

**Negotiating Subject Hierarchies: Neoliberal influences on the comprehensive curriculum in Ireland**

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# **Negotiating Subject Hierarchies: Neoliberal influences on the comprehensive curriculum in Ireland**

## **Abstract**

This article critically examines the relationship between recent educational policy and the advancement of second level subject hierarchies in Ireland. The paradox of promoting an individual subject by means of the matriculation system, while also calling for a broad and balanced curriculum, is questioned. The apparent retreat from a commitment to comprehensive education is discussed with respect to a neoliberal agenda in education and a modernist-vocational ideology of curriculum development. The article concludes with a discussion on the place of subject-based curricula and a call for more balanced debate around educational policy which may result in the promotion of subject boundaries.

Keywords: comprehensive curriculum, subject hierarchy, subject boundaries, educational policy

## **Introduction**

In the currentage of globalisation Mathematics education occupies ‘a rather special position’ (Smith, 2004: 2) where it is ‘increasingly recognised as crucial to the nation’s economy’ (Reyna & Brainerd, 2007: 147). Mathematics is now established as a fundamental pillar in the majority of primary and post-primary curricula worldwide (Linder, Powers-Costello, & Stegelin, 2011). Its prominence is reflected in the forward of the Cockcroft Report (Cockcroft, 1982: iii) which highlighted that ‘few subjects in the school curriculum are as important to the future of the nation as mathematics; and few have been the subject of more comment and criticism in recent years.’ The crystallisation of the place of Mathematics in the school

curriculum is often predicated on the belief that Mathematics education underpins economic development (Jablonka, 2003). However, many such as Derek Woodrow (2003: 15) have questioned this proposed relationship with national economic development, and ‘why it is so common for such a link to be assumed’. Despite a surprising lack of consistent empirical evidence to support the ostensible axiomatic link between Mathematics education and economic growth (Lewis, 2003), the discipline continues to hold a prominent position in ‘the social and political discourse across the world’ (Woodrow, 2003: 10). Mathematics continues to be seen as growing in importance for ‘both individual and national economic competitiveness’ (Schmidt, 2012: 133).

There is significant evidence to suggest a strong link between Mathematics ability and academic performance in many other disciplines (Bourguignon, 2002; Malloy, 2002; Reyna & Brainerd, 2007; Singh, Granville, & Dika, 2002). For example studies have shown a strong correlation between mathematics scores and spatial ability, especially for male students (Guay & McDaniel, 1977). Competency in Mathematics is also seen as essential to the study of many areas of science (Meltzer, 2002) and has become a major requirement in the computer sciences (Ben-Ari, 2012). This is reflected in a discussion paper published by the Irish National Council for Curriculum and Assessment (NCCA, 2005: 7) which highlights that ‘while mathematics is a discipline in its own right, it also plays an important role in a variety of other subjects’. Mathematics has well established links with Science, Technology and Engineering as a corollary of the development of the concept of STEM education (Sanders, 2009). However, the field of contemporary Mathematics education has been significantly broadened to include ‘issues of the social, the cultural and the political’ (Pais, Stentoft, & Valero, 2010: 398). Consequently, Mathematics is recognised as an essential tool in supporting one’s ability to understand and explain the world around them (Crawford, Gordon, Nicholas, & Prosser, 1994). Yet Mathematics is not the only lens through which one

can examine the world. This paper problematises subject boundaries and questions the promotion of Mathematics over other disciplines. However, it is first important to explore the position of Mathematics education within the Irish context through an examination of policy documents published by four of the key agencies that determine educational policy in Ireland: the Department of Education and Skills (DES), the National Council for Curriculum and Assessment (NCCA), the State Examinations Commission (SEC) and the Irish Universities Association (IUA). Reports which analyse the impact of this policy are also explored.

## **Context**

The matriculation system in Ireland is unique in that it relies almost entirely on a set of summative examinations collectively known as the Leaving Certificate which are administered by the State Examinations Commission (SEC). Points are awarded to students based on their performance in a minimum of six subjects, with the majority of students studying the three subjects of Irish, English and Mathematics. All subjects for the Leaving Certificate are offered at both ordinary and higher levels and in addition, Mathematics and Irish are offered at a third foundation level (Hyland, 2011). The ‘Points System’ determines entry to and allocation of the majority of third level courses<sup>1</sup>. For the most part, at higher level students can gain a maximum of 100 points for receiving an A1 in any particular subject. However, in 2012 the Department of Education and Skills (DES) Ireland, together with the Irish Universities Association (IUA), introduced on a pilot basis 25 ‘bonus points’ for students who receive a grade D or greater in higher level Mathematics (IUA, 2010). With

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<sup>1</sup>For further details on the Leaving Certificate please see the Hyland Report on *Entry to Higher Education in Ireland in the 21st Century* (Hyland 2011), available at [http://www.heai.ie/files/files/file/News/1335\\_HEA\\_Conference\\_01.pdf](http://www.heai.ie/files/files/file/News/1335_HEA_Conference_01.pdf)

the introduction of these 25 extra points for students who successfully pass the Higher-Level Mathematics examination, the maximum points any student can now receive is 625 points up from the previous 600 points for graduates before 2012.

The Chief Examiner's report on the 2005 Leaving Certificate Higher-Level Mathematics paper highlighted a 'noticeable decline in the capacity of candidates to engage with problems that are not of a routine and well-rehearsed type' (SEC, 2005: 72). This was not an isolated finding. Gill et al. (2010) found a constant, steady decline in the mathematical standard of students entering university between the years 1997 and 2008 in Ireland. During the same period the percentage of Leaving Certificate Mathematics students sitting the Higher-Level paper was also below the expected uptake of between 20 and 25 percent predicted when the syllabus was first launched in 1992 (EGFSN, 2008). There was in fact a small decline in the percentage of students taking the Higher-Level paper between 2001 and 2008, falling from 18% to 17% of the student cohort (ibid 2008: 1). This poor uptake of higher level Mathematics is worrying as it 'has implications for the follow-on study of mathematics to degree level' (NCCA, 2005: 10). Accordingly STEM courses at third level are labouring to attract students, especially in the area of engineering; 'historically, Irish higher education has been relatively good at meeting demand for science graduates, but not quite so good when it comes to engineering, as a result of lower student demand for these courses' (DES, 2011: 36-37). One of the major challenges in attracting students to take higher level Mathematics for the Leaving Certificate is the perceived disparity in the grading of different subjects. There exists a perception in Ireland 'that some subjects are marked more leniently than others and that by taking these subjects, students are more likely to get higher grades' (Hyland, 2011: 12). In parallel subjects are also viewed to vary significantly in respect to levels of difficulty, with Mathematics perceived to be among the top five most difficult Leaving Certificate

subjects (Smyth, Banks, & Calvert, 2011). This perception is perhaps reinforced by the fact that other subjects such as English, for example, while being offered at both ordinary and higher level, unlike Mathematics it does not differentiate by 'reference to content, nor is there a specific intention to target the Higher level English syllabus at 'specialists'' (NCCA, 2005: 4). In addition and in contrast to many other subjects, for students taking higher level Mathematics, 'perceived difficulty is greatest among those in the highest-achieving groups' (Smyth, Banks and Calvert 2011: 27). Also worth noting is that foreign languages were viewed by students as some of the 'most difficult subjects' to study (Smyth, Banks and Calvert 2011: 27) and in Ireland, at both primary and second level, fewer students (as a percentage of the overall cohort) study a foreign language when compared to the rest of the European Union (European Commission, 2012). Consequently, it is not surprising that Smyth and Calvert (2011) demonstrated a strong link between perceived difficulty and student course choice at senior cycle in Ireland.

One element of the responses developed to help increase the number of students studying higher level Mathematics was the reintroduction of 'bonus points'. The scheme was introduced in 2012 for a four year pilot period and is due to be reviewed in 2014 (IUA, 2010). Many have called for 'bonus points' to also be rolled out across additional subjects. Hyland (2011: 24) for example, suggests that it may be beneficial to increase the number of points for subjects which are good predictors of subsequent performance at third level such as English. The Irish Universities Association (IUA, 2012: 4) have proposed the provision of additional points for subjects that are 'deemed to be strategically important and/or are more demanding in terms of workload' for students. What is evident in these proposals and common across many reports which discuss promoting Mathematics at second level (DES, 2011; EGFSN, 2008; Hyland, 2011; Innovation Ireland, 2010; IUA, 2012) is a neo-liberal agenda in

education and a modernist-vocational ideology of curriculum development. This appears to be far removed from the ‘broad curriculum at senior cycle’ promoted by the NCCA (2009: 6). Such contradiction as evident in Irish educational policy and in much of the political and professional debate around the purpose of education is perhaps reflected in the confusion between the concepts of education and schooling. In explaining this distinction, Carr (2003: 16) provides a useful analogue highlighting that ‘the relationship between education and schooling is comparable to that between religion and church, or justice and the legal system’. As highlighted by Gillies (2006: 29) ‘the vocational, economic concern of schooling... would not be a focus in a philosophical, conceptual understanding of education’. In this sense ‘education’ is perhaps best reflected in a broad and comprehensive curriculum which promotes intellectual, artistic and other achievements for its own sake (D. Carr, 1996).

### **A ‘Comprehensive’ Curriculum**

Curriculum discourse is replete with reference to the need for systems of education which provides students with a ‘broad and balanced’ curriculum (Harland et al., 2000; Moore, 2012; Wiliam, 2001). So much so that this is now a firmly established concept and permeates many contemporary policy documents around curriculum reforms including the recently published Framework for Junior Cycle (DES, 2012) in Ireland. This new Framework for Junior Cycle, due to be implemented on a phased basis from 2014, is designed to help schools ‘provide their students with a broad and balanced education that is suited to their identified needs’ (DES, 2012: 8). The concept of a broad and balanced education based on a curriculum that is both flexible and inclusive of all was one of the principle ideals that ‘animated the pioneers of comprehensive education in the 1960s and 70s’ (Holt, 1999: 329). In England the comprehensive ideal emerged in response to a growing ‘culture of individualism’ in school,

and promoted 'equality of respect', highlighting that the 'school should judge each pupil to be of equal value' (Holt, 1999: 330). Comprehensive education promotes serving 'the variegated needs of a heterogeneous student population through a variety of courses, programs and activities' (Wraga, 1999: 297). This is in stark contrast to the growing trend of grouping pupils by ability in distinct subjects (Stevens & Vermeersch, 2010). The concept of comprehensive education is something that successive Irish reports on education and curriculum reform appear to support. The comprehensive ideal is certainly reflected in much of the guiding principles in the Framework for Junior Cycle (DES 2012). It can also be found to permeate throughout a report by the Curriculum and Examinations Board (CEB, 1986: 10) which highlights that the general aim of education should be:

To contribute towards the development of all aspects of the individual, including aesthetic, creative, critical, cultural, emotional, intellectual, moral, physical, political, social and spiritual development, for personal and family life, for working life, for living in the community and for leisure.

While there continues to be support for a comprehensive curriculum in Ireland (Bonel-Elliott, 1994), the 'backwash effect' of the current 'points system' (NCCA, 2007) employed by the Irish matriculation structure has placed significant performativity pressures on both students and teachers (Hennessy & McNamara, 2011). Hyland (2011: 4) notes that senior cycle 'students (advised by their parents and teachers) will do everything possible to optimise their potential points'. This 'points race' and the ensuing impact on teacher pedagogy (OECD, 2009) only serves to reaffirm the hidden curriculum message to students that 'only knowledge, skills and abilities that can be readily measured, especially in a written test, are to be treated as *really* valuable' (Hargreaves, 1988: 56). It has also resulted in some students basing their 'subject choice for Leaving Cert on the perceived likelihood of getting a high

grade, rather than on their aptitude for the subject or its relevance to their higher education course of choice' (Hyland, 2011: 4). While this appears to conflict with the broad and balanced education promoted by the report from the Curriculum and Examinations Board (CEB, 1986) and evident in the Framework for Junior Cycle (DES, 2012), it is reflective of the ever increasing presence of a neo-liberal agenda in education.

### **Neo-liberalism and Education**

Practices of neo-liberalism have been evident in educational discourse, government policies on education and in schools in capitalist societies that participate in the global economy since the early 1980s (P. B. Davies & Bansel, 2007; Olssen & Peters, 2005). An associated marketplace ideology has meant that public institutions such as schools which were previously held as essential to the 'collective well-being' of society are now 'reconstituted under neo-liberalism as part of the market place' (P. B. Davies & Bansel, 2007: 254). This is a concern echoed by Lynch (2006: 1) when she outlines that 'there is an increasing attempt to privatise public services, including education, so that citizens will have to buy them at market value rather than have them provided by the state'. Hill (2004, 2007) argues that a restructuring of education is continuing to take place around the globe, reflecting a neo-liberal agenda and accompanied by neo-conservative policies, designed to develop 'human capital'. Hill (2007) contends that neo-liberalisation has resulted in fundamental changes to teacher education intended to better prepare students for the workplace. This ideological shift is directly linked to a drive for a global knowledge economy and the corresponding 'rediscovery of the economic importance of education' (Peters, 2001: 1). Neo-liberal market values have resulted in a 'commodification of knowledge' (Hennessy & McNamara, 2011:

207) that is reflected in the Irish education system through increased standardisation and a technician approach to teaching and learning (Hyland, 2011; Lynch, 2006; OECD, 2009).

Central to a neo-liberal agenda and ubiquitous in contemporary educational policy is the theme of 'investment in human capital' (Olaniyan & Okemakinde, 2008; Peters, 2001; Sexton, 2011). However, when viewed through this consumerist lens, subjects and disciplines are compared and measured like any other commodity in order to determine where the best investment may lie. In Ireland organisations such as the Expert Group on Future Skills Needs have been set up to advise government on the 'future skills requirements and associated labour market issues that impact on national potential for enterprise and employment growth' (EGFSN, 2007). In the case of the Expert Group on Future Skills Needs (EGFSN) they report directly to both the Minister for Enterprise, Trade and Employment and the Minister for Education and Skills, highlighting the direct link between neo-liberal market values and educational policy. In their annual reports to government the EGFSN have made repeated reference to the need to 'increase the STEM skills supply pipeline at second and third level' (EGFSN, 2011: 2), as well as to the 'importance of raising national Mathematical achievement' (EGFSN, 2009: 6). When viewed in this light, disciplines that are not seen to reflect as strong an economic investment are in danger of being overlooked at best. This is not isolated to Ireland and is reflected in capitalist societies worldwide (Hill 2007) at all levels of the education system. For example Lynch (2006: 7-8) highlights a 'blatant bias against the Arts and Humanities and most of the Social Sciences' in the Shanghai Jiao Tong (China) World Ranking of Universities. Robinson (2011: 42) also warns that as a result of economic pressures and through global educational reforms, 'policy makers typically narrow the curriculum to emphasise a small group of subjects, tie schools up in a culture of standardised testing and limit the discretion of educators'. Both the bias

towards a small group of subjects and the promotion of standardised tests can be seen in the Irish initiative to reintroduce additional Leaving Certificate points for students who successfully complete the higher level mathematics examination. It was designed to increase the number of students studying higher level mathematics and it achieved this primarily through the reinforcement of a summative examination system that has been shown to narrow the curriculum (Hyland 2011) and to support a transmission approach to teaching (OECD 2009).

The promotion of certain subjects and disciplines over others is a common feature of debates around curriculum development worldwide. As highlighted by Bernstein (1971: 34) most curricula 'involve assumptions that some kinds and areas of knowledge are much more 'worthwhile' than others'. Once realised through educational policy, such epistemological assumptions reflect a position that is designed to inform educational practice. Therefore, educational curriculum can be seen to reflect the materialisation of the epistemological assumptions advanced by educational policy. Lawton (2012) suggests that curriculum is a selection from the culture and as highlighted by Carr (2006: 146) 'there can be no privileged epistemological position that will enable us to transcend the particularities of our culture'. If the dominant culture within educational policy and practice is not contested it may lead to reproduction (Bourdieu, 2000) and the reaffirming of pre-existing norms and standards within educational discourse. Accordingly, this paper seeks to question the impact of policy changes such as the reintroduction of additional points for Mathematics which could serve to narrow the educational experience for students by endorsing subject hierarchies. However, one must first examine pre-existing, socially constructed, discipline hierarchies that may impact the perceived 'value' of school subjects.

## **School Subject Boundaries**

As highlighted by Bernstein (2000) the classification and framing of knowledge into school subjects is a process of translating power and involves the formation of power relations. In this context, Bernstein (2000: 5) explains that power relations ‘create boundaries, legitimise boundaries, reproduce boundaries’ and that ‘power always operates to produce dislocations’. Therefore, the clearer a subject’s boundaries are the more potential it has for power and control over its position in the curriculum. Conversely, subjects with regions where the boundaries are less defined risk occupation by existing disciplines or newly emerging subject areas. This is perhaps best illustrated by Goodson (2011: 29) when he examined ‘the battle over environmental education in the late sixties and early seventies’. Goodson (2011) suggests that the Geographical Association in England strongly opposed the formation of environmental education as a school subject due to its perceived overlap with the existing Geography syllabus. In the early stages of the development of Geography as a subject it was made up of a ‘variety of idiosyncratic local versions devised or taught by specialists from other disciplines’ (Goodson 2011: 29). Consequently, Geography as a field of study was battling to establish its boundaries. This process of negotiation continues throughout the evolution of subjects as boundaries are established and repeatedly clarified.

Another significant influence on the formation and stratification of school subjects is third level education and the courses offered to students. Just as curriculum practices at second level are limited by the control of university curricula and matriculation systems (Goodson, 1983), so too are the subjects offered. As highlighted by Young (1975: 104) universities do not directly control second level education but instead there exists a ‘process by which

teachers legitimate their curricula through shared assumptions about ‘what we all know the universities want’’. The selection of subject content at second level is therefore often inexorably linked to university programmes and areas of study. Within this environment, in order for a school subject to remain relevant it requires dedicated scholars researching and working in that area of study at third level. Accordingly, the greater the attention a discipline is awarded by scholars at third level the stronger the perceived position of associated subjects at second level.

Kohlhase (2006: xii) suggests that ‘Mathematics is one of the oldest areas of human knowledge’ and forms the ‘basis of most modern sciences’. Therefore, Mathematics as a discipline has had sufficient time to evolve clear boundaries. Also, given its relationship with modern sciences it has a long and established history of scholarly study and application at third level. Consequently, it is not surprising that Mathematics enjoys an exalted position in the curriculum of the majority of education systems worldwide. This is reflected in Ireland where of the 54,341 students who completed the 2011 Leaving Certificate examination, 51,990 students sat the Mathematics examination at some level compared to 44,398 taking Irish in the same year (SEC, 2012). This is despite Irish being the only compulsory subject at senior cycle in Ireland (Hyland, 2011). Mathematics was taken by more students than any other subject that year. English as a subject followed closely with 51,453 students completing the examination at some level (SEC, 2012) but all other subjects were far less popular. For example 27,306 completed the Geography examination, 12,104 took History, and just 6,924 sat the Physics examination (SEC 2012). Similar completion rates were recorded for 2009 and 2010 respectively (SEC, 2012). These figures would suggest that mathematics is valued by students (a position reinforced by a matriculation system that has historically required Mathematics at some level for entry onto the majority of third level

programmes). However, it is the depressed percentage of students taking higher level Mathematics (16% in 2011) compared to other subjects such as English (64% in 2011) that has spurred the reintroduction of ‘bonus points’, along with concerns regarding a ‘problem of mathematical underpreparedness’ with regards to students entering third level education (Gill, et al., 2010: 337).

## **Discussion**

The conception of education as a social process and function has no definite meaning until we define the kind of society we have in mind (Dewey, 2004: 93)

The above quote from John Dewey highlights the role that education plays in social formation. Dewey (2004: 95) goes on to note that an undesirable society ‘is one which internally and externally sets up barriers to free intercourse and communication of experience’. The strengthening of subject boundaries through the prioritisation of certain disciplines can hinder cross curricular collaboration and create barriers to a broader educational experience for students. The use of 25 additional points also serves to reinforce a focus on summative assessment structures which in turn maintains a curriculum that in reality is all too often defined by subject content. This outcomes or product driven model is a ‘technical rationality’ (McKernan, 1991) which sees the function of education as solely to bring all students to some preconceived point set out in the respective subject syllabuses. Stenhouse offers his process model (Stenhouse, 1975) as an alternative ‘in which aims are realised in rather than as a result of the process of education’ (McKernan, 1991: 188). When the focus is shifted from the product towards the process of education, the requirement to promote individual subjects over others becomes defused as subject boundaries themselves are blurred. Researchers are acutely aware of the ‘artificial nature of subject boundaries and

that they are dynamic' (Tress, Tress, & Fry, 2006: 15), yet school curricula continue to promote such boundaries even between subjects with very clear overlap and strong interdependence (Darby, 2008). Boyle and Bragg (2006: 571) argue that the promotion of a subject-based curriculum has led to:

- i. the superiority of subject-based knowledge, almost to the exclusion of cross-curricularity,
- ii. the undervaluing of practical knowledge,
- iii. undue priority being given to written as opposed to oral forms of presenting knowledge
- iv. the superiority of knowledge acquired by individuals over that developed by groups of pupils working together

However, research is beginning to suggest that the increased use of technology as a pedagogical resource may lead to the inexorable weakening of subject boundaries and a shift in focus away from subject-based curricula (Law, Chow, & Yuen, 2005).

The reintroduction of 'bonus points' for Mathematics appears to rest on an epistemological position which values certain forms of knowledge more than others. Even though historically 'the relationship between philosophy and mathematics is particularly close' (De Man, 1982: 13), where philosophical reflection is seen as central to the discipline (Mancosu, 2011; Prediger, 2007), as a subject in schools Mathematics is celebrated for having 'simple, unquestionable criteria for distinguishing right from wrong and correct from false' (Sfard, 1998: 491). By comparison, within the paradigm of the social sciences, for example, there is no absolute truth and the concept of intersubjectivity is embraced (Sfard 1998). Therefore, this 'bonus points' policy suggests that dualistic forms of knowledge as promoted through 'schooling' are more important, at least for entry to third level in Ireland.

The hidden but very clear message to students is that people with strong logical, mathematical skills are more valuable than those whose skills lie in alternative areas. It can therefore be argued that this educational policy not only reflects but promotes the epistemological position of dualism as outlined by Perry (1970) within the Irish second level curriculum. This policy also runs contrary to the aims of the Humanities Curriculum Project (Stenhouse, 1968, 1971) and the comprehensive ideal (Holt, 1999). Furthermore, this raises questions about the beliefs, values and ideologies of society that we wish to promote through school education. Read (1943: 8) suggests that ‘the general purpose of education is to foster the growth of what is individual in each human being, at the same time harmonizing the individuality thus educed with the organic unity of the social groups to which the individual belongs’. Claxton (2009: vi) largely agrees and goes on to argue that education is failing to ‘prepare young people for their complex and uncertain futures’. Claxton (2009: vi) suggests that there is ‘no evidence that being able to solve simultaneous equations, or discuss the plot of *Hamlet*, equips young people to deal with life’, yet the 2012 initiative to reintroduce ‘bonus points’ for just one subject suggests that Mathematics is not only essential for a student’s future but more important than all other disciplines.

As highlighted by Davis and Edwards (1999: 266) the development of subject-based curricula was predicated on the erroneous ‘assumption that a coherent whole would emerge from the sum of the parts’. However, within such subject-based curricula, as evidenced by the work of Bernstein (1971) and Goodson (2011), subject hierarchies are naturally going to develop as disciplines with clearer defined boundaries gradually move up the echelons. Therefore, it can be argued that the reintroduction of ‘bonus points’ for Mathematics is neither changing existing, or generating new, practice but instead is merely reflective of pre-existing norms. It can be seen to mirror the neo-liberal model of marketised education (Lynch, 2006), as well as the associated economic values espoused by policy makers and the

wider Irish society. It reflects an associated move towards greater market accountability (as distinct from democratic accountability) (Lynch, 2006), along with similar demands for more evidence-based policy and evidence-based practice (B. Davies, 2003). As highlighted by Carr (2006: 154) 'educational policy and practice are always and already rationally constrained by the social practices of rational justification that are intrinsic to the discourse of the educational community within which practitioners act.' Furthermore, successive reports from the Expert Group for Future Skills Needs in Ireland have called for the promotion of Mathematics, especially at higher level in the Leaving Certificate, to help meet the future national economic needs (EGFSN, 2008, 2009, 2011). The initiative has been very successful in this regard with the number of Leaving Certificate students completing the higher level Mathematics examination rising from 8,235 (16% of the student cohort) in 2011 to 11,131 (22%) in 2012. Also, as highlighted by Eisner (1992: 10) 'since a school cannot teach everything, selection is inevitable'. Given the discrete type of knowledge assessed in the Mathematics examination and with increased performativity pressures as a result of globalisation it is perhaps economically prudent to be emphasising Mathematics at present. However, it must be acknowledged that the curriculum reflects the values of society (W. Carr, 1998; Mollman, 1992) and too often what is missing from policy discourse is the discussion about 'the kind of society we have in mind' (Dewey, 2004: 93).

## **Conclusion**

This article has raised critical questions regarding the endorsement of second level subject hierarchies through the use of educational policy and a third level matriculation system in Ireland which places greater value on certain subjects over others. In doing so, it contests the epistemological assumptions underpinning such educational policy. The promotion of higher level Mathematics at second level through the reintroduction of 25 additional points for

students who successfully pass the associated Leaving Certificate examination suggests a certain preference for graduates with strong numeracy and logical, mathematical skills. Of course this is also reflective of repeated reports warning of falling mathematics skills (Gill et al., 2010; SEC 2005) and significant calls for initiatives to promote Mathematics in order to meet future economic needs (EGFSN 2008; 2009; 2011). It is essential that educational policy is capable of meeting the changing needs of society and that when required can react appropriately. However, as highlighted in this article what is too often missing from the political and educational discourse is a wider discussion on societal requirements above and beyond economic needs.

This article poses important questions for curriculum developers and policy makers in Ireland with respect to the continued promotion of subject-based curricula. Such questions include:

- What type of society is advanced as a result of the endorsement of subject hierarchies through educational policy in Ireland?
- To what extent does the promotion of individual subjects over others reflect a growing neo-liberal agenda filtering into Irish second level education?
- Has the comprehensive ideal that supports a broad and balanced curriculum been displaced by a modernist-vocational ideology that serves to reinforce subject boundaries at second level in Ireland?
- Does the promotion of subject-based curricula through educational policy reflect the contemporary needs of society?

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