

## Conceptualising teacher education and research as 'critical praxis'

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Praxis is involved in the concrete situations which are codified for critical analysis. To analyse the codification in its 'deep structure' is, for this very reason, to reconstruct the former praxis and to become capable of a new and different praxis (Freire, 1972, p. 36).

### Introduction

Over the last fifteen years extensive innovation, development and refinements around school and university Project Partnerships, aimed at supporting the professional development of pre-service teachers, have brought the School of Education at Victoria University to a position which permits and calls upon teacher educators to examine the conditions which have proven to facilitate productive learning environments. This position has been arrived at because of a number of key principles that have underpinned this work. These include partnership-based teacher education, learning from immersion in professional practice and the notion of 'praxis inquiry.' A Praxis Inquiry Protocol has been developed that guides the constant and inter-related description, explaining, theorising and changing of professional educational practice for improved learning of all teachers, pre-service teachers and university staff involved. A unit of study has been incorporated into each university year level as the formal connection between school and university experience. This position we suggest distinguishes the Praxis Inquiry model of Victoria University from other models of teacher education that may emphasise an apprenticeship-type approach towards teaching, rules and skills, approaches that underscore the transmission of subject content, or the more prevalent approach of reflective practice. We now discuss each of these key ideas and practices from the perspective of our experience at Victoria University and extend the frame of 'praxis inquiry' to that of 'critical praxis.'

Project Partnerships is based on a framework of ethical professional practice that recognise learning as occurring through social practice, where learning is most significant and productive when arising from community interest and activity. The notion of 'project partnership' refers to school students, teachers, pre-service teachers, university personnel and communities working together collaboratively to pursue knowledge and learning across all fields of human activity. It is not a traditional 'teaching round' model. Project Partnerships imply pre-service teachers participating in the wide range of educational and community activities school. In this model, pre-service teachers accept responsibility for their learning and the learning of school students while working with mentor teachers on specific curriculum assignments. In this instance, Project Partnerships are characterised by trust, mutuality and reciprocity among pre-service teachers, teachers, school colleagues and teacher educators which are long-term and involve consistent themes of inquiry over time (Kruger et al 2009).

Project Partnerships has attempted to move beyond the teacher education as *education* or *training* dualism by constructing a community of inquiry, which brings teachers, student teachers and teacher educators together. Here, pre-service teachers negotiate with the partnership school Applied Curriculum Projects (ACP) as part of their Project Partnership activity. ACPs aim to meet objectives that explicitly respond to school identified student learning needs. ACPs provide a scaffold for pre-service teachers to actively engage with the school community more broadly and aim to make strong connections between the theories explored in coursework and teaching with learning practices in schools (Eckersley et al, 2011). Ideally, the ACPs are of value to the schools as well as the pre-service teachers and the challenge the notion of the role and responsibilities of pre-services in schools.

The implementation and undertaking of Applied Curriculum Projects (ACP) by pre-service teachers have been significant elements of the school experience for both individuals and institutions (Arnold, Edwards, Hooley & Williams, 2011). While the conceptualisation and realisation of the ACP has provided valued opportunities for individual pre-service teachers to contribute to the work of the school it has also shown itself to be a successful means of establishing and developing an ongoing relationship between schools and the School of Education. Habermas (1987) puts forward the view that the theorising of practical questions can create the conditions to promote communicative action, which in turn may draw forth an individual's respective interpretation and reflexivity.

Initially, in the case of Victorian University site-based pre-service teachers, the ACP is a connection between the expectations of the university and the imperatives and desires, which make up the work of a school. Closer scrutiny highlights that the ACP becomes a mechanism potentially promoting considerations and conversations, which in turn facilitate participant recognition of the common ground and reciprocity of such collaborations (Kruger et al, 2009). As each of these relationships have developed, so too have the opportunities been embraced by pre-service teachers to become immersed in not only the core focus of the school, that is classroom teaching and learning, but also to be granted license to critique the pedagogical context of the learning community. Such critique has most often been welcomed and supported by the schools, as the relationship moves beyond the regulated requirements of pre-service practicum placement in a host school (Arnold et al, 2011).

Collaborations around the potential of particular ACPs have often drawn the respective partners 'closer' through a shared recognition of what the school is seeking to achieve for their students. A common consideration has been recognised in relation to the development of school-based research, aimed at gaining a refined insight into both the existing experiences of students as well as evaluating initiatives related to responding to student learning needs. Bourdieu (2003, p. 52) contends that 'one has to situate oneself within 'real activity as such', that is, in the practical relation to the world, the preoccupied, active presence in the world through which the world

imposes its presence, with its urgencies, its things to be done and said, things made to be said, which directly governs words and deeds without ever unfolding as a spectacle.' This view on experience provides an appropriate perspective to consider the value of 'real' involvement of pre-service teachers in schools.

The experiences, to date, around the site-based pre-service teacher education are pertinent for the purposes of this paper, in that they are artefacts of the discourse that has led to the reflexivity of individuals. While there has been an explicit observance of pre-service teachers' developing insights into learning and teaching, the very conditions that are responsible for such development have drawn in other educators into the discourse of critical pedagogy. The Participatory Action Research (Kemmis and Mc Taggart, 2005), subscribed to as a 'natural' consequence of the determinations and undertakings, by both university and school personnel, to the development of what is now viewed as an essential aspect of collaborative partnership work. This work has added a dimension to the experiences of pre-service teachers (Kruger et al, 2009).

The initial premise of finding 'common ground' has consequentially promoted the conditions for spheres of communicative action. Kemmis and Mc Taggart (2005) viewed projects aimed at collective capacity building as raising the potential for exploring new ways of operating with a collective commitment. Pre-service teachers have, as a result of their inclusion in the thoughts and actions, as part of the overall learning community, have contributed to and reflected upon the public discourse of the partnership school. The development of a relationship formed around the considerations of collective commitment, referred to by Kemmis and Mc Taggart, the school and university continue to build and refine conditions of professional development and teacher education, more specifically one that seeks to embrace the challenges of and opportunities for critical pedagogy. According to Kincheloe (2008, p. 2), 'critical pedagogy is a complex notion that asks much of the practitioners who embrace it. Teaching a critical pedagogy involves more than learning a few pedagogical techniques and the knowledge required by the curriculum, the standards, or the textbook. Critical teachers must understand not only a wide body of subject matter but also the political structure of the school.'

In our attempts to design a research methodology that explores and explains our field of practice, we have undertaken a journey around the theorising of our own practice. This reflective practice has resulted in what has been viewed as a movement towards new critical understandings of the pre-service teachers and ourselves. Building upon the praxis inquiry protocols model (see below) we have sought to determine and explain not only the nature and intent of pre-service teacher education but have sought to conceptualise the opportunities for practice to act as a catalyst for pre-service teacher reflexivity. Having sought to find explanation and interpretation of pre-service teacher experience through the development of Philosophical Project Knowledge (Arnold et al, 2010), we have not only applied this model as viewing the learning of pre-service teachers but

have applied the construct of this model to inform our work towards a refined means of viewing and explaining the practice of learning.

The very essence of pre-service teacher education comes from the timely nature of pertinent questions being raised by pre-service teachers themselves, albeit thinking out loud in many instances, which may then be used as a lever towards re-imagined practice. The sharing of such insights between pre-service teachers and university educators in and around the actual learning environment of a school has not only facilitated the capturing of learning moments but in the relating of such has led to a renewed recognition of the 'taken for granted' view of education. Such timely opportunities to promote reflection and imagination have resulted in responses that have in turn created not just introspection on the part of the university educators but have also become the impetus for refining a means by which to highlight the diverse, yet interrelated, elements of professional practice in education. In seeking to construct a model to best explore and explain the experiences and reflexivity of pre-service teachers, in practice, we have found ourselves subscribing to the model in seeking to scaffold our own construction of meaning of and for pre-service teacher education.

### **Constructing a 'critical' dimension**

Throughout the history of modern science, there has always been a tension between the movement towards rational and generalised norms on the one hand and situating such thinking within the economic and political imperatives of the time on the other. Seen as an essential feature of the European Enlightenment, science has this dual character, providing ways of investigating and understanding the world without the tyranny of enforced dogma and regulation, but also seeking to neutralise and formalise understanding that does not reference socio-cultural backgrounds. In the 1920s, the Institute of Social Research at the University of Frankfurt which became known as the Frankfurt School (Carr and Kemmis, 1986) was established to pursue these ideas, particularly in the context of pre-war Germany and the rise of Nazism. The Frankfurt School was concerned with 'critical theory' or the development of social and ideological critique that is capable of supporting social change without being dominated by its own presuppositions and doctrine.

Critical theorists are therefore interested in both sociology and epistemology and how citizens can create new thinking within the often restrictive social conditions that exist. Associated with the Frankfurt School, Habermas (1987) has written about 'knowledge constitutive interests' and categories of knowledge that are technical, practical, or emancipatory. While technical knowledge is instrumental and empirical and practical knowledge is more communicative with social intent, emancipatory knowledge is actively self-reflective, directed at liberating citizens from oppressive

and domineering forces. Theorists and practitioners who adopt a critical stance towards knowledge therefore situate knowledge and learning within the political and economic framework of a particular society and attempt to identify through ideology critique how such characteristics impact, distort and influence knowledge that is produced.

The notion of 'being critical' involves both knowledge and action where each depends on the other. As such, critical knowing must include recognition of the history, culture and language of participants as they attempt to understand reality from their own perspectives and frames of cultural capital. This is a continuing philosophical project of long standing. Aristotle for example is associated with the notion of 'praxis.' Predating Habermas, he also saw three forms of knowledge that he termed theoretical leading to truth, productive and technical. In this sense of knowledge, praxis involves a combined practice and theory for change that can support the intentions of various groups in society. Building on Aristotle and in terms of education, Paulo Freire (1972) saw praxis as the bringing together of social practice and theorising of the world in order to transform the world into something better. Given his experience of oppression in Brazil, Freire had a broad view of knowledge where the continuing process of praxis assisted groups and communities in developing a critical consciousness so that the forces of oppression could be deposed, social conditions altered and knowledge expanded. Language, literacy and communication were important aspects of such transformation according to Freire.

This unified concept of praxis as action, reflection, theorising and change in cycles of constant social practice therefore conceptualises knowledge as arising from community necessity in relation to the purposes, viewpoints and constraints of others. Dewey (1916) also wrote of the dangers of decontextualising knowledge, in seeing ideas not in formation and disconnected from the surrounding cognitive and social milieu, but rather grounding understanding in the experience of students through processes of democratic inquiry. According to Dewey, learning becomes the construction and reconstruction of personal experience to guide further action. In attempting to destroy the reductive 'grand narratives' of modern science, which must include the historic epistemological narratives of Freire, Dewey, Habermas and the like, postmodernism (Lyotard, 1984; Jamieson, 1991) and poststructuralism (Derrida, 1976) attack the basis of knowledge itself and what is possible to learn. Critical knowing and a critical consciousness stand in marked contrast, subjecting processes, human ideas and their contexts to rigorous critique, seeing knowledge always becoming as history unfolds.

We now propose a particular approach to epistemological action as 'critical praxis,' where we bring together the ideas of ideology critique, self-reflective consciousness and emancipatory action. In defining ideology as a strongly held and self-defining set of ideas that underpin economic and

political action, ideology critique can apply to entrenched viewpoints of knowledge and learning as well as to taken for granted values and structures of the broader society. Self-reflective consciousness refers to a recognised process of modifying or removing obsolete ideas to better suit nascent circumstances. Fearlessly bringing current practice and understanding into closer alignment with changing conditions for the public good regardless of powerful forces of conservation can be identified as emancipatory intent and enactment. A detailed discussion of the 'public good' is beyond the scope of this paper, but it involves at its core informed action to create the conditions that are needed for a dignified and socially just existence for all citizens. Freire's concept of transforming society and thereby transforming ourselves provides a clear frame for viewing these three practices as an integrated whole.

Critical praxis for educators seeks to move beyond the constraints of formal teaching, knowledge and curriculum and instead encourage communities, teachers and students to work together in producing new understandings and practices for majority interest, located within but critical of the socio-economic determinants of the time. Initially, this involves rejection of various deficit pathologies directed at low income, ethnic and other groups of students in relation to genetic code, cultural and economic deprivation, inadequate socialisation and refocuses on the incorporation of community wisdom, interests and practices in school classrooms and programs. Intensive critique of current privileged school knowledge (or 'disciplines') such as mathematics, science, literature, language and history is also necessary to the extent that new arrangements of knowledge may be required that include new forms of investigation. As a collaborative participant in knowledge production, the teacher enables and challenges thinking by introducing external comment and evidence from national and international projects so that ideas are not confined by the boundaries of location. This connects with Freire's emphasis on language, communication and literacy as crucial aspects of critical consciousness.

Critical praxis will include a number of complex features interacting as school projects are negotiated and progressed. For example, they will encourage the full extent of imagination, deep conversation and listening, exploring patterns and structures of language, thought and process, seeking connections between different ideas and objects, moving in cycles of theorising and action and situating knowledge and concepts within the socio-cultural map of investigation. Such a creative, imaginative approach to knowledge draws upon what Kincheloe, Steinberg and Hinchey (1999, p.67) discuss as an 'implicate order,' where holistic and simultaneous structures vanish as part of a larger universe. They note that 'Einstein often referred to his physics as based on a process of questioning unconscious assumptions' about the nature of physical reality. Critical praxis searches for a set of conditions across the school curriculum including mathematics, science and history where educational practices encourage such 'flashes of insight' on a regular basis for

teachers and students alike. This cannot be achieved when the creative leaps of others achieved in another place and time are decontextualised and sanitised for passive transmission and adoption.

Constructing a critical dimension of learning within formal institutions will require respect for the practice of dialogue. As knowing subjects, participants in knowing need to be able to interact with others so that their own understanding is capable of reconstruction as experience and situations alter. Active learning in this way does not see knowledge as memorisation of transmitted information but entering into a dialectical and dialogical relationship with the social and physical worlds such that new imaginings materialise. All knowledge becomes problematic for sage and neophyte as both engage the continuing practice of learning. There is a major contradiction between this dialogical practice not pervading conservative hallowed halls of education and the need for conservative societies to make educational progress within their own terms of reference. Systems of education that serve the trajectories of privilege need creative and innovative outcomes, but only for the minority. A compromise is therefore reached between the ideological basis and status quo of mass education and the provision of more inventive pathways for the minority to tread. To counter this social inequity, Freire (1972, p. 40) spoke of a 'utopian pedagogy' in the sense of 'full of hope' that 'finds its expression in a dialogical praxis in which the teachers and learners together, in the act of analysing a dehumanising reality, denounce it while announcing its transformation' for the liberation of humanity. Critical praxis as the basis of teacher education and educational research needs to be hopeful, dialogical and emancipatory in this way.

### **Implementing a Critical Praxis Protocol**

Attempting to move beyond the conservative reproductive ideology of schooling for all children is essentially and ultimately an epistemological process of practice. Bourdieu indicated this when he defined educational 'authority' in terms of 'symbolic violence' with 'the power to impose (or even inculcate) the arbitrary instruments of knowledge and expression (taxonomies) of society' (cited in Grenfell, 2004, p. 79). From this, it is not enough to merely analyse society and schooling, but to be able to act upon and change the 'arbitrary instruments of knowledge and expression' (pedagogies and practices) in every classroom, so that families and children can actively engage knowledge from the perspective of their own culture and experience. Accordingly, Table 1 shows the current Praxis Inquiry Protocol described above as being expanded to include student-teacher imagination and re-imagination as part of the professional practice of schooling:

Table 1. Praxis Inquiry Protocol

Professional Practice	Imagined	
Changed		Described
Theorised		Explained
	Re-imagined	

In considering this model, we have proposed an approach to pre-service teacher education that is realistic and scaffolds the construction of meaning for teachers, pre-service teachers, school students and university educators alike. In addition, we have outlined Philosophical Project Knowledge (PPK) as a concept of knowledge that broadens the practice of learning so that it becomes an object of its own investigation. Imagination signifies the understanding of social practice that pre-service teachers and others have of traditional education as their ‘taken for granted’ knowledge, whereas they enter and construct re-imagined worlds of possibility as their experience and reflection continues. Table 2 however outlines additional features if such meaning-construction is to become critical

Table 2. Critical Praxis Protocol

Professional Practice	Imagined	
Changed Mapping		Discourse Described
Theorised Patterned	Critique	Contextualised Explained
	Re-imagined	

Each of the features of Critical Praxis are constituted by a subjective-objective dialectic that takes place within the context of professional practice. The four additional features compared to the Praxis Inquiry Protocol (discourse, contextualised, patterned, mapping) are designed to link local understandings with the surrounding structures and imperatives of the social and political environment. Exactly how such linkages are made depends on the commitment of the agents concerned and their methods of work and whether or not the material conditions of existence accord with local consciousness. That is, discourse involves engagement with the literature so that challenges arising from elsewhere can be considered and met, problems and issues are identified and positioned within the local and general context, tentative patterns and themes are constructed to provide guidance for analysis and understandings are mapped onto current intellectual

frameworks from which new structures are actively imagined and lived. This is an ongoing process of Dewey's education as construction and reconstruction of experience where ideas and actions are constantly in tension and formation and being evaluated in relation to community consensus and credibility. Such an approach is not the basis of formal education systems where the emphasis is on what students can show they know of the predetermined, rather than what they can create and imagine of the arbitrary under non-trivial or realistic conditions. It is the antithesis of graduating teachers to maintain the status quo and to reproduce the privileged knowledge of the dominant. As Giroux (2011) points out, the intrusion of market values into all aspects of social sensitivity is accompanied by a 'diminishing of non-commodified public spheres - those institutions engaged in dialogue, education and learning – that address the relationship of the self to public life, social responsibility to the broader demands of citizenship and provide a robust vehicle for public participation and democratic citizenship.' Working as active agents within 'democratic public spheres' (Hooley, 2008), teacher educators need to de-commodify knowledge and learning as much as possible in support of civic voice and society.

In summary and from our discussion above, we understand that critical praxis involves bringing together the ideas of ideology critique, self-reflective consciousness and emancipatory action for the public good. It raises the historic questions of what is good, what can I learn and how can I live well? Bourdieu (2003, p. 167) suggests that part of the reason for moving to questions of this type and for the ossification of social views implies that 'The self-evidence of the world is reduplicated by the instituted discourses about the world in which the whole group's adherence to that self-evidence is affirmed.' He raises notion of 'doxa' or popular opinion and points out that more radical perspectives are always limited by objective conditions including the imperatives of the dominant class. There is a continuing struggle between the heterodox and the orthodox as conditions alter, circumstances that are clearly evident in the mathematics, science, language and all other school classrooms. These conditions are indicated in Table 2 involving discourses that encompass the social and educational fields of activity, the cultural and political contextualisation of events for students and teachers to relate, the identification of the patterns and themes of experience for theorising and the mapping of influences and outcomes as practices are changed. This is not an idealised conception of classrooms, drawing on the comment of Bourdieu (2003, p. 169) that 'Crisis is a necessary condition for the questioning of doxa but is not in itself a sufficient condition for the production of a critical discourse.'

In associated research we have described the epistemological process of advancing beyond the 'taken for granted' as 'recursive theorising' (Eckersley et al, 2011, p. 77). We propose that pre-service teacher education be 'conceived as a matrix of interacting and referential personal and social practices' that 'enhances dispositions of practice, knowledge and equity' for all concerned

(p.90). For recursive theorising to occur as the basis of a 'critical praxis' of knowledge production and critique, the features of Table 2 need to be present in classrooms and be constantly enacted. In some cases such as the traditional school mathematics classroom, or the traditional language classroom, a Bourdieuan 'crisis' will most likely be precipitated as the doxa of school mathematics and consequently of teacher authority is challenged. Critical Praxis is designed to bring together the three fields of society, education and knowledge and lays the basis for new understandings and perhaps, new forms of knowledge itself. In this way, the sociological and epistemological constructs of human liberation become active in every class and in every subject, for all children.

### **Possibilities of 'critical praxis' for research and teacher education**

Conceptualising critical praxis as epistemological action that involves human dispositions, society and public virtue has drawn us to the theorising of the French sociologist, Pierre Bourdieu, for advice. Within this context, Bourdieu's concepts of habitus, field, cultural capital and symbolic violence provide general analytical tools for investigating and understanding teacher education and schooling from both an epistemological and sociological perspective. For our purposes, teacher education is 'conceived as a matrix of interacting and referential personal and social practices' (Eckersley et al, 2011, p. 100) that immerse collaborative participants in ongoing recursive constructions of experience, knowledge and meaning. Teacher education as 'critical praxis' locates teaching and learning within the context of ideology critique, self-reflective consciousness and emancipatory action. Teacher education as 'epistemologically reflexive' enables participants to investigate explanations of social and physical phenomena while recognising their own intellectual partialities. In this sense, we draw on Bourdieu's notion of reflexivity which, according to Deer (2008, p. 206), is a 'philosophy of action applied to social scientists.' Deer goes on to comment that for reflexivity to be as wide-ranging and inclusive as possible, the social scientist should investigate 'the invisible determinations inherent in the intellectual posture itself ..... when observations and discourses about the social world are made by intellectuals who have retired from it' (p. 207). From these considerations, we propose that teacher education as a collaborative social practice involves both sociological and epistemological investigations of community interest that generates rather than enforces knowledge.

Bourdieu's reflexivity is concerned that the social and epistemological position of the knowing subject in relation to the object of study should be acknowledged and critiqued. This requires a detailed analysis by the social scientist regarding the power and discourses that exist within each field of activity and the relation of the social scientist to them. There is also a reflexive relation that exists between habitus and field such that there is constant change and transaction without determination by either. Bourdieu's reflexivity is a major sociological theory to overcome the

problem of determinism so that humans have much greater autonomy over their actions and thinking.

Adopting a stance towards research of 'critical praxis' has two main features. First, that research is recognised as taking place within socio-political conditions such that participants are encouraged to act upon and change those conditions. Second, that researchers adopt a stance of 'critical praxis' towards themselves whereby their understandings, biases and existing practices are challenged and changed. They accept that the research process opens up new understandings of critique, knowledge and society thereby relationally changing their position in the particular field of activity and changing the field itself. In discussing the nature of habitus and power, Bourdieu (2003, p. 164) noted that 'Every established order seeks to produce (to very different degrees and with very different means) the naturalisation of its own arbitrariness' which then applies to the field of formal knowledge production. He proposed that the most important mechanism for so doing is 'the correspondence between the objective classes and the internalised classes, social structures and mental structures' (p. 164) that set the limits and indeed 'misrecognition' of reality. If so, research methodology needs to provide rigorous critique of itself and involve researchers in critical challenge of their own practices, conceptions and arbitrariness.

From Bourdieu we conclude that a critical approach to research will involve a meticulous self-analysis of habitus, field and the relationship between them. For each research project undertaken it will be necessary to consider the social field, the education field and the field of knowledge and in particular the position and positioning of researchers within each. This will difficult to achieve honestly and accurately and will require the assistance of colleagues. It will be difficult to achieve for individual projects undertaken on a short-term basis as personal learnings and changes to habitus occur under the influence of life-long processes, folding and refolding in and on each other. As an example, an initial and broad habitus-field analysis is shown in Table 3:

Table 3. Habitus-Field Analysis Grid

Habitus	Social Field	Education Field	Knowledge Field
Working class family Irish connections Dominance of mother Country town Coastal environment Centre politics Some unionism Little religion Importance of reading Little ongoing schooling No university aspirations	Permanent employment Modest income Working class aspirations Left politics Union background Vietnam War No religion Major large city Dominance of education Marriage, 2 children, divorce	Equity, democracy Schools, universities Teaching, research Mathematics, science, language Writing Unions	Equity, democracy Integrated, inquiry Learning by doing and reflection Constructed knowledge Privileged knowledge

Habitus-position	Social Field-position	Education Field-position	Knowledge Field-position
Remains essentially as above, life-long.	Aspiration is to retain position and values as above- modest, working class, progressive.	Remain as above – equity approach to education for all.	Remain as above – inquiry learning across all knowledge.
Habitus-positioning	Social Field-positioning	Education Field-positioning	Knowledge Field-positioning
Remains as above.	Inconsequential in field.	Inconsequential in field.	Strong, consistent epistemological positioning, in support of equity, democracy.

After a first draft of Table 3, it becomes necessary to explode each field of action in relation to Bourdieu’s concepts of power, institution and individual (Bourdieu, 1993). This is to enable a more detailed analysis:

- regarding the relationship between dominant groups in society (wealth, influence) and their impact on fields
- regarding the interrelationships between dominant institutions and individuals
- regarding the relationship between individuals of the field themselves.

This analysis should result in a description of social life that involves both objective (field structures, power connections) and subjective (characteristics, dispositions) conditions, as the basis of developing critical understanding. The Education Field has been begun to be exploded in Table 4 below.

Table 4. Relations within Education Field

Education Field	Power	institution	Individual
Equity	Wealthy class Unions People’s movements	Top 100 companies Business groups Governments Think tanks Armed forces Legal system Media	Global networks Social capital networks
Democracy	Wealthy class Unions People’s movements	Top 100 companies Business groups Governments Think tanks Armed forces Legal system Media	Global networks Social capital networks
Schools	Wealthy class	Top 100 companies Business groups	Global networks Social capital networks

Universities	Wealthy class	Governments Think tanks Top 100 companies Business groups	Global networks Social capital networks
Teaching	Practitioners Theorists Wealthy class Governments Writers	Governments Think tanks Top 100 companies Business groups Governments Think tanks Regulators	Practitioners Writers Theorists Advisors, consultants
Research	Funding bodies Researchers Theorists Governments	Top 100 companies Business groups Governments Think tanks Regulators	Practitioners Writers Theorists Advisors, consultants
Knowledge	Practitioners Writers Researchers	Researchers Professional groups Governments Funding bodies	Practitioners Writers Theorists Respected practitioners
Writing Unions	Authors Members	Funding bodies National groups	Practitioners Members Writers Theorists Respected practitioners Authors Officers Social capital connections

There is a striking and immediate conclusion here: at a specific point in the chart, authority and autonomy suddenly shifts from large, external forces and connections, to smaller, individual possibilities. If Table 4 shows the presence of authority and autonomy throughout the Education Field, then there are two immediate implications. First, in an objective sense of power and structures, it means that research participants have authority/autonomy to act in tactical and strategic ways, albeit small. Second, in a subjective sense of dispositions and characteristics, research participant activity in the field with authority/autonomy impacts on habitus to strengthen understanding and capacities, albeit small. In this way, the 'space of possibles' is identified and provides the basis of ongoing action, change and knowledge production. Bourdieu (1993, p. 176) discussed the 'space of possibles' for those included in the field of cultural production (involving education) as an orientation 'to their research, even without their knowing it, by defining the universe of problems, references, intellectual benchmarks ..... , in short, all that one must have in the back of one's mind in order to be in the game.' With this analysis over time, researchers and knowledge become elements of 'critical praxis' as part of social and educational existence.

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