems can be diminished, leading to autonomous systems which display limited transformation.

The shifts in the growth of academic development from a skills-based, deficit model, for students identified as 'weak', to academic literacy, where the norms and expectations of the discipline are viewed as social practices and are taught in the mainstream, are well documented (Henderson & Hirst, 2007; McKenna, 2004; Street, 2003; Lea & Street, 1998, among other authors). In terms of these shifts, academic literacy practitioners and disciplinary specialists traditionally functioned as separate, autonomous systems at technikons and universities, in South Africa and internationally. Jacobs (2005: 476) ascribes this partly to the way in which the academy is structured – each discipline of study forms a separate academic department – and partly to a notion that the academic disciplines constitute the mainstream curriculum, and academic literacy is a service course that only exists at the entry level of the curriculum. As a result, most academic literacy courses followed an 'add-on' approach, providing students with generic and decontextualised support beyond the curriculum.

The New Literacy Studies' late-20th century view of academic literacy as located in specific cultural and social contexts – therefore often referred to as academic literacies – holds that the acquisition of these sets of practices is dependent on acquiring the underpinning values (Gee, 1990; Street, 2003; Lea & Street, 2006; McKenna, 2010, among other authors). Street (2003: 78) points out that academic literacy, in this sense, is always contested, both its meanings and its practices, and that literacies are thus ideological – they are rooted in a particular world view and its power relations, specifically in "a desire for that view of literacy to dominate and to marginalize others". This ideological view of academic literacy imbues its relationality with new importance. In essence, academic literacy demonstrates Dillon's (2000: 8) "radical relationality" with regard to the social practices in which it is situated.

The above redefined relationship between academic literacy and context is closely linked to student success. Research (Gee, 1999; Jacobs, 2005; Van Schalkwyk, 2010; Gunn, Hearne & Sibthorpe, 2011, among other authors) has shown that academic literacy is most successfully acquired when it is integrated into, and taught within the contexts of specific academic disciplines. A separation between academic literacy and disciplinary content does not advance effective learning and, thus, student success – it is within an open, transdisciplinary academic system, formed by academic literacy practitioners and disciplinary specialists across the boundaries of the two communities of practice, that student learning and success can be transformed into 'becoming':

[U]niversity teachers do not consider these aspects of learning [academic literacy] to be part of their responsibility, and qualifications from disciplines other than education may leave them ill equipped to address them. Collaborative relationships with specialist staff from academic support units offer significant opportunities to overcome these hurdles (Gunn et al., 2011: 2-3).

The teaching and learning of both the academic literacies related to a particular discipline and the content of that discipline are thus contextualised within an adapted and expanded set of social practices and related broadened discourse. This expanded context holds that the traditional social structures within which academic discourse functions at tertiary institutions are widened (Jacobs, 2005: 479).

Growing towards "radical relationality": Academic literacy and disciplines at Stellenbosch University

In the past, the traditional lack of relationality between academic literacy practitioners and disciplinary specialists at SU was reflected in the often disparate and inconsistent inclusion of academic literacy in curricula. Not all members of the SU academic community recognised the potentially transformative role of academic literacy in their particular disciplines or subjects. In some numerically oriented subjects, for example, academic literacy was generally viewed as generic reading and writing skills only and, hence, as secondary to the modes of knowledge acquisition and production which define those disciplines. In these subjects, academic literacy – where it was

granted a position in the curriculum – functioned primarily in the form of generic or stand-alone modules. There were few examples of the curricular integration of the academic competencies students need to be successful in their discipline. However, in recent years, increasing attempts have been made to integrate, and a measure of success has been achieved. In the Department of Biology, for example, information literacy – taught by the Library and Information Service – forms an integral part of the first- and third-year curricula; in the Department of Psychology, academic writing skills are taught in the third-year curriculum and, in the Law Faculty, instruction in academic writing – with assistance from the Centre for Teaching and Learning and the Language Centre – is being embedded in writing-intensive modules across the LLB programme.

The gradual change in the inclusion of academic literacy in disciplines at SU is due to a number of factors, among which is the focus on language and academic literacy in the University's strategic priorities and language planning. According to Leibowitz (2010: 1), the national emphasis on graduate attributes, thus on "graduating with the necessary reflective, analytic, as well as presentational skills", would fall under the general ambit of "academic literacy". There is an additional emphasis on increasing access to tertiary institutions as well as enhancing student throughput. In this regard Leibowitz (2010: 1) refers to a related acknowledgement that various approaches that might encourage academic success at school and, hence, facilitate the acquisition of academic literacy in tertiary education, are not always a reality.

Within this context – and within the context of its relations to other institutional systems in the SU environment – the Centre for Teaching and Learning at the University has headed an initiative to integrate academic literacy into the curricula across the institution. A colloquium was held in May 2010 as a university-wide discussion on the approach to the teaching of academic literacy at the institution. Subsequently, a multidisciplinary task team was set up to investigate the relationship between academic literacy and disciplines, and to compile a framework for the fostering of academic literacy in the institution's teaching and learning programmes. A guideline document was accepted by the University in August 2012, detailing an approach in which learner-centredness, flexibility, collaboration, and the systematic incorporation of academic literacy into curricula are key concepts (Guideline Document for Academic Literacy at SU, 2012: 3-4).

In considering collaborative practices at SU and their relations to their respective disciplinary and institutional communities of practice, the contested nature of the relationship between academic literacy practitioners and disciplinary specialists has become clear. The above-mentioned guideline document recommends multidisciplinary collaboration between different role players for the design of new programmes, the evaluation of existing programmes, and the design or delivery of academic literacy interventions. These role players would include academics, the Library and Information Service, the Language Centre, the Centre for Teaching and Learning, and ICT specialists e(Guideline Document for Academic Literacy at SU, 2012: 4).

With reference to Wenger's (1998: 45) interpretation of a community of practice as "the sustained pursuit of a shared enterprise", the aim of increased student success at SU could be achieved by, inter alia, an improved relationality between academics and academic literacy practitioners, and consequently an intensified collective pursuit of this aim. However, this would necessitate both academic literacy practitioners and disciplinary specialists changing their conceptualisations of academic literacies as "an autonomous body of knowledge", thereby releasing one another from the perceived need to protect their domain (Jacobs, 2007: 871). Insight into this transformation process can be provided by complexity theory – a tool with which to explore the desired 'becoming' of an improved relationality between these terrains and agents.

Complexity theory: Relationality in transformation

Complexity science emerged in the 1980s as a new approach to the study of systems which defy definitions of order. It is applied to a wide variety of environments, and is credited with enlarging researchers' vision and enhancing their ability to describe and explain interactive systems. The diverse origins of this theory have led to an equally diverse and continuously developing body of thinking and research that can, therefore, only be defined partially and provisionally. This article ascribes to the definition of a complex system as a "'system of systems'" which are interdependent (Heylighen, Cilliers & Gershenson, 2007: 1) and characterised by change (Byrne, 2005: 97): the interaction – and thus the relationality – among the components of the system, and between the system and its environment, is not fixed, but shifts and changes (Cilliers, 1998: viii). A change in any component may affect virtually any other component, in a mostly unpredictable way (Heylighen et al., 2007: 1).

Complex systems are characterised by openness, in other words, they have to interact with their environment in order to stay alive or active. Their behaviour is thus unpredictable in a linear fashion. The resultant constant change in these systems necessitates the properties of adaptability and self-organisation or emergence (the spontaneous development of collective properties that do not appear to be present in individual components (Urry, 2005: 5)). Heylighen et al. (2007: 13) argue that all complex systems created through self-organisation and evolution are "intrinsically adaptive", since they do not have a blueprint telling them "how they should behave". However, despite its adaptability, each complex or "self-making" system (Urry, 2005: 7) develops boundaries which separate it from its environment, giving it its identity as distinct from other systems (Heylighen et al., 2007: 6).

The basic components of a complex system are agents, "autonomous individuals who try to achieve some personal goal or value ... by acting upon their environment – which includes other agents" (Heylighen et al., 2007: 11). Agents fulfil a certain function in the system, and complement one another's functions. Their goals are intrinsically independent, however, and therefore often in conflict. Cilliers (1998: 6) points out that agents can only act on the information available to them, and are not aware of the functions of all the other agents in the system. As a result of

the transformational nature of complex systems and their accompanying lack of equilibrium, agents co-evolve: they constantly adapt to the changes made by other agents. However, in this way, they also modify the others' environment, forcing them to also adapt. Changes to the environment include adjustments to structures and activities: agents interpret and respond to issues of practice differently, as their sense of agency is aligned with that of others in a new relational dispensation.

The constant change in complex systems necessitates that agents are able to process information about, and deal with many variables in order to survive challenges and make the most of opportunities (Clemens, 2002). A system that demonstrates this ability is described as 'fit'. According to Clemens (2002), the key to fitness is self-organisation that results from the agents' actions: together, agents can generate structures and activities that cope well with complexity and are, therefore, adaptable to change. However, challenges may be experienced during the process of agents' mutual adaptation, caused for example by conflicting goals or threats to expertise and identity. These challenges may lead to a temporary or permanent reduction or loss of fitness; in other words, the agents temporarily or permanently lack the capacity to deal with a specific change (Clemens, 2002). When fitness is reduced or lost, a new adaptation process takes place in the area of the problem, enlarging itself as far as necessary to absorb all the negative effects (Heylighen et al., 2007: 13).

From separate 'being' to relational 'becoming': Academic literacy practitioners and disciplinary specialists as a complex system

Traditionally, the functioning of academic literacy practitioners and disciplinary specialists as separate systems at SU was contrary to the "radical relationality" which Dillon (2000: 8) ascribes to the natural and social world. These two communities of practice maintained their 'being' by protecting their respective terrains and autonomy, and sustaining a relative equilibrium. Despite their collective goal of student success, the objectives of the agents in the two systems were, to a large extent, independent, resulting in the protection of their respective domains, reduced relationality, and resistance to a change of the status quo. The transformative capacity of these two separate systems was, therefore, limited.

In some numerically oriented disciplines, for example, academic literacy was reduced to generic reading and writing skills for students in need of remedial language support, thus foregrounding the value of the importance of numbers and, simultaneously, propagating the related underlying values of the lesser importance of both communication and academic literacy in those disciplines. Introducing academic literacy interventions into the practices of these disciplines, and hence into their world views, led to the meaning as well as the practices of academic literacy being contested, as Street (2003: 78) points out. A change in this view of academic literacy to literacies, which would, for example, include numerical and information literacies, and the incorporation of these literacies into the mainstream curricula

would have increased the collaboration between the agents in the two systems. Working together across the boundaries of the systems could have involved structural adjustments such as jointly designing interventions and developing new curricula, and team-teaching, as well as collaborating in adapting related activities: planning, teaching, assessment, reflection, and so on.

The aligning of the diverse senses of agency would have entailed several challenges. In their discussion of the multidimensionality of change in teaching, Walton and Lloyd (2012: 67) highlight three dimensions: the use of new materials, the use of new teaching approaches, and the alteration of beliefs. These three dimensions, together with academics and academic literacy practitioners possibly experiencing a sense of losing control of the teaching/learning process, having to learn how to teach dialogically, and how to reconcile different perceptions of curriculum, instruction and assessment (Walton & Lloyd, 2012: 67), would have led to a reduction and possibly a loss of fitness in the new transdisciplinary system. However, increased interaction between the agents, working together towards realising their common goal of improved student success, could alternatively have resulted in the gradual creation of relationality across systemic boundaries. The initial reduction or loss of fitness could have been addressed by a focus on the opportunities offered by the collaboration, rather than the challenges: for the academics, a sharing of workload and responsibility for the performance of their students, for example, and for the academic literacy practitioners, contributing towards student success as an invited disciplinary 'insider' instead of an 'added-on' 'outsider'. Until recently, though, this transformation was resisted, due mainly to the understandable response from the disciplinary agents and structures to hold on to their domains and thus their positions of power. McKenna (2004: 150) correspondingly states that "the discourses of the mainstream lecturers are the most powerful and have been the slowest to change", resulting in an unsystematic – and still contentious – move towards integrating academic literacy. This holds true for SU.

Increased recognition of the "radical" relationality of academic literacy practitioners and disciplinary specialists and, therefore, of the interdependence among the agents of the two systems could contribute to the growing of the transdisciplinary academic community of practice. Jacobs (2005: 484) recommends that the basis for such a complex system should be issues of teaching and learning, rather than the academic discipline (as at present). This would entail a change from the traditional, separate roles of academic literacy practitioners and disciplinary specialists to a combined role as tertiary educators, and would simultaneously facilitate the integration of academic literacies into the disciplines. Jacobs (2005: 484) states that the creation of such a transdisciplinary community of practice "could serve a transformative purpose in HE". The academic literacy agents in this complex system would contribute an understanding of the teaching and learning of literacies as well as experience in supporting students in discourses new to them, while the disciplinary professionals would bring both "insider knowledge" and an understanding of their respective disciplinary discursive practices to the system (Jacobs, 2005:

484-485). McKenna (2004: 275) takes this potential shift further, recommending that literacy development should become "the primary task of staff development", so that academics are made aware of the role academic literacy acquisition plays in student success, and are supported in "their own ongoing acquisition and critique of academic literacies".

According to Jacobs (2007: 871), the need for academic literacy practitioners and disciplinary specialists to change their conceptualisation of academic literacy as an autonomous body of knowledge also underlies this shift. This change would improve the collaboration between the two systems, reducing their perceived need to protect their domains and assert their disciplinary expertise over the "other" (Jacobs, 2007: 871). However, this transformation requires fitness, with agents who are able to cope with the variables related to the challenges and opportunities that accompany the change to a transdisciplinary system. The adaptability of academic literacy practitioners and disciplinary professionals at SU – needed to acquire fitness – has already been demonstrated by the degree of co-evolving and integration of the agents, structures and activities achieved thus far. In addition, the capacity of the agents for self-organisation, also required for a fit system, has already been displayed in their ability to spontaneously structure their respective systems and start a trajectory of growth in collaborating across their systemic boundaries. The guideline document produced by the task team on academic literacy at SU should enhance this self-organisation, potentially leading to an increased will among the agents in the two communities of practice to align their objectives, structures and activities, and pursue their common goal of student success across the boundaries of their respective systems. Their collaboration in realising this goal could prove to be the key factor in the 'fitness for change' of the new transdisciplinary system.

Navigating between fitness and the reduction or loss thereof in the above complex system will be one of the main challenges in the trajectory of change towards "radical" relationality for academic literacy practitioners and disciplinary specialists at SU as well as at other tertiary institutions. However, to return to the words of Derrida (1988: 119):

> *[O]ne should … never simplify or pretend to be sure of … simplicity where there is none. If things were simple, word would have gotten round.*

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Endnotes

1. An overview of the educational development opportunities offered by the Centre for Teaching and Learning at Stellenbosch University is contained in S van Schalkwyk, F Cilliers, H Adendorff, K Cattell & N Herman 2013. Journeys of growth towards the professional learning of academics: understanding the role of educational development. *International Journal for Academic Development*, 18(2): 139-151.
2. A forthcoming article will examine the degree to which this challenge has been met and related opportunities for change have been utilised.