Cultural-historical-activity-theory (CHAT) provides a powerful explanation of how young people become functioning members of their local communities by participating in particular activities, in which they receive assistance in their zones of proximal development through guided participation or legitimate peripheral participation. However, it has been less successful in providing a theoretical account of the processes through which young people in the contemporary world appropriate the cultural resources that enable them to participate in and contribute to the larger society. What is missing is an adequate understanding of the ways in which becoming a member of society demands more than simply becoming a member of one’s family and local community. And for this, an explanation of the role of formal education in providing the bridge between individual and society is required. In this paper, I contribute to such an explanation by exploring two issues: the organization of schooling, and the nature of the knowledge that schools expect students to master.

**Schools: The current situation**

Today, in many countries in the world, there is said to be “a crisis in education”: students are failing to reach the standards that are considered necessary for them to be effective contributors to their nation’s competition in the global economy. Tests reveal that far too many are “left behind” in achieving adequate levels in literacy; many students drop out before graduating from high school; and, of those who do graduate, too few are interested in careers that require high levels of competence in mathematics and science. Typically, the problem is seen as one that can be addressed by making schools more accountable for ensuring that students meet the prescribed standards. However, from a cultural-historical activity theoretic (CHAT) perspective, the problem could be seen, more radically, as schools failing to provide a form of education that enables young people to participate fully in contemporary society.

One aspect of this problem is the “encapsulation of schooling” (Engström, 1991). Contrary to the emphasis that both Lev Vygotsky and John Dewey placed on classroom activities being relevant to students’ lives in the present as well as in the future, there is a serious lack of connection between the knowledge that students are required to master in the classroom and their lives beyond the school (see Lee, this volume). And closely related is the manner in which their success as students is evaluated—not by the extent to which their learning contributes to the achievement of a “real-life” goal, but by their performance on tests that have little immediate practical relevance for them. However, even if teachers were able to find more effective ways of making classroom activities personally relevant for students, they would still be constrained by the requirement placed on them to prepare students to perform
satisfactorily on state-imposed tests of achievement in basic skills and specific items of knowledge. Because this requirement is backed by regulations and sanctions, it tends to be given precedence, even when teachers are reluctant to toe the line.

The predicament that teachers find themselves in was forcibly brought home to me when I was teaching an introductory course for a new intake of pre-service elementary teachers. In both its content and organization, the course emphasized the CHAT-based approach to learning-and-teaching that I have dubbed “dialogic inquiry” (Wells, 1999). Readings included articles by CHAT scholars and practitioners and by teachers with whom I have conducted collaborative action research in the past (Wells, 2001). The major assignment for the course was to conduct a small-group inquiry into a self-chosen topic under the umbrella theme of sustainable living and to reflect on the experience from the dual perspectives of the learner and the prospective teacher.

After some initial misgivings about the open-ended nature of the assignment, students’ enthusiasm for this CHAT-based approach mounted steadily and, by the end of the course, most were firmly committed in principle to organizing their future teaching according to the principles that we constructed together. I emphasize “in principle” because, once the students started to spend time in elementary schools in California, they began to voice serious doubts about the feasibility—or acceptability—of adopting this approach. Several were placed in what are designated “Program Improvement Schools” and they saw how the teachers had virtually no control over either the content or the teaching of the curriculum. The district assigned the texts and permissible supplementary materials for language arts and mathematics and the teachers were required to keep to a strict pacing guide and administer regular “benchmark” tests. This regime allowed no time for science, social studies, or the arts, even when the books they were reading raised issues relevant to those disciplines. Furthermore, as these student teachers’ learned from interviews with school principals, only teachers who willingly accepted the emphasis on raising test scores by means of the scripted curriculum were favourably considered for employment, despite the severe shortage of well-qualified applicants.

At the end of the course, a number of students volunteered to form a collaborative group to investigate the basis for the tension they felt between the pedagogical principles to which they now subscribed and the practices that they saw enacted in the schools in which they were placed. Their question was this: “How is it that the insights gained by CHAT and other researchers concerning learning and teaching have had so little impact on what actually happens in classrooms?” To which they added, “How can we use our commitment to CHAT principles to make a difference?” In attempting to answer these questions, I start by considering the role of institutions in the organization of schooling.

**Institutions and society**

Drawing on the distinction between three foci of analysis of classroom activities—personal, interpersonal and cultural-institutional (Rogoff, 1995) —all of which are applicable on any occasion, I recently proposed the following diagram (see Figure 1) of how they map on to the three well known strata of cultural-historical activity theory (Wells, 2007), which, in this case, I took to correspond to the societal activity of
educating young people, the actions that are carried out in classrooms, and the operations that participants perform in carrying out these actions.

Figure 1. The centrality of interpersonal action in cultural activity

Looking at this diagram today, I think it is over-simplistic. In particular, the conflation of “cultural” and “institutional” in the widest focus elides the difference between (a) taken-for-granted cultural practices, which are learned through participation, and (b) the reified knowledge and practices that are promulgated by institutions and have to be deliberately learned in order to participate in the activities over which those institutions hold sway. This differentiation is less apparent if analysis is restricted to individual communities, particularly those in less technologically developed societies. However, in highly technologically developed societies, there is hardly any community whose activities are not constrained by bureaucratic regulations emanating from superordinate and apparently impersonal institutions.

It might be thought that institutional regulations are intended to facilitate the efficient functioning of societal organizations and the interactions between them so that each can achieve its goals in ways that are of maximum benefit for society as a whole. However, these institutions are not ideologically neutral, being based on the goals of those who control them. So while the practices they promulgate may be of benefit to those in control and to those who support them, they may be disadvantageous to many other sub-groups in society that differ from those in power on many cultural dimensions. To understand the conflict felt by new teachers, therefore, it is necessary to look more closely at the institutions that affect the running of individual schools and classrooms and at the ideologies that infuse them. These include both what is to be learned and how it is to be taught.

The institution of public education

In seeking to explain the progressive bureaucratization of schooling—and of many other organizations—appeal has been made to the theory of institutionalism. Earlier theories of the functioning of organizations assumed that decision-making was based on the rational
pursuit of interests and goals. However, institutionalism gives much less weight to rationality, proposing instead that organizations are concerned with “legitimacy”, particularly when it is difficult for them to demonstrate technical efficiency. Thus, there is a tendency “for organizations to succeed and persist as a result of conformity to institutionalized rules and procedures” (Rowan & Miskel, 1999, p. 361). The question is how do these rules and procedures come to be established and adopted and, in the case of schools, how are they enforced against the principled objections of many teachers?

By way of explanation, three “pillars” have been proposed as making up or supporting institutions: regulative, normative, and cultural-cognitive (Scott, 2008). The regulative makes use of rules that are legally sanctioned, to which organizations comply from expediency; the normative depends on social obligation and conformity to binding expectations; and the cultural-cognitive appeals to shared beliefs that provide legitimacy. The first two pillars seem relatively straightforward—organizations both enable and coerce behaviour through the promulgation and monitoring of regulations and, through norms, they establish prescriptive or obligatory means for attaining their goals and for accrediting achievement. However, equally important are the cultural-cognitive beliefs that the institution uses to justify its operation. But how these come to influence the public is more difficult to explain.

In an earlier article, the same author compared several different versions of institutional theory and suggested that they all had a common root in the work of Berger and Luckmann. “Society is a human product. Society is an objective reality. Man is a social product….Together they comprise the paradox ‘that man is capable of producing a world that he then experiences as something other than a human product’” (Quoted in Scott, 1987, p. 495–496). However, the problem with this formulation is that, while society is a human product, it is not homogeneous. Because of their different experiences in relation to a society’s powerful institutions, individual members construe society and its values in different ways. This means that beliefs that are strongly held as taken for granted by some segments of society on the basis of their experience are equally strongly rejected by others. Nevertheless, to succeed in gaining acceptance, any institution has to persuade the general public of the “truth” of its foundational beliefs. In practice, this is achieved by appealing to what it portrays as the normative, generally accepted nature of these beliefs or by demonstrating the positive results of following the institution’s rules and adopting its practices. At the same time, since there are frequently other institutions competing for the control of an organization, the likely result is that no single institution can gain complete control. If one of the competing institutions has the support of law, it may use coercion to achieve domination of the organization, for example through the imposition of punitive sanctions on those members of the organization who fail to comply. This is the current situation with respect to public education.

**Competing institutions in public education**

There are many institutions involved in the governance of public education; however, arguably the three most important are (a) the federal, state, and local governments, (b) the teacher unions, and (c) the academic community of scholars and researchers. Each of these institutions has a responsibility to the public in general, particularly to those who
pay the taxes to provide education, and to the young people to be educated and those children’s families. At the federal, state, and local levels of government, this responsibility is tested and ratified through political elections. With the unions, there is answerability to members. To some extent, educational researchers also compete for public approval, but less directly. The awarding of grants to carry out research is largely in the hands of government departments, who decide what sort of research they wish to encourage. Also influential are the publishers of textbooks and the testing agencies. Their responsibility is to their shareholders, so they compete to have their materials adopted by the states with the greatest purchasing power.

**The institution of educational research**

Educational researchers investigate many aspects of education in an effort to understand them and bring about improvements—from organizational policy to pedagogical strategies. In some cases, they conduct research at the invitation of government agencies, but research may also be explicitly critical of policies currently being enacted. However, while seeking to influence policy and practice, researchers do not attempt to persuade voters. Instead, they attempt to persuade peers through arguments based on evidence, according to the traditions of scholarship within their disciplines. Since the overarching theories in the different disciplinal traditions within which researchers work play a significant role in their choice of topics to research, they do not all speak with the same voice. Nevertheless, across the spectrum of the constitutive disciplinary institutions within educational research, there is considerable unanimity about the basis on which their research should be judged, such as the requirement that claims should be supported by appropriate evidence and that arguments about the relationship between claims and evidence should be evaluated through peer review for them to be accepted as contributions to knowledge in their respective fields.

In this respect, CHAT researchers start from a common set of principles, which include (a) the centrality of joint activity for the creation and recreation of knowledge and the development of individual identity; (b) the social origin of “higher mental functions” evidenced by the appropriation of knowledgeable skills through participation in such joint activities; and (c) the key role of artifacts and practices in mediating particular activities. Building on these principles, CHAT researchers have offered many recommendations for the improvement of the practices through which learning-and-teaching are enacted. For example, they have demonstrated the value of developing communities of learners in classrooms, the centrality of dialogue for the development of understanding, and the need for apprenticeship into productive forms of small group discussion so that ways of thinking together can be internalized to become resources for individual reasoning. Going beyond the classroom, they have also shown how minority students make better progress when community knowledge and skills are valued in the classroom and when curricular material is related to students’ lives and experiences. Researchers using CHAT have also provided the theoretical basis for after school intervention programmes that embed learning as an essential aspect of playing computer games and how this raises school performance as well as shown how activity theory can be an effective tool for site-based teacher development.
Institutions of government

Since national and local governments are elected, they need to be responsive to the concerns of at least the majority of the electorate. In practice, however, they tend to generate their own agendas and hope that, by justifying them in terms of what they take to be commonly held beliefs about the goals of education, the electorate will support them.

Whereas the beginnings of public education in Europe and North America go back to the 16th and 17th centuries, it was the advent of the nation state, industrialization, and large-scale immigration (to the United States) that led to the establishment of universal public education, both to ensure that the mass of workers was equipped with the skills required to contribute to the national economy and to socialize them into the required virtues of punctuality in performing their allotted tasks, knowing their status, and compliance with orders from above.

In the early part of the 20th century, the organization of education was strongly influenced by the development of the assembly line in manufacturing and by the introduction of standardized testing, which enabled students to be classed according to aptitude based on the concept of IQ, and credentialed according to measured achievement. These developments led, in turn, to the construction of standardized curricula, to be taught with the aid of strictly sequenced textbooks and by the same methods of instruction. However, whereas this approach may have been partially successful in preparing workers for repetitive jobs in heavy industry, it has become less appropriate as a greater proportion of employment opportunities demand much more than basic skills in literacy and numeracy. Nevertheless, the organizational structure of school districts, and the practices, content and assessment of learning and teaching in individual schools are essentially those that were developed a century ago.

One very important feature of the governmental institution of education is its strongly hierarchical structure. While individual states have control of their own organizational decision-making, they are obliged to follow federal policy to receive funding for a range of programmes that are under federal control. The state’s response to federal requirements is then imposed on local school districts and thereby on school administrators. And because the federal programmes have the support of law, they require compliance at all levels.

Driving the overall governmental policy is the desire for efficiency—on the model of large manufacturing industries. This translates into the search for the one best system, based on what are taken to be generally accepted beliefs, such as that there is one form of education that is suitable for all children, that students learn through passive reception of transmitted information, and that standardized tests are an appropriate way of evaluating student achievement. However, these beliefs are strongly rejected by other institutions, such as educational researchers and advocates for social justice, and also by many teachers. Indeed, with respect to the No Child Left Behind act, without the withholding of funding for non-compliance and the threat of “restructuring” (i.e. takeover) if test scores do not sufficiently improve, many districts and schools that do not
accept the above beliefs would not have been willing to accept the requirements of the Act.

Here is what one student teacher wrote after interviewing her school’s principal:

[The principal] spoke at length about the incredible (and seemingly always-present) pressure the school faculty feels over student performance on high-stakes standardized tests each year. To the principal, teachers, and staff, these standardized test scores represent, and can even dictate, whether or not there may be future school funding, job security, freedom of choice when making curriculum decisions, and motivation for teachers to teach and for students to learn.

In sum, despite the diversity of beliefs in society at large about how public education should be organized and about what students should learn and how they should be taught, the governmental institutions pursue a top-down, bureaucratic approach to decision making. Instead of encouraging participation in the planning, enactment and assessment of education by those most directly involved in its practice, they use their legal right to coerce compliance with their policies and, in so doing, attempt to impose their beliefs on all those involved, whether or not they are in the best interests of those to be educated.

Schooling: Knowledge and beliefs

In the preceding sections, I discussed the role of institutions, particularly governmental institutions, in relation to the organization of schooling. Equally important is the content of schooling, and particularly the relationship between the knowledge that students are required to learn and the personal beliefs they form as a result. The passage quoted above from Berger and Luckmann makes it clear that, in their view, “society” is a social construct—a product of human activity and therefore “real”. But in what sense is it real? How does this “reality” come to be part of each person’s reality? And is it the same reality for each? These are important questions when thinking about education because (a) answers to them have significant bearing on how the functioning of institutions can be understood and (b) such answers are critical for selecting appropriate pedagogic strategies for helping students to construct the beliefs that constitute their personal realities.

Despite different philosophical positions with respect to whether it is possible for human beings to come to know the nature of the universe, most people have little doubt about the reality of the material world, although they may have very different ways of explaining it and, as a consequence, different ways of interacting with it. For example, for some, forests should be preserved because they prevent soil erosion and absorb carbon dioxide; for others, they should be felled to provide raw material for a variety of industries or to allow the land to be cultivated. In each case, proponents would probably justify their actions in terms of what they considered to be relevant beliefs and perhaps by more encompassing theories. However, whereas forests can be directly perceived through the senses, “society” is not available to direct perception. Does that mean that the reality of society is of a different kind?

Children may come to understand what a forest is if they live in or near one, or if they have been driven through one on a journey. Such children might find the meaning of “forest” relatively unproblematic; for practical purposes “a large number of trees in a
bounded area” would be sufficient. Similarly, every child meets people from different walks of life in his or her neighborhood. To begin with, they are simply particular individuals—Aunt Jenny, the milkman, Ms Wang (my teacher), Mr Gonzales (who owns the convenience store). Gradually, however, they will also come to think of them as members of their local community. Later, typically in school, they hear or read about groups of people, such as miners, scientists, lawmakers, all of whom have an influence—albeit indirect—on their own lives. At this point the term “society” may be introduced. However, although “many people living in a particular area, such as the United States” might be an important part of the meaning of the term, it would not be sufficient; intrinsic to an adequate understanding of “society” are the various relationships that hold between the different constitutive groups and their individual members.

Both these terms name concepts but, at first glance, the latter seems more abstract than the former. In cultural-historical terms, the difference appears to correspond to that between “spontaneous” and “scientific” or “schooled” concepts (Vygotsky, 1986). Yet that would be too superficial a judgment. To a botanist or an earth scientist, as well as indexing a particular group of trees, the concept named by the term “forest” is understood as part of a system of concepts that are interrelated with respect to theories relevant to their research. But similarly, whereas “society” would be understood as naming a concept within a system of concepts by a sociologist or anthropologist, the term is frequently used much more loosely to refer to a group of people with one or more common attributes, with one typically being geographic. It is clear, therefore, that the concept that is referenced by a particular word on a particular occasion of use may be more or less “scientific”. Furthermore, speaker and listener may construe the word differently. It also follows that speaker and listener may differently intend and understand belief statements that include these words, particularly when these are not embedded in the context of a larger discourse in a recognizable register or genre.

**What and where are concepts?**

Whereas dictionaries and other sources provide very different definitions of “concept”, two common themes are that (a) concepts specify categories of entities or actions sharing common features and (b) they function as tools for thinking with. Further, whereas most concepts are expressed linguistically through the lexicogrammar, some are expressed through other means, such as mathematical symbols, musical notation, gestures. However, to function effectively as tools for thinking with, either alone or with others, concepts must be understood in the same way by all users. From a CHAT perspective, concepts are learned through appropriation from the behaviour, including linguistic behaviour, of others and, when internalized, become individual resources for thinking with (Vološinov, 1973). But if people vary in the meanings they attribute to words and other symbols, the concepts appropriated will also vary from one individual to another. The question is how is—or can—this problem be overcome?

As far as what Vygotsky (1986) called spontaneous concepts is concerned, there is usually little difficulty in achieving mutual understanding on a particular occasion of face-to-face interaction, as there is additional information available in the situation and opportunities for clarification, as necessary. But when writing is the medium, and
particularly where scientific concepts are concerned, support from the situation is very much reduced. It is for this reason that one may argue for the desirability of embedding the introduction of schooled concepts in relevant, practical joint activities, including collaborative knowledge building through dialogue. However, this still does not resolve the question of where exactly concepts are located. Much of the work on conceptual change assumes that concepts are individual possessions and that in many cases they are “misconceptions” in need of correction. However, this presupposes that there is a correct version to which appeal can be made, and that this version must be vested with appropriate authority. But where does this authority reside?

To elucidate this matter, it is useful to make a clear distinction between individuals’ knowing and what, within the relevant community, is taken to be known. In local communities this distinction is relatively unimportant because there is a continuing calibration concerning what is known through knowing together in the course of joint activities. By contrast, this is much less the case with scientific concepts and other schooled knowledge. With respect to these—as with the use of spontaneous concepts—knowing is always situated in place and time and occurs as part of a particular activity. However, knowledge, in the sense of what is known, is much more formally and impersonally determined. It is the institutionally sanctioned, accumulated outcome of the formal procedures whereby what particular individuals claim to know as a result of their research is critically evaluated and formally documented according to the historically developed practices of the professional organizations to which they belong. Such knowledge and the concepts appealed to are thus collaboratively produced and constitute for society the realm of “what is known”. Moreover, as publicly available, symbolic formulations that can be located in texts of various kinds, their authority is independent of the particular individuals who constructed them.

To clarify this distinction between knowing and what is known, concepts, along with other cultural creations, such as theories, works of art, and belief systems, may be thought of as constituting a world of “objects” that are at one and the same time “real” yet immaterial. Popper (1994) referred to this as World 3, distinguishing it from the other two worlds in his model—World 1, the physical universe, and World 2, the world of conscious experience, that is to say, of individual knowing. However, it needs to be emphasized that the origin and continued existence of World 3 objects depend on their embodiment in people’s concrete activity and in the artifacts produced by their labour in World 1, and equally on the thinking processes of World 2 in which these people engage. In these processes people make use of objects from World 3, which they find either in material artifacts (World 1) or in the form of memories encoded in their brains of occasions when they previously used such external representations for some particular purpose. Problem solving, then, is a World 2 process that draws upon the contents of World 3, mediated by World 1 artifacts. It requires an active process of construction—a transaction between the problem solvers, the relevant World 3 concepts, and all the other affordances available in the situation, notably material artifacts and other people who are or have engaged in tackling the problem in question.
Learning and teaching for understanding

Although Popper’s characterization of knowledge as constituting a supra-individual World 3 may seem very abstract, it can be seen as highly compatible with the CHAT perspective, which treats knowledge, together with language and the other semiotic media in which knowledge is represented, as socially created and a resource for society as a whole. Thus, since World 3 knowledge comes with the authority of the various institutions that evaluate contributions in their respective fields, it is important that schooling provide opportunities for students to encounter this knowledge in contexts that are relevant for their lives in the present and in their envisaged futures. However, simply memorizing this knowledge does not, in itself, change the beliefs that guide people’s behaviour. For this to occur, the relevance of the knowledge must be personally experienced. School knowledge must become knowledge for and in action.

This is where the knowledge that is being developed by the institution of educational researchers becomes important, to some of which I referred above. Research in the CHAT tradition has contributed significantly to an appreciation of the conditions that foster “learning for understanding”, which is a prerequisite for informed and responsible action. In summary, this research suggests that successful learning depends on students participating in culturally and personally relevant activities that enable them to come to understand and use the resources of World 3, and that teaching is first and foremost the organization of meaningful opportunities for learners to use these resources and the provision of assistance of various kinds that enable learners to gradually appropriate and master them for use in their own lives.

Key to the creation of these conditions is the development of a classroom community of dialogic inquiry. Just as learning language in infancy is most effectively achieved through ever-widening opportunities to use language in activities jointly conducted within the family and local community, so too are the learning and mastering of the concepts, theories, and sense-making practices of the wider society best achieved through participation in the dialogue of knowledge building in the community of the classroom. Ideally, the whole school should be organized as a family of such classrooms with collaborative relations with the wider community that it serves.

Unfortunately, however, that is not how most schools are currently organized. Rather than being supported in determining the best way to achieve the goals just described, they are bureaucratically controlled by the institution of public education, which has many goals to achieve that are not directly concerned with the development of the potential of individual students. Indeed, the manner in which public education attempts to achieve the goal of accountability is in conflict with the former, because the desired level of achievement cannot be attained without equitably taking into account the needs of individual students and providing learning opportunities that best meet those needs. The overall situation is thus much more complex than is represented in Figure 1. Society is not homogeneous with respect to beliefs about goals and means and there are many institutions vying for influence over what and how students are taught, as I show in Figure 2. As before, I have placed the activity system of the classroom community at the centre, with the object-directed actions in which students and teacher negotiate meaning as the focus. In contrast with Figure 1, however, what this way of representing the
situation brings out is the contentious nature of all the points at the angles of the different constitutive triangles—including the very contents of World 3—as a result of the pressure exerted by external institutions.

Figure 2. Institutional pressures on classroom practice

In the classroom, teachers—and students—are not just members of the community of their local activity system. They are also, whether they recognize it or not, participating in many different activity systems, which are—or may be—in conflict with respect to the rules, norms, and values that govern their local practices. Ideally, the different activity systems should be in bidirectional relationships, with each contributing to and gaining from the actions performed by the others. The double-headed arrows in Figure 2 express that this is at least partially the case for some of the activity systems. By contrast, the single-headed bold arrow from the school district indicates the strong unilateral, coercive pressure this activity system exerts, which is a function of its place in the hierarchy of legally sanctioned control.
So what can new teachers do?

How can new teachers resolve the tension between the pedagogic principles that they are appropriating in their teacher preparation programme and the constraints imposed by the governmental goals and the means prescribed for attaining them? Clearly, they have to find a way of resolving the demands of these two competing activity systems. However, there is no simple answer. In practice, much depends on the relative strength of the various competing institutional pressures, which vary according to the school’s success in meeting the test score targets that are imposed. Nevertheless, even under the most oppressive conditions, constantly bearing key CHAT principles in mind and acting upon them whenever possible, will be to students’ long-term advantage.

Most important to remember is that who the students become depends on the activities in which they engage together and how they make sense of them through dialogue with their peers and their teacher. This includes reflecting critically on the goals of these activities and the means, including the concepts and procedures that they are using to accomplish them. When students adopt this stance toward the information that they are required to learn and the activities in which they are required to engage—being encouraged to ask “why?” and “what if?”—it certainly helps them to understand better. It also encourages the development of a lifelong disposition to think critically about the beliefs and values that competing institutions would like them to take for granted before they make important decisions for themselves and the communities to which they belong.

A second important principle to bear in mind is that working in collaboration with others is more likely to achieve results than struggling alone. For teachers, colleagues can be a source of strength, particularly if they share the same beliefs and values. Meeting regularly to discuss their investigations of strategies that are effective in achieving the goals they believe in can be particularly empowering. Making connections with students’ families and their local communities and involving them in their children’s education can also be advantageous for all concerned. It is therefore important to create a classroom community whose members understand and enact the principles just described, for it is in communities in which people act and interact about matters of concern to them that learning and identity development are most effectively achieved. As Vygotsky and Paulo Freire understood, by participating in activities with others to change their own conditions of existence, communities and their members can and do change themselves. It is only by fostering such communities that we can create a more democratic and equitable society.

Acknowledgements

I should like to thank Rodney Ogawa, Anne Edwards and Natalie Bernasconi for their helpful comments on earlier drafts of this paper. I should also like to acknowledge the contributions of my team of co-investigators to my thinking about the predicament facing pre-service teachers.
References


Figure 1. The centrality of interpersonal action in cultural activity
Figure 2. Institutional pressures on classroom practice