Effective collaboration: deep collaboration as an essential element of the learning process

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Abstract

Collaboration is a frequently used term in current educational debates. However, the nature of collaboration and the possibilities it offers are often assumed among practitioners. Where it is dealt with as problematic, this tends to be at the operational level (Hargreaves 1992; O'Neill 2000). In this paper I argue that the process of collaboration is more complex than it may initially appear, and use Boreham's (2000) research as a vehicle to explore this complexity. In addition, I use Vygotsky's Zone of Proximal Development to provide a possible theoretical explanation of why collaboration can be effective. I also argue that collaboration works on two levels in a manner akin to Argyris' explanation of double-loop learning (Argyris 1992), and offer opportunities for the development of a creative pedagogy. Lastly, I examine the implications of effective collaboration for learners and professionals in communities of support, practice and learning.

Introduction

The language of the current educational debate contains many key words, such as inclusion, achievement and attainment. The way in which these terms are used tends to suggest that the underlying concepts they refer to are somehow understood in the same way by all participants in the field: academics, teachers, pupils and their parents. Collaboration is another frequently used term receiving similar treatment, even among the most respected commentators. For example, Bruner (1996) has argued for the importance of collaboration as part of learning, and Hargreaves (1992) has made a similar case in the domain of teaching.

Collaboration as a concept, however, has been contested. For example, Hargreaves (1994, pp 245–247) has argued for the benefits of collaboration on a personal level in terms of increases in moral support and confidence; on a professional level by providing opportunities for improved

effectiveness, self-reflection, professional boundaries and teacher learning; and finally, on a practical level in terms of increased efficiency, reduced workload and continuous improvement. Previously, however, he had pointed out that there can be limits to the assumed effectiveness of collaboration in what he termed 'bounded collaboration', where participants work within a highly prescriptive context and are allowed little time to question, discuss or develop the materials they work with (Hargreaves 1992).

Similarly, O'Neill (2000) explores the possible benefits of collaboration in the daily lives of school departments. At the same time, however, he discusses the power arrangements within a collegiate department and argues that collegiality may simply be an organisational tool; a different way of managing people's workload by passing responsibility from a head of department to its members. At the same time, he notes that 'Teachers value, and often find more productive, their privacy and solitude …' (O'Neill 2000, pp 19–20).

In each case, however, there appears to be a sense of underlying opportunity which may benefit from being made explicit. When Hargreaves (1992, p 228) described 'bounded collaboration' as

> … collaboration which does not reach deep down to the grounds, the principles or the ethics of practice but which stays with routine advice giving, trick trading and material sharing of a more immediate, specific and technical nature …

he was, of course, implying that deeper collaboration may well be possible. Similarly, O'Neill (2000, p 14) has argued that in limiting collaboration to the routine, there is a danger that we lose out on the chance to explore '… the uncertain, the difficult to identify, the less easily understood, the idiosyncratic'.

In each case, and in countless others, the value of collaboration has been argued, but not investigated as a concept.

Bruner, however, does address the nature of 'intersubjectivity' (Bruner 1996, p 182) and the predisposition of humans to interact in ways that develop shared meaning. He cites the example of a mother teaching her infant son the names of things in a book and describes how they interact in order to create meaning. This is first done at a simple level, with the mother naming what is in the book. However, her questioning of what the object is for, or what the person in the book is doing, takes the learning on to another level.

Perhaps most interestingly for the argument of this paper is the complexity and nature of collaboration required in order to create a meaning that is shared rather than imposed. In the course of the interaction between mother and son, there came a point where they had to disagree about the 'name' for the woman's head on the back of a British penny. Whilst the mother's wider knowledge of the world led her to identify the woman as

'Queen', the child, whose knowledge of women in the world was more limited, insisted on the name 'Grannie'.

This illustration highlights that, whilst humans may well be disposed to interact in a collaborative fashion, collaboration is nevertheless a complex and problematic process that requires participants to employ a repertoire of skills: negotiation, communication and interpersonal. The various parties involved in any collaborative act will come to the task with different backgrounds and knowledge, and only when these are made explicit can potential barriers to effective collaboration, such as misunderstandings and misconceptions, be addressed.

With this paper, I try to address this issue by arguing that collaboration works on at least two levels: the functional level equivalent to Hargreaves' 'bounded collaboration'; and a deeper level identified by O'Neill and Hargreaves, which I refer to here as 'effective collaboration'. Further, I argue that whilst functional collaboration is a process that can be used to support learning, effective collaboration is an integral element of the learning process itself.

To offer a theoretical explanation of how effective collaboration works, I will be employing interpretations of Vygotsky's Zone of Proximal Development. Thereafter, I examine Boreham's (2000) research into collective competence to make the case that there may indeed be competencies which can only be achieved as a group, and to suggest, therefore, that collaboration at a deep and effective level is not only desirable but necessary.

Finally, I explore the implications of effective collaboration for teachers in terms of communities (Wenger 1998). To do this, I select examples of a community of support, from my own experience as a teacher of children with social, emotional and behavioural difficulties; of communities of practice; and of communities of learners, from research and the literature. Each of these is a development of Wenger's notion of the community of practice (Wenger 1998) and how it may be developed (Wenger et al 2002). For each community, I argue that, to support the learning of all pupils, effective collaboration is not only a desirable but essential part of pedagogy.

Functional vs effective collaboration

The difference between functional and effective collaboration can be likened to that between constructivism and social constructivism in the teaching and learning process. Whilst constructivism involves an interaction between individuals with unique roles to play (teacher and learner) to benefit one of those individuals (the learner), social constructivism can be seen as a much more mutual process, in which all parties engage in the learning activity to benefit all participants (Pollard & Triggs 1997). Similarly, functional collaboration can be seen as individuals behaving in a way that benefits each participant differently: the teacher is allowed to teach, and the learner can learn.

However, effective collaboration can be viewed as a group of people behaving in a way that not only produces individual benefits, but leads to a degree of success belonging to the group and can only be achieved by group members working together in this fashion. A suitable term currently used for this type of collaborative behaviour might be 'community' (Wenger 1998). In particular, use of the terms 'community of support', 'community of practice' and 'community of learners' emphasises the collaborative conceptualisation of a range of effective groupings; where the choice of terminology reflects a shift from focusing on the individual to focusing on the social aspects of learning.

Indeed, in the recent Tavistock report on pedagogical research and practice (Cullen et al 2002), learning as a social activity was highlighted as a strategic element in the 'new pedagogy'. To establish the meaning of functional and effective collaboration in these contexts, it is appropriate to examine the concept of collaboration and how it operates at different levels.

As a starting point, the concept can be thought about in the context of the following three questions:

What does it mean?

What benefits for learning can be gained from collaboration?

How is collaboration operationalised in an educational context?

In answer to the first question, it could be argued that collaboration is essentially multi-dimensional: its meaning is derived from the range of activities involved in the act of collaboration and from the subsequent effects of such activities. At the simplest level, collaboration comprises a range of closely related acts such as coordinating, consulting, communicating and cooperating.

The value of each of these aspects can be readily understood. Coordination is necessary to ensure that any enterprise runs smoothly and efficiently, and to realise the optimum use of resources, including human resources. Consultation is essential to assure that all involved understand what is being done and carry it out in an appropriate manner. Communication ensures that everyone knows what they are doing and when they have to do it. Finally, participants need to cooperate to execute any agreed and organised activity.

The common implication in all of these activities is that more than one person is involved; an individual cannot collaborate on her/his own. This underlying fact makes the concept of collaboration intriguing. At a basic level, it could be acknowledged that these activities are simply essential for organised societies or communities such as schools to run smoothly. They are not mutually exclusive, and there is no set order in which each of the functions must be performed; indeed, they are simultaneous acts.

Moreover, collaboration can be seen as an intermediary process; something has taken place beforehand which suggests that people need to work together collaboratively in order to deal with it, resulting in a new context or subsequent set of activities. The concept becomes altogether more fascinating when the multi-faceted nature of collaboration, the diversity of people who cooperate in the act, and the antecedent-activity-result process are considered. Participants may also potentially achieve more than might be expected considering the efficiency of individual aspects of the process.

In other words, the elements mentioned above represent the functional aspects of collaboration; but, in addition, participants may not fully realise the effectiveness of the act if they do not give it close enough attention. This does not in any way dismiss the importance of the functional aspects of collaboration; however, it supports the argument that working together presents opportunities that go beyond the procedural.

Boreham's recent study of critical incidents in hospital emergency departments is enlightening here. Having noted the interdependency of individuals in the emergency teams, Boreham (2000) argues that developing a collective knowledge base can lead to commonsense-making. This may take thinking on collaboration beyond the functional and towards looking at what people can achieve collectively – which is more than the sum of the combined efforts of all involved.

Boreham (2000, p 4) refers to this as 'collective competence'. The exact nature of collective competence is dependent upon the culture of the group, and its manifestation can be seen as the result of participation within this culture (Boreham 2000). The argument here is that the surface manifestations are the visible results of a deeper, complex reality involving the cognitive and affective human activities of thinking, feeling and perceiving (Boreham 2000, p 4).

Once individuals acknowledge these factors, they can successfully move away from simply disposing of what has gone before and into the context-enhancing realms of alteration and creativity to achieve a desired outcome. When individuals bring these deeper aspects to the fore, they create opportunities to do more as a group than they could achieve as a collection of individuals working alongside each other. In other words, effective collaboration has a propensity to become greater than the sum of its parts.

> Consequently, when there is a need for collective activity such as cooperation and communication, competence depends on building a sense of interconnectedness which will transcend the fragmenting tendencies of allegiances to sub-groups. (Boreham 2000, p 4)

Developing a collective understanding through the creation of shared knowledge is central to group effectiveness. At this level of operation – ie at the metacognitive rather than functional level – group competencies begin to emerge, and the group becomes more effective as an entity than it could ever be as simply a collection of individuals, however highly trained and motivated.

Boreham et al (2000) demonstrate that failing to share knowledge, for example in hospital emergency teams, can have serious consequences, and usually an individual is identified for blame. It would therefore appear that a team can only function collectively if its members share their knowledge (Boreham 2000, p 6). If so, to achieve maximum effectiveness in a group situation, we should establish exactly what shared knowledge the group possesses.

Boreham (2000, p 6) refers to this part of the process, or essential element of an effective group culture, as sense-making. Therefore, in sharing different perspectives, individuals in a group can create a collective knowledge that leads to a shared or common sense of the task in hand. In an educational context, a common sense might entail: a shared understanding of why a task is being undertaken, its value and derivation; the dimensions of the task; agreed strategies for engaging with the task and overcoming difficulties; criteria for assessing the success of the task; and a shared understanding of the relevance of the current task for future learning.

The operation of effective collaboration: Vygotsky

An explanation of how effective collaboration works can be gleaned from a consideration of Vygotsky's Zone of Proximal Development (ZPD) (Vygotsky 1978, 1986).

The most common educational explanation of the ZPD relates to scaffolding. In this model, the ZPD is the distance between what a learner can achieve on his or her own and what can be learned in collaboration with a more able or experienced adult or peer. This is very much a cognitive interpretation of the ZPD (Daniels et al 2000, p 175).

However, there are other interpretations. One is the cultural model, in which the ZPD is represented as the difference between what might be termed active knowledge, owned by individuals as a result of their everyday experiences; and understood knowledge, which is scientific in nature and gained through instruction (Daniels et al 2000, p 175).

A third interpretation sees the ZPD as the distance between the everyday actions of individuals and collectively generated activity. This is termed the collectivist or societal interpretation and '… involves the study of learning beyond the context of pedagogical structuring ...' (Daniels et al 2000, p 176). An analysis of this model involves taking into account the social and cultural structures that affect learning, and in doing so moves beyond the cognitive to include the affective (Daniels et al 2000, p 176).

The model thus begins to match Boreham's assertions that collective effectiveness requires a sense of interdependence that affects how individuals feel about their experiences. Moreover, it coincides with what Bruner (1996, p 3) has to say about the creation of meaning:

> ... however much the individual may seem to operate on his or her own in
> carrying out the quest for meanings, nobody can do it unaided by the culture's

symbolic systems. It is culture that provides the tools for organizing and understanding our worlds in communicable ways.

This third explanation of the ZPD may account for the different operations of functional and effective collaboration. Functional collaboration can be understood as the routine actions of individuals in a context which inhibits the creation of a ZPD – Hargreaves' 'bounded collaboration', perhaps. In this context, although people may be gathered together for some ostensibly common purpose, in reality they behave as individuals and only carry out the roles expected of them. However, where the individuals involved look beyond narrow personal or departmental interests and generate a clear sense of purpose of the group and their role in it, then the group as an entity begins to generate the understanding and insight that results in the kind of activities which satisfy the purposes of the group and might never have otherwise emerged.

An analogy might be made here with Argyris' concept of double loop learning (Argyris 1992). If some contexts can be considered anti-learning – in the sense that they inhibit the creation of a ZPD through the imposition of a routine via a hierarchical 'management' of the group – then members of the group may be considered to operate only from an aspect of self-interest, and their learning is limited to a primary stage. However, where the operation of a group allows collectively generated activity to develop, then a secondary, deeper stage of learning results.

The value of collaboration, therefore, is twofold. It affords individuals the opportunity to move beyond the functional aspects of coordination, cooperation and communication to the collective. Through creating a new, shared knowledge and understanding, they achieve more than a collection of individuals working in harmony. Moreover, this fits with what is known about learning, particularly about the creation of meaning essential to the success of groups and cultures.

It thus follows that some things can only be achieved through group activity. Thus, for educators to behave in a professional and efficient way to ensure the quality of educational experiences for their learners – by ensuring that their own learning experience is as fruitful, fulsome and enjoyable as possible – then it becomes not only desirable but imperative that they collaborate effectively.

How the different levels of collaboration are manifested in practice are perhaps best analysed through an examination of practice. In particular, it may be helpful to consider an example from the field of Additional Support Provision (specifically behaviour support), because the need for change in this area is often the most urgent – and the need for its educators to undertake self-examination and analysis to develop pedagogy is perhaps greater.

Communities of support

Working with children who have Social, Emotional and Behavioural Difficulties (SEBD) frequently requires teachers to collaborate with a range

of interested parties, including children, their parents, other teachers, social workers and educational psychologists (Porter 2000). Sometimes the context in which such a group engages is formal; such as the classroom, and in meetings for referral, planning and review. At other times, contact is informal, such as a chat with a parent or a taxi driver, or a telephone conversation with colleagues from schools and social workers. Whichever is the case, each individual makes a significant contribution to educating the young person in focus. Whilst much of this exchange begins with sharing helpful information, over time it can lead to an understanding of what is being provided and its effectiveness in supporting young people.

In this process, the various participants air problems, and consider contradictions in practices and perceptions. They discuss and resolve these to create new understandings and strategies to help young people manage their lives and learning. From this activity, professionals can gain a new understanding of their own and each other's roles and practices, and subsequently develop a more cohesive and effective approach, which can be explained by activity theory (Engeström et al 1999). Anning (2001) analyses how the various professionals in a community of practice develop new and deeper understandings of their task and the role they play. Essential to this process is the resolution and the conflicts and contradictions that emerge as professionals interact which, in turn, offers the opportunity for creativity in managing the task (Engeström et al 1999).

The difference between the two states – the exchange of information on one hand and shared understanding on the other – highlights the differences between procedural or functional collaboration and effective collaboration. In the first case, people gather together in some context, contribute to the discourse from their own point of view, help to make decisions based on the information generated, and then go off to carry out the actions they have agreed to. Generally, the various parties approach this context with their own set of priorities and see their contribution as limited to their own area of expertise or knowledge. The kind of material produced at such meetings is generally a list of tasks for some or all of the participants to undertake, to support the learning of the young person. All participants have carried out the expected functions of reporting, suggesting and agreeing, and view the decisions they make as enhancing provision for the learner.

In the second case, something much more meaningful takes place. Individuals no longer simply play their individual parts, but have a sense of what the group as a whole is trying to achieve, and direct their efforts and expertise towards reaching this common goal. Consequently, support takes on the features of a multi- and cross-disciplinary exercise – more relevant to the pupil's needs, and ultimately more effective. In other words, the group has become a community, creating a shared understanding of the nature and purpose of the group and a common sense of mutual benefit.

At its simplest, the professionals learn from the pupil how they might go about their business in a way that is effective for that pupil, and gain a greater understanding of what they are doing and why it is done in a particular way. The sense of one party 'doing something to' the other or of

having something done to them disappears, and participants feel more of a sense of group enterprise. In obtaining results as a group that they could not have possibly achieved as a collection of individuals, participants perceive that the whole is greater than the sum of its parts.

Impressionistic evidence of colleagues in the field of behaviour support suggests that their perceptions and experiences of collaboration are similar. With procedural or functional collaboration, student support is limited to attending meetings, reporting on a student's learning progress, suggesting further programmes of work, and thereafter returning to work with the student. With effective collaboration, however, interaction is led by the student and each participant contributes in a way that allows the group to generate an understanding of and insight into that student's needs and their own needs, desires and constraints. As such, participants confront problems and create solutions. It would thus appear that there are degrees of effectiveness in collaboration, and if the conditions that allow for increased effectiveness can be analysed, they can be recreated more quickly, thus leading to more effective support of student learning.

In the UK, legislation on services for children has given pre-eminence to inter-agency collaboration as an effective strategy for organising appropriate provision (eg the 1989 Children Act and the 1995 Children (Scotland) Act). However, the Scottish Executive (1999) reported three barriers to collaboration: structural and functional; process; and cultural. Cultural barriers are the most concerning for professionals working at a local level, as they incorporate the different viewpoints, aims and objectives of each of the groups involved. For example, Lloyd et al (2001) cite the perceived cultural differences between social work and educational professionals as barriers to collaboration. When these professionals overcome such barriers, they experience an enhanced sense of effectiveness and awareness of what empowers and constrains each other's work.

From their study into collaboration among professionals working with children who require learning support, Graham & Wright (1999, pp 38–39) posited three manifestations of collaboration: planning activities, sharing activities and goal-achieving activities. Some of the activities they listed are of particular interest, given the importance of moving beyond the functional operation of collaboration:

- giving a knowledge and understanding of my role to others;

- explaining the contribution I make to meeting the needs of pupils;

- talking to other professionals regularly ... to share knowledge and expertise;

- trying to make sure that a common language is used that can be understood by all professionals and parents;

- acknowledging the importance of the various particular methods used by different professionals to achieve identified goals;

- getting to know and understand the goals of other professionals. In this process, we can see links with and scope for developing the notions of interdependency, collective knowledge and communal sense making. (Graham & Wright 1999, p 39)

Their results indicate that teachers are more prepared than other professionals to employ these strategies and become involved in this level of collaboration. When learners, teachers, social workers, psychologists and other interested parties work together in this way, they create the opportunity to develop from a supportive group – well-intentioned but constrained – to become a 'community of support' that creates the conditions and strategies necessary to achieve its goals.

More recently, Daniels et al (2000) suggested the concept of teacher support teams (TSTs) as a model for collaboration among teachers. The model indicates that TSTs would be small (perhaps one per school), consisting of perhaps three teachers to whom any member of staff approach about a problem. One obvious example of a problem would be a difficult child, but teachers may seek support regarding any relevant matter affecting them.

The idea of peer support for professionals is not new. Indeed, in professions such as counselling, peer support is an integral part of their activities. The educational argument is that peer support leads to shared knowledge among teachers and increases the ability of schools to deal with the diverse range of pupils within their catchment areas (Daniels et al 2000, pp 173–174). Teachers' perceptions of support teams are positive. They claim that team discussion externalises the problem so that it can be considered from a distance, and confirms existing strategies or allows new ones to be developed. They also claim that the sympathetic ethos of the discussions is cathartic (Daniels et al 2000, p 182).

Communities of practice

Motivation for collaboration in classrooms begins at the point where problems appear unsolvable; where teachers have tried everything they know and can suggest no more. According to Boreham (2000, p 6), commonsense-making also takes place at this point. Moreover, he argues that the apparent intractability of a problem, or the unexpected, often produces a natural opportunity for collaboration, because it frequently results in a spontaneous conversation among interested parties (Boreham 2000, p 7).

Boreham's analysis seems to endorse the collectivist interpretation of Vygotsky's ZPD. Accepting this thesis affords an opportunity for effective collaboration with colleagues, and allows the production of solutions that are more likely to be effective because they result from the interaction of several people.

Ainscow and Howes (2001) term this collegial model of collaboration a 'community of practice'. This concept challenges conventional ideas of learning as:

> … an individual process, that … has a beginning and an end, that … is best separated from the rest of our activities, and is the result of teaching. (Wenger 1998, p 3)

The value of a community of practice stems from individuals sharing their ideas, experiences and practices to build new knowledge within the community. They achieve this through a process of debate, challenge and experiment that 'results in social learning that could not be produced by reification alone' (Ainscow & Howes 2001, p 2).

Hargreaves (1992, p 220) developed a four-part typology to describe the possible range of teacher cultures: individualism, balkanism, contrived collegiality, and a collaborative culture. He argued that the form of the culture influences how teachers behave, which impinges on their development as professionals:

> …the way teachers relate to their colleagues has profound implications for their teaching in the classroom, how they evolve and develop as teachers, and the sorts of teachers they become. (Hargreaves 1992, p 217)

A strong implication of Hargreaves' argument is that there is no neutral position. Prevarication immediately assumes one of the other cultures; in his terms, collaboration therefore becomes a professional imperative.

A recent research project from one local Scottish authority suggests that forming a community of practice is seen to make a valuable contribution to teachers' professional development. Collaborative ways of supporting pupils with social emotional and behavioural difficulties were seen to be most effective. In particular, cooperative teaching was viewed as the most effective way of supporting colleagues in developing their practice in order to facilitate the inclusion of young people in mainstream schools (Head et al 2003, p 38).

Communities of learners

Perhaps more important, however, is the place of effective collaboration within the classroom. As indicated earlier, Argyris (1992) emphasised the importance of a secondary phase of learning in which opportunities not available in an initial phase of surface learning are presented. The difference between these levels of learning can be likened to the levels of collaboration described here. Indeed, what I have referred to here as effective collaboration is, according to Argyris (1992, p 33), 'a necessary condition for learning'. Similarly, Bruner's (1996, p 20) premise that learning is dependent upon the 'ability to understand the minds of others' suggests that effective collaboration might be a desired element of the teaching and learning process. If this is the case, then teachers may need to problematise and rethink their interactions with students.

As the majority of teachers in schools, colleges and universities were educated in a behaviourist environment (Pollard & Triggs 1997), this has probably affected their own teaching. Educators are therefore liable to continue creating the cultures of individualism and balkanism described above. In addition, educational institutions may well constrain learning through prescribing curricula, enforcing necessary timetables, and setting exam targets and timing. Consequently, much teacher-student interaction is directed towards control and accountability. Indeed, the very structure of such institutions not only hampers a secondary phase of collaboration and hence learning, but prevents it from taking place (Argyris 1992).

However, organisational barriers to learning can be overcome if what takes place between students and teachers is reconceptualised. Schematically, such rethinking of pedagogy can be represented as follows.

control   _____   learning

accountability   _____   understanding
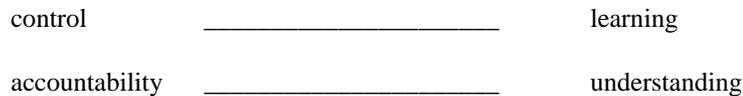
A first step might be to shift from a basically didactic approach to teaching, demanded by an ethos of control, toward a pedagogy based on dialectical interrogation. However, structural alterations are required for this to happen, and the model of pedagogy needs to develop. If the argument I present here holds, it is first necessary to actively overtake the functional level of collaboration – in which all parties are accountable to the group and others outside it – in order to foster effective collaboration, where all group members contribute towards a common understanding of their task. In terms of my argument here, effective collaboration becomes an essential element of secondary learning and may even be a prerequisite for the necessary rethinking to allow such learning.

Reconceptualisation of an institution is more likely to be achieved if those in charge enact and support it (Argyris 1992). However, how this operates in the everyday learning context is a matter for the institution, the students and their teachers. Using a management model based on the assumption that a problem is best solved by those involved in it on a daily basis, the institution ceases to be a hierarchy of command and control and becomes a collegial organisation:

> … where search is enhanced and deepened, where ideas are tested publicly, where individuals collaborate to enlarge inquiry, and where trust and risk-taking are enhanced. (Argyris 1992, p153)

Thus, the roles of managers and teachers shift from positions of authority to participants and learners in a culture of investigation, experiment and mutual sense-making. Cranston (2001) has highlighted the need for closer collaboration among school colleagues in Australia and the UK, and for school principals to develop the skills necessary to collaborate in a context of school-based management. In eschewing hierarchical status in favour of academic autonomy and intellectual advancement, the members

work together, creating insight and a shared understanding of their function and purpose to become a community of learners.

Communities of learners have their roots within schools and classrooms, and what takes place within them can therefore inhibit or enhance learning. If the interactions between teachers and students operate at the functional level of coordination, cooperation and communication, then the class will likely find itself 'addressing but not necessarily solving problems' (Lloyd et al 2001, p 9). Collaboration at this level may well help to create conditions for learning, but does not guarantee its occurrence. To increase the likelihood that learning will take place, educators need to foster conditions for effective collaboration.

Interactions between pupils and teachers, therefore, should be about generating a shared understanding of why learning in general and the topic being explored at the time are important. In addition, a common sense of the nature and purpose of the task in hand, and future tasks, would create insight into the intrinsic value of the functions of learning, and allow the community to create a vision of where it is heading intellectually and generate appropriate strategies for getting there.

Brown et al (1996) have offered an example of how a community of learners might work. Founded on the theories of Piaget and Vygotsky, the analogy of the relationship between functional and effective collaboration and constructivism and social constructivism offered earlier becomes clear. In this model, a classroom operating as a community of learners is founded on five main principles: multiple zones of proximal development; a community of discourse; negotiation of meaning; mutual appropriation of ideas; and the importance of the common knowledge and individual expertise that grows out of its creation (Brown et al 1996).

In this model, the teacher and pupils agree on areas and themes for research within an overall context. In acting as researchers on one of these themes or sub-themes, students become the community experts on that theme. They are then in a position to teach the others in the classroom and thus contribute to the creation of common knowledge and understanding. To carry out these tasks, learners develop a language that becomes increasingly subject-specific and academic as they learn and disseminate their learning.

Since the learners will be at different stages in their learning at different times, a community of learners will necessarily consist of a range of 'multiple, overlapping zones of proximal development that foster growth' (Brown et al 1996, p 161). However, whilst the traditional classroom tends to address difficulty in learning by differentiating the task in a community of learners, '[the] task is simplified by the provision of social support through a variety of expertise, not via decomposition of the task into basic skills' (Brown et al 1996, p 160). An essential element of this social support is, of course, the teacher. The teacher acts as mediator, guiding the learning of the students through questioning, reflecting and making suggestions, in what might be described as a dialectical approach to learning.

Children learn by acquiring knowledge in a range of contexts, including the school, but they learn the value of such knowledge through experience: in the home; at leisure with friends; and in real-life situations. To benefit most from their experiences – and for the school to be the context in which they develop the cognitive and affective tools to cope with life in other contexts – then effective collaboration among teachers, pupils and other relevant professionals and lay people may well be essential to the conditions which nurture this process.

In this paper, I have tried to examine ways in which people elect to collaborate. By examining personal experience and Boreham's work, I have highlighted the problematic nature of collaboration. To address these problems effectively, I have suggested a series of communities: a community of support; of practice; and of learners. The collegial imperative of each of these communities – and of effective collaboration as argued here – illustrates how theories of learning can further an understanding of the nature and value of group learning. The more a concept or process is understood, the more likely it will be put to good use. For this reason alone, the concept of collaboration is worth exploring more deeply.

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