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The Cross-thematic approach and its implications for secondary education with particular reference to Greece and Cyprus.

Abstract

This article examines the impact of the Cross thematic approach on Greek and Greek Cypriot secondary education. The major argument put forward is that the Cross thematic approach (CTA) affects not only pedagogy and educational knowledge but teacher professionalism as well. In justifying this argument , the Cross thematic approach is considered as a Bernsteian 'pedagogic device'. The insights of Basil Bernstein are used to develop research questions about the changing nature of teaching and curricula in Cyprus and Greece currently, with its implications for teacher professionalism- all set within global, European and national contexts. Particular reference is made on the Flexible Zone programme as the author of the present article reckons this to be an extreme form of (CTA). AS a final attempt this paper seeks to demonstrate that CTA can be empowering for education as it can open up the horizons for an 'intelligent accountability' while this may challenge existing professional identities.

Introduction

This paper discusses and analyses the widespread impact of the Cross thematic approach (CTC) on education. A major concern will be how empowering this approach can be for both

Greek and Cypriot secondary education as both countries have recently sought to align their educational policies to those of the E.U as well as to respond to the wider global educational principles such as 'general education', 'critical thinking', 'learning skills', 'lifelong learning', 'sustainable development', 'experiential learning' etc. All these principles fall within a discourse which accompanies the Greek *Cross Thematic Curriculum Framework for Compulsory Education,* known as the cross thematic curriculum (CTC) text which was developed in 2002 by the Greek Pedagogical Institute (GPI, 2002) and has been put into practice since 2003 introducing the CTA approach. The latter has been carried out in two forms. The one involves the application of the Flexible Zone (FZ) programme, a time zone of 2-4 teaching periods within which students and teachers of different subject matters are free to materialize projects and activities with themes of their interest using participatory and cooperative methodologies (Karatzia-Stavlioti and Alahiotis, 2007). The other form of CTA concerns its exploitation in the newly revised textbooks which are being used in secondary education since September 2007. This paper is mainly concerned with the FZ as this constitutes an extreme form of CTA for the reasons given in a later section.

Cyprus has adopted the Greek CTC text and some public schools have been applying experimentally the FZ program, while all public Cypriot schools have been using the new textbooks introducing the CTA since 2007. It should be pointed out that Greece has only experienced just a few piloted studies concerning the effectiveness of the approach in the context only of FZ whereas this is an untrodden area of research for Cyprus. A series of documental guidelines edited by the Cypriot Ministry of Education comprise the only evidence which can be used to illuminate some issues concerning the implementation of the CTA within Cyprus secondary education.

Many educationalists have sought to provide various types of CTA by placing different forms of it on a continuum as well as by constructing frameworks for thinking about interdisciplinary study, a term usually used interchangeably with CTA (Applebee et al, 2007; Lake, 2001; Jacobs, 1989; Matsaggouras, 2004). Getting to examine the different designs and frameworks of CTA goes beyond the scope of this paper as categorizations and designs lack a clear consensus among commentators. Moreover, definitions of CTA vary within the advocated literature of the field. Thus, 'integrated curriculum', 'thematic teaching', 'synergistic teaching', 'multi-disciplinary teaching', 'cross-curricular curriculum' and the like, comprise related terms for CTA. For the purposes of this paper the term CTA will be adopted for it is used by the Greek CTC policy text. A full definition and description of the term CTA will be given as this paper evolves. Thus, in a subsequent section entitled as "CTA as a 'pedagogic device' and the formation of identities ", CTA will be regarded as a 'pedagogic device' and will be identified with the Bernsteinian meaning of 'integration' which refers to the "subordination of previously insulated subjects or courses to some relational idea, which blurs the boundaries between the subjects" (1975, p.93).

Succinctly , this paper will provide strong argumentation for the empowering effect of CTA by drawing mainly on Bernstein's theory of pedagogic discourse, seeking to examine whether his theory fits into the way the FZ program is promoted in the Greek CTC policy text .

Before moving on to develop the aforementioned arguments, it would be important to delineate some of the forces and pressures which contributed to bring CTA in the limelight. These forces have their origin at a global, European and national level and comprise the rationales for the CTA innovation policy for both Greece and Cyprus.

The global necessity for CTA

In our times globalization can be conceived of as processes occurring in many spheres. Thus we can have different forms of globalization such as economic, technological, environmental, cultural, political, linguistic, demographic and American, all of them affecting education by steering the policies of nation states which in turn affect their educational institutions (Bottery, 2006). Therefore, contemporary educational policies can be interpreted as a response to the new needs that globalization is imposing on economy and society. Education is perceived as an institution which should serve the contemporary needs of the economy, allow the formation of the new citizens and enable individual access to the labour market (Zambeta, 2002). Educational reforms then seem to be affected by the organization of work. Carnoy (1999) makes an interesting point when he argues about the way globalization is affecting education. He points out that: " the most rapid growth in demand is for products with a high level of skill content. Work is becoming organised around the notion of flexibility. Increasingly workers change the kind of jobs they do over their work lives, and their jobs tend, more and more, to be multitasked. This translates into pressure to increase the average level of education in the labour force and to provide more opportunities for adults to return to school to obtain new skills" (p. 15). The notion of multitasked jobs is a consequence of economic globalization and thus the aim of education is to create flexible citizens able to respond to the demands of the economy and information technology. The formation of innovation policies such as the CTA, or to use an alternative term interdisciplinary/integrated curriculum is a response to these demands.

Sternberg (2008) stresses the importance of 'multidisciplinary thinking' in dealing with problems confronting society in recent times such as epidemics, terrorism, global warming etc. He argues that students of both secondary and tertiary education, in order to be prepared for today's complex world should be engaged in problem-based approaches not from a uni-disciplinary perspective but from the standpoints of different disciplines. He then proposes an interdisciplinary minor to be offered at Tufts University which aims at creating positive effective ethical leaders for the world of the future. The minor is organised around three tiers. The first tier involves courses dealing with the theoretical aspect of leadership, the second tackles leadership from the perspective of liberal arts such as literature, history of art, psychology, sociology etc, whilst the third tier has a more practical aspect by means of applying what has been learned in the first two academic tiers in the third. The point that should be stressed here is that interdisciplinarity or CTA seems to be a concept transferred from the private sector to the public sector. Sternberg (2008) refers to a list of many colleges which have already started to offer such multidisciplinary programs. Similarly Matsaggouras (2002) expressed the notion that the basic attribute which distinguishes CTA from traditional subject-based teaching is the elimination of the boundaries between different subjects and disciplines, as an outcome of the influence from tertiary education. Therefore, in tertiary education interdisciplinarity or cross-curricularity can be carried out through the contribution of different tiers or modules tackling one topic from different perspectives, likewise in secondary education one possible way to endorse cross-curricularity is to integrate an issue or a topic into all subjects and into many aspects of school life (CIDREE, 1998). For instance, if the topic to be tackled is 'terrorism', then different subjects should be structured and cooperate as to provide a holistic approach to 'terrorism'. Thus, from the standpoint of history, teachers and students could deal with the

historical accounts of terrorism, the subject matter of literature could offer literacy depictions of terrorism, the subject of economics could estimate and evaluate the economic consequences of terrorism, chemistry, biology or physics could turn their focus on the environmental effects of terrorism and psychology could pay attention to the emotional or psychological consequences of terrorism as well as triggers leading to terrorism. Then after exploring the issue of terrorism through its analytical and creative aspect in the context of the interrelations of different subject areas, a more practical aspect could be carried out in the program of FZ where students can actively apply what they have already learned into practice with teachers acting as facilitators. This new emerging nature of teaching and learning will be explained and discussed later in this paper by using Bernstein's theoretical model of classification and framing to explain the new emerging power relationships between teachers and students and how this can affect teacher identities, student assessment and teacher accountability.

CTA as a European requirement

The European Union has not confronted economic globalization without any challenges. The challenges of a new knowledge-driven economy are affecting every aspect of people's lives and require a radical transformation of the European economy. The European Council in Lisbon (23-24 March 2000) put forward a strategic goal according to which by 2010 the E.U should "become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and grater social cohesion" (p.1). A strong emphasis is placed on life-long learning as a means to ensure equal access to the labour market by all E.U citizens. More recently in 2006, the Commission

presented proposals to the Member States requiring that national lifelong learning strategies must be adopted by the end of 2006 (European Commission, 2006). The Commission's decisions aim at guarantying effectiveness and equity and in order for this to be achieved emphasis has been placed on school autonomy, cooperation between teachers and among teachers and parents as well as on social support services which according to the Commission can be carried out by using updated social inclusion strategies based on a pedagogical approach.

The idea of CTA is not a relatively new concept for the E.U. The report to Unesco (1996) on Education for the Twenty First Century which was produced by the president of the International Commision Jacques Delors (1996), set out to promote the four pillars of education which make up the underpinnings of CTA today. The four fundamental principles that the report sought to promote are the following: a)Learning to know, b) learning to do, c) learning to live together, learning to live with others d)learning to be. Noteworthy are the three dimensions of education documented by the report: the ethical and cultural, the scientific and technological, and the economic and social. These three dimensions can be experienced by students through a combination of conventional teaching and out-of – school approaches (UNESCO, 1996).

Later in 1998, the CIDREE (Consortium of Institutions for Development and Research in Education in Europe) report was developed under a European initiative to map out the values and objectives underlying CTA. The report coined the term cross-curricular themes (CCTs) and the agenda it attempts to put forward it has economic nuances as from the very beginning it is clearly stated that "rigidly constructed subject-based curricula tend to create

a gap between education and the emerging needs of society" (p.2). In addition, the report underscores both the economic and the social vision of education as elsewhere it is stated that "business interests and economic commentators have increasingly come to recognize the importance of the individual's personal and social skill attitudes and dispositions as ultimately the most crucial source of economic growth" (p.4). Moreover, the report has sought to reproduce the skill's based agenda of the OECD, for it is denoted that the latter has played a major role in giving weight to the importance of cross-curricular working since it has worked on the development of new educational indicators, the so-called 'cross-curricular competencies' (CCC). By CCC the OECD refers to problem solving skills, communication skills, and social competencies which it deems as survival skills in highly educated societies (OECD, 1997). The attention which the OECD pays to CCC is based on the conviction that traditional indicators on mathematics, science and reading attainments give insufficient information on what contributions schools make to individual students as well as to society as a whole. Nevertheless, the problem-solving skills which the OECD is trying to put forward in the educational agenda cannot measure student performance in a quantifiable manner. Therefore, the OECD reckons that these be developed within cross-curricular structures. The focus of discussion will be now turned to the Greek and Cypriot national contexts and how they have moved towards the formation of policies envisioning the development of cross-curricular structures.

Setting the national scene of CTA

Within the last two decades, Greek and Cypriot educational policies have been taking up efforts to reconstruct and reform their curricula due to the needs of global economy as well

as due to European alignment. Getting into depth about what the educational changes have been goes beyond the aim of this paper. Some of the major educational reforms that were legitimized for both educational systems have been the creation of the Comprehensive upper secondary education, the introduction of ICTs and the promotion of the European dimension in the newly revised textbooks. The ICT innovation along with the promotion of the European dimension fall within the aims of CTA innovation, and many educational commentators have seen cross curricularity as an effort by the Ministries of education of both countries to construe the European dimension in ways which identify 'Europe' with the E.U, which associate it with technological and economic development (Philippou, 2007; Alahiotis, 2004; Bonides, 2003; Alahiotis and Kratzia-Stavlioti, 2006; Koustourakis, 2007). In addition to this, the European Commission has presented the cross-thematic curriculum as an innovation that accomplishes two European objectives: the entry of ICT into the educational process and the promotion of the interdisciplinary concept (Commission of the European Communities, 2000). Before going on to discuss about the CTA curriculum reform in both countries, a rationale of Greece – Cyprus unified education should be briefly explained.

Cyprus shares the same language, religion, culture and history with Greece. For centuries Cyprus has been the target of military attacks because of its strategic position and this resulted in a continuous effort to maintain its Greek identity through education. This 'ethnic' education was expressed through adoption of the Greek standard curriculum as well as through the use of textbooks edited in Greece (Koutselini and Michaelidou, 2004). After the 1974 Turkish invasion in Cyprus, the survival of the island as an independent and sovereign country was a priority for the Cypriot government . Thus, Cyprus applied for

membership in the E.U in 1990, so that its national identity and human rights would be secured and sustained. In 2004 Cyprus gained accession to the E.U and has intensified its efforts towards educational alignment with the European directives. The formal education system remains highly centralised, with pre-primary, primary and secondary education operating under the authority of the Ministry of Education and Culture. All syllabi, curricula and textbooks are common to all public schools. Some textbooks are published and printed by the Cypriot Pedagogic Institute, while the most basic ones are imported from Greece, including the newly revised ones which promote the cross curricular approach (Myaris, 2007).

The introduction of CTA in Cypriot education emerged as a mere consequence of Greece-Cyprus unified education and as a necessity to harmonize its educational policies to those of the E.U, as now Cyprus is a full member of the E.U and has officially been integrated into the Economic Monetary Union and in the zone of the Euro countries since January 2008.

As far as Greece is concerned, the Greek educational system is becoming more and more Europeanised. This is due to the fact that since the middle of the 1990s, Greek educational policy has been closely related to the European Community's Support Framework's funds and for this reason the Greek educational system constitutes part of a plan pertaining to the establishment of a comprehensive European educational policy (Bouzakis and Koustourakis, 2002). Greece saw the adoption of CTA (*diathematikotita* in Greek) as a hope to strengthen its role into the European arena (Koustourakis, 2007). The new curriculum embracing the CTA was published in 2003 in the Government journal and became a law of the State (MOE, 2003). The writing of the new school handbooks which was accomplished in 2006

incorporating the cross thematic approach and the overall way in which the curriculum was reformed was an application of the aforementioned European policy after Lisbon (2000) (Koustourakis, 2007).

By examining the discourse of the Greek CTC text, one can see that it is based on a pedagogic discourse referring to principles projected by the European Union from the one hand, and from the other hand, the text is infiltrated with terms connoted to a progressive theory of instruction in terms of a Piagetarian and Vygotskian version of constructivism. Examples of the former case involve words and phrases such as 'general education', 'strong pedagogic climate', 'investigative methodologies', 'critical thinking', 'learning skills', 'lifelong learning', 'sustainable development' etc. As far as the latter case is concerned, concepts and expressions ascribing to a constructivist philosophy of learning are as follows: 'student interest', 'student every day experiences', 'active involvement', 'metacognitive skills', 'cooperative learning processes', 'learn how to learn', etc. (p. 4).

With a constructivist approach to learning the nature of knowledge changes in terms of how knowledge is acquired by the student and how the teacher transmits this knowledge. Additionally, the ontological aspect of knowledge changes in terms of which knowledge is considered as valid and objective. Constructivism depicts knowledge as transitory and provisional (Watts and Bentley, 1991). Thus knowledge viewed from a provisionalist account , it can be argued that the fragmentation and departmentalization of knowledge into separate subjects can no longer be valid unless it is tackled from different perspectives. That is a challenge for the traditional views of worthwhile knowledge in Greece and Cyprus. Traditional curriculum practice in both Greece and Cyprus can be understood in terms of

humanism as regards the academic orientation of the curriculum content. This Greek humanism which is based on Ancient Greek values and Christian Orthodox ideas has had an impact on how classical and philological studies have been viewed. The knowledge of such studies has been considered worthwhile because it has been perceived as unchanging and permanent as it involves the conceptualization of ideal forms through theoretical rationalization (Ifanti, 2007; Koutselini, 1997). Hence, CTA poses many challenges for the humanistic tradition, for the latter has been penetrating an encyclopaedic curriculum. This is not to say that specialized subjects should be abolished but should not be any longer approached as rational entities aiming to indoctrinate specific values from a monolithic perspective. In the CTC text is highlighted that "Although in the new curriculum for compulsory education the traditional school subjects are maintained, a holistic approach to content learning is followed, whereby cross-disciplinary connections and relationships rather than delineations between academic disciplines are promoted....Therefore, a spiral approach to core knowledge and skills is utilized, according to which core knowledge is first introduced at a basic level and then reintroduced at a middle and at a high level of abstraction, all the while building on pupil's prior knowledge " (MoE, 2003, p. 35). The distinction between core knowledge which is the knowledge of specialised subject areas and cross-disciplinary connections which are the interrelations between different areas of knowledge can be better explained by drawing on Bernstein's dichotomy of 'collection type/code' curricula and 'integrated type/code' curricula which fall within a broader theory of classification and framing and is the next point of discussion.

CTA as a 'pedagogic device' and the formation of identities.

This section is concerned with Bernstein's theory of pedagogic discourse. Bernstein (1975), by developing the framework of classification and framing he demonstrates how changes in the structure and transmission of knowledge affect power and institutional relationships and thus the formation of identities. The argument which is mainly put forward in this section is that CTA which the Greek CTC text provides applies to what Bernstein (1975) has called an 'integrated type curriculum '.

The underlying philosophy of CTA as many commentators have argued, is mainly based on psychological approaches namely Vygotsky's social constructivism (1978) along with other tenets of progressive pedagogy (Applebee et al, 2007; Lake, 2001; Nelson and Slavit, 2007; Sunal et al, 2000; Maxim, 2003; Koustourakis, 2007; Matsaggouras, 2004). However, for the purposes of this paper, discussion will be based on Bernstein's work for it offers an explanatory and comprehensive framework in analyzing contemporary changes occurring in technology, economy, culture, the labour market and education along with the consequences of these changes for identity construction (Bernstein and Solomon, 1999; Middleton, 2008).

Bernstein (1975) distinguishes between two types of curriculum, the 'collection' type which he opposes to an 'integrated' type of curriculum. The former involves the reification of subjects, strong boundaries between courses and highly ritualized and hierarchical teacher-learner relationships. In this type of curriculum the student has to "satisfy some external criteria" (Bernstein, 1975, p.80). These external criteria in Greek and Cypriot education take

the form of standardized tests and examinations to assess students' performance for every separate subject. Moreover, Bernstein points to some possible underlying concept with which the collection type seeks to create and construct a particular assumption about the 'educated individual'. Such value laden constructs are culturally or ideologically bound and according to Bernstein they might refer to the 'gentleman', 'the educated man', 'the skilled-man', or 'the non-vocational man'. The educated person that both the Greek and Cypriot educational systems have been trying to promote is the 'moral person' as it is expressed in Aristotle's and Plato's philosophy , for the latter it is believed to provide «the basis for all the streams of the current knowledge and scientific thinking" (Greek Ministry of National Education and Religion, 1990,p.7). Humanism, is the underlying idea of the 'moral person' which the previous section alluded to.

As far as the 'integrated' type of curriculum is concerned, the various contents of each subject area do not go their separate ways, but rather they stand in an open relation to each other. In this case of curriculum type, ''the various contents become part of a greater whole and each content's function in that whole is made explicit'' (Bernstein, 1975, p. 80). In the case of Greek and Cypriot CTA, subjects are organised around conceptual links documented in the CTC text and promoted in the newly revised textbooks. These cross-curricular concepts which are documented in the CTC text and are being infused in all subject based textbooks are as follows: system, change, communication, civilization, dimension (time-space), interaction, similarity-difference, unit (atom-element), whole (group, set) (GPI,2002, p.18). The CTC text exemplifies some possible ways in which each cross-thematic concept can be tackled by different subjects. Thus, from the perspective of philological studies(Modern Greek language, literature, history) in the case of the *system*

'Greek nation' it can be easily identified that "this system is in continuous *interaction* with 'the systems of other nations' and this *interaction* should be sought to be mutually advantageous. Within this context relations and encounters of all kinds on a social, economic, political and cultural level are all considered to be forms of *interaction*" (GPI, 2002, p.18). From the standpoint of physical sciences the example illustrated by the CTC text seeks to draw a link between the systemic perception of reality and the systemic perception of the natural environment, increasing in this way "the pupils' environmental awareness and their understanding of the consequences of human activity on our planet" (GPI, 2002, p.18). These cross-thematic concepts and their cross thematic extensions benefit the pupil in that when taught a specific subject he/she can make worthy use of knowledge and experience already acquired from other subjects. The CTA approach in this case can be supportive and empowering for the teacher as well. Arguments in justifying this will be developed later on.

 Bernstein (1975) has moved on to examine the patterns of social relationships which arise out of the specialized form of 'collection type' and those which are generated by curriculum of the 'integrated type'. The former type of curriculum produces particular student and teacher identities for its specialized form generates specific skills which are clearly marked and bounded. Bernstein (1975) views this form of collection as a powerful form of control, for the significance of the subject is enhanced as well as the authority of those who profess it. Thus, the 'collection type' of curriculum tends to be differentiating, rigid hierarchical and cultural bound in character. In this respect the Greek and Cypriot 'collection type' is content specialised and differentiating and reflects the values and schools of thought of the Greek nation which are underpinned by humanism.

In the case of 'integrated type' of curricula there emerges a shift in emphasis "from education in depth to education in breadth", or in other words "from content closure to content openness" (Bernstein, 1975, p. 83). In this way "the ultimate mystery of the subject" is unravelled very early in the educational life. This is not to argue that the humanistic nature of Greek and Cypriot curricula should be abolished, but should be tackled instead from a more global perspective with the contribution of different discipline areas. Besides, what the Greek CTC text suggests is the maintenance of traditional school subjects followed by cross-disciplinary connections (GPI, 2002, p.35). Pedagogy in this sense is affected by an "emphasis on ways of knowing rather than states of knowledge" (Bernstein, 1975, p.83). Bernstein notices that the shift from a 'collection type' to an 'integrated type' of curriculum is likely to transform "the teacher-pupil, lecturer-student authority relationships" (Bernstein, 1975, p.83). In addition, staff relationships are expected to undergo considerable changes and exhibit considerable flexibility. The latter is likely to occur as the boundary between contents are open. Thus, within an 'integrated type', separate hierarchies of specialized education tend to be weakened and consequently teachers of different subject areas "enter into social relationships" engaging themselves into "shared co-operative educational task" (p.83). Therefore, this shared expertise contributes to the creation of specific teacher identities according to the Bernsteinian assumption. This argument is better developed after he establishes a more general set of concepts: classification and framing. He adopts the concept of 'classification' to refer to the relationships between contents and to the nature of differentiation between contents. At the same time he coins the concept of 'frame' to refer to the form of the context in which knowledge is transmitted and received. He then assigns the values of 'weak' and 'strong' to

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both concepts (classification and framing) as to illustrate the degree of boundary maintenance between contents and the degree of teacher and taught relationship respectively. Thus, he makes the conviction that "where classification is strong contents are well insulated from each other by strong boundaries, where classification is weak, there is reduced insulation between contents, for the boundaries between contents are weak or blurred" (p.88). As far 'frame' is concerned, where this is strong, there is a sharp boundary between what may be transmitted and what may not be transmitted and where framing is weak, the boundaries are blurred. Another aspect to framing also concerns the range of options available to teacher and taught in the control of what is transmitted and received in the context of the pedagogical relationship. Thus, for Bernstein strong framing entails reduced options while weak framing entails a range of options. The space for initiative and room for choice for both the teacher and the student is documented not only in the Greek CTC text but in a series of official documentary guidelines which were developed by the Cypriot Ministry of Education and Culture. These documents place an emphasis on teachers' and students' freedom to decide about the topic of a project or a problem solving task as well as the resources and material (MOEC, 2007 (a); MOEC, 2007 (b); MOEC, 2007 (c); MOEC, 2007 (d), MOEC, 2006; PI, 2007). Noteworthy is the fact that these documents ascribe to the teacher and the student particular identities. In a general view the teacher is depicted as a 'facilitator' or a 'coach' whose role is to minimize his involvement in the classroom, encouraging in this way student self responsibility and assessment promoting in this way the student as a 'responsible' and 'active learner'.

Furthermore, Bernstein considers the relationship between the non-school every day community knowledge of the teacher and taught and the educational knowledge

transmitted as another aspect to framing. Thus, in considering the Greek CTC text's emphasis on opening school to society by paying attention to student's every day experience and knowledge (GPI, 2002), it follows that framing in this case is weak since the boundaries between school and every day knowledge are blurred.

The way CTA is promoted in the CTC text, seems to bear all the hallmarks of what Bernstein describes as 'integrated-type' curriculum. The discourse of the CTC text implies the discourse which responds to the Bernsteinian weak and relaxed frames. Bernstein points to an underlying theory of the integrated type which is more group and 'self-regulated' in contrast to the didactic learning theory which underlies the collection type. In a similar fashion the CTC text props up a pedagogical approach envisioning 'self-evaluation', 'accomplishment of common goals', 'individualized learning', etc. (MoE, 2003).

The main argument defended in this section has been that CTA can operate as a pedagogic device for it involves ways of knowledge transmission and impacts upon institutional relationships. Now the focus shifts to the implication that CTA as a pedagogic device has for teacher identity formation in the context of the FZ .

On weakening the boundaries: how flexible may teachers feel in the Flexible Zone?

This section involves the application of the CTA as a 'pedagogic device' in the context of FZ . Bernstein (1975) in developing his theory of 'code modalities' (classification and framing) based on his initial distinction of 'collection type' and 'integrated type' curricula, he distinguished two forms of integrated type. The first form is 'teacher-based' with the

teacher blurring the boundaries between the different subjects. The second form is 'teachers-based', with integration involving relationships with other teachers and according to Bernstein, this second form of integrated code/type is more difficult to introduce than the first form. In regard with the first form, this applies to the way CTA is promoted in the newly revised textbooks and so the teacher on her\his own has to draw connections with other subject matters. For the purpose of the present paper discussion will focus only on the second form. This second form applies to one of the main innovations in the Greek CTC text, the Flexible Zone. One of the main goals of the FZ program is to loosen the boundaries between disciplines and allow for interrelations of knowledge to develop that will put an end to the discrimination between prioritized and second-tier school subjects (Pedagogical Institute, 2001). The FZ is also considered by many educationalists as an extreme form of CTA for no single subjects are taught and teachers from different subject areas have to cooperate in getting students to carry out projects of their interest (Karatzia-Stavlioti and Alahiotis, 2007; Chrysostomou, 2004; Spyropoulou, 2004; Matsaggouras, 2004).

Drawing on Bernstein's argumentation of classification and framing, it follows that the FZ is an example of both weak classification and weak frames in that the teacher has less authority in transmitting knowledge, in that the boundaries between subjects are abolished and in that the demarcation lines between school knowledge and non-school knowledge are diminished. The latter is achieved by the use of real-world resources by means of conducting organizations, businesses, government offices and using the Internet.   The CTC text defines FZ as " an established period of 2-4 hours per week within which pupils implement collective projects on topics of their interest. Thus, it is expected that pupils will discover connections between school knowledge and their everyday experiences and that

school in general will open its doors to the outside world" (GPI, 2002, p.36). Versions of FZ can be found internationally and usually these are given different names such as 'discovery hour', 'independent study', 'student project time', 'wonder hour', and 'exploratory time' (Wolk, 2001 p.56).

By following Bernstein (1975) the loosening of code modalities (classification and framing) is likely to impact upon teacher and student identities as well as student evaluation. From the teachers' side there may arise some resistance, for as subjects lose their autonomy, consequently teachers are likely to feel that their identification to their field area is weakened as well. For Bernstein this may lead to a disturbance of existing specific educational identities in a context where teachers have to follow a process of re-socialization into a new subject loyalty. Likewise, teachers in the context of FZ are likely to undergo considerable identity formations. Before the application of the FZ, they had been socialized into strong subject loyalty and through this into specific identities. These specific identities were taking place 'vertically', to use Bernstein's language. Bernstein, on referring to 'vertical relationships' he talks about these specific identities operating in the collection code/type and are continuously strengthened through social interactions within the department and through the insulation between departments.   With the integrated code\type, teachers of different subjects will be required «to enter into social relationships" which will arise out of "a shared-cooperative educational task" (p.104).

Additionally, there are likely to occur some other changes regarding student evaluation and assessment. For Bernstein, integrated codes and in the present case CTA in the context of FZ, call for greater homogeneity in evaluation and pedagogy in general, since the

boundaries between subjects are abolished and thus the mystique each teacher used to uphold in carrying out the teaching process, now is revealed. Thus, different methods of student evaluation which used to be invisible for teachers of different subject areas, now within the context of FZ become visible and this requires teachers to find a consensus in developing evaluation criteria. From the one hand it is likely that there will be a homogenisation in the evaluation process, but from the other hand there will be greater differentiation regarding the selection of what is taught, for as Bernstein put it ''the weak classification and relaxed frames of integrated codes permit greater expressions of differences between teachers, and possibly between pupils, on the selection of what is taught'' (p. 107). This is likely to be the case for the FZ as the CTC text pays considerable attention to teachers' freedom and flexibility in selecting the material and resources to be used for projects the topic of which will always be negotiated between teachers and students. Along with the flexibility of teachers in choosing material and adapting this to the needs of the students and the nature of the project, there emerges the nature of the evaluation process. Bernstein makes the assumption that within an integrated code, evaluative criteria are likely to be relatively weak, in the sense that they are less likely to be as quantifiable and measurable as in the case of collection type. This in turn is likely to have a positive effect on teachers' accountability operating in the context of FZ in Greece and Cyprus, for teachers in both contexts have been operating in relatively highly centralized systems and their only task has been to teach pre- defined and pre-scribed curricula perpetuating a culture of encyclopedism valuing high testing and achievement standards. In examining the assessment techniques that the Greek CTC text suggests, it can be argued that these apply to what Bernstein has called a 'sensitive-feedback' (p.108) and therefore they open up new prospects for teacher 'intelligent accountability'. The latter will be

explained after looking at some points the CTC text alludes to assessment. The CTC text fosters a descriptive form of expressing the assessment result as it states that "the descriptive form allows for a more comprehensive and detailed description of student performance. Thus, both parents and pupils become aware not only of pupil's weakness and difficulties but more importantly of positive aspects of their performance, including effort, involvement and active participation" (GPI, 2002, p.32-33). This form of assessment results to the eradication of "grade chasing", "rote learning" and "over-zealous competition" (MOE, 2003, p.33). It should be pointed out that the assessment techniques proposed by the CTC text do not exclude the traditional testing, rather they are expanded to include non-measurable and more qualitative ways of evaluation including self-assessment or peer-assessment, student portofolios, systematic observation, synthetic creative-exploratory tasks (projects) and semi-structured dynamic dialogue among the participants in the learning process. These assessment techniques foreshadow an 'intelligent accountability' for teachers.

The very idea of 'intelligent accountability' came to the attention of educators in 2002 when Onora O' Neill's Reith Lectures on "A Question of Trust" explored the negative effects of the accountability culture taking place in public services in Britain. Her argument has been that: " The new accountability is widely experienced not just as changing but distorting the proper aims of professional practice and indeed as damaging professional pride and integrity". In this sense O'Neil 's argument implies that greater accountability does not contribute to greater professionalism. Intelligent accountability is a concept which requires to be underpinned by trust in the teaching profession and in order for this to be achieved, student performance should not only count on academic attainment and

prescribed indicators but rather using self-chosen goals and measures that encourage the fullest development of every student (Crooks, 2007). The FZ bearing all the attributes of Bernsteinian integrated codes, has the potential to respond to such requirements which are the cornerstone of an 'intelligent accountability'.

As already mentioned in the introduction, Cyprus has not experienced any empirical research on the implementation of CTA which is currently being applied in the form of FZ as well as in the form of being infused in educational textbooks. As far as Greece is concerned, there have been conducted only two empirical studies, the one concerning teachers' attitudes towards the effectiveness of the FZ for primary education (Karatzia-Stavlioti and Alahiotis, 2007) and the other examining both teachers' and students' attitudes towards the implementation of the FZ in both primary and secondary education (GPI, 2002). Both studies were conducted at a point of time when the FZ had only been experimentally applied. The experimental phase of the FZ innovation had started in 2001 in both primary and secondary education and was later assessed by the Greek Pedagogical Institute in 2003 and the findings showed that the major aims of the FZ had been promoted (Alahiotis, 2004). Both studies exhibited the same results. The study which was conducted by the Pedagogical Institute was carried out by using a questionnaire design and was distributed to both teachers and students along with semi-structured teachers' interviews. The results have indicated that students developed skills and attitudes of considerable importance for responding to the needs of contemporary society due to the spirit of teamwork and cooperation in carrying out projects that the FZ program had encouraged. In addition, students developed a sense of self-direction and responsibility. As far as teachers' views are concerned they showed a great enthusiasm towards the way that the FZ had been applied.

The focus of the study concerned only their views and beliefs of the effectiveness of the program for students. Thus, the most important effects of the FZ for students have been listed in a hierarchical order by teachers. Therefore, teachers have considered as the most possible effective outcome of the FZ the broadening of student interest, student creativity, student self-learning and self-evaluation, student familiarization with social issues, the reconstruction of teaching methods, student development of social competencies, the opening of school to society and the fostering of experiential learning (Alahiotis, 2004).

The latest study conducted by Karatzia-Stavlioti and Alahiotis in 2007, reproduced similar results. Teachers in this more recent study have valued as important outcomes of the FZ the following: experiencial-investigative and problem solving learning and teaching, cultivation of the students' social skills and competencies in a way that promotes creative and cooperative learning and lifelong learning and the development of good relations among the various interested groups in school (teachers, pupils, parents, etc) in a way that allows the school to strengthen its pedagogic role and open its doors to society.

The two studies above have focused only on the positive aspects of the outcomes of the FZ and this makes the enlightenment of the impact of the FZ on Greek education partial. A more illuminating study in regard to both the flexibilities and constraints stemming out of the FZ would be one which would tap into teachers' views and realizations of professional agency, autonomy and formation of identities.

This section has sought to argue that the FZ as an extreme form of the CTA which the Greek CTC is trying to promote has the likelihood to challenge teacher identities in the sense

that their already formed subject based identities may be weakened by their entangling with other subject areas, however , it can open up opportunities for teacher 'intelligent accountability'.

The way forward

This paper has sought to demonstrate the forces which comprise the rationales for both Greek and Cypriot CTA in secondary education by attributing these to a global, European and national level. Further to this, It has endeavored to consider CTA as a Bernsteinian 'pedagogic device' in order to demonstrate the alteration of power relationships within the implementation of CTA.

 In some respect, teachers might feel that their subject loyalty is threatened by compromising it to other subject territories, while in another respect they might feel stimulated or inspired in making use of the freedom, autonomy and flexibility which the CTA policy encourages.   Therefore, teachers engaging themselves in cross-curricular programs such as the FZ might be oscillating between feelings of joy and travail. They might view their pedagogical repertoire as expanded or they might feel that their pedagogical limitations and weaknesses have been exposed.

Nevertheless, the payoff could be higher than the risk. Given that self-responsibility, self-regulation and self-evaluation are prominent in the Greek CTC text, then we can talk about a policy which it is empowering for both teachers and students as it opens up possibilities for what might be called 'intelligent accountability' with students acting as active learners

and teachers as trusted and respected professionals with the hope and the prospect of becoming what Schon (1983) has called 'reflective practitioners'.

As already mentioned, the implementation of CTCs into Greek secondary education is an under-developed area of research whilst in Cyprus this area of research is absent. Therefore, the dearth of research on the field signifies the necessity for an empirical investigation on the matter of CTCs. This present piece of writing has achieved to enlighten some of the possible effects that CTA might have on pedagogy and on teachers' professionalism as well. A more extensive investigation could tap into teachers' views as to through insight on issues regarding professional identities by utilizing Bernstein's (2000) more recent work on *Pedagogy, symbolic control and identity: Theory, research, critique.* Bernstein (2000) refers to identifications as 'sacred' or 'profane'. By 'sacred' he describes the inwardness of one's teaching or in other words 'introjected' relations to knowledge and 'profane' an outward (projected) orientation towards economic, political or institutional imperatives. Given the fact that the Greek CTA is a European market -led policy, it can be argued that it aims to construct 'projected' identities which in turn might clash with 'introjected' and personal identities which might be underpinned by humanism.

The issue of interdisciplinarity or cross curricular approach is a complicated and 'multi-disciplinary' one. It challenges knowledge epistemologies, pedagogy, student/teacher identities and teacher professionalism. In tackling one aspect, all others should not be excluded, but rather, each part should contribute to a greater whole.

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