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Gender and the Curriculum

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Chapter 18: Gender and the curriculum

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Abstract

Curriculum resides in relationship with the concept of gender in complex and multifaceted ways. Such a relationship acknowledges also the interconnectedness of curriculum, with assessment and pedagogy as well as with gender and demands that we look beyond gender as 'sex-group differences' to a deeper understanding of this notion as a cultural artifact, with more nuanced and complex understandings of boys and of girls and how gender affects young people's identities as learners, as consumers of knowledge and skills, as well as differentially mediating their learning and ultimately their attainment. The chapter explores how we have moved from considerations of gender as a dichotomous variable (male/female) against which curriculum and assessment outcomes can be measured or evaluated, into considerations of gender as a culturally, fluid understanding of how boys and girls identify as individuals and as learners and how they differentially interact with subjects, subject knowledge and skills, as well as how these are taught and assessed.

Key words: gender, curriculum, assessment, pedagogy, culture, subject knowledge, sex-group, testing.

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Biographical Details

Jannette Elwood is Professor of Education at Queen's University Belfast. Her main research interests are in the social constructions and consequences of tests, examinations and assessment practices. She is particularly interested in: socio-cultural approaches to understanding the impact of assessment on students' lives; gender and its interaction with assessment techniques and practices; the ethics of assessment policy and practice and theoretical and methodological issues in educational assessment research and practice. She is a founding member of the Association for Educational Assessment-Europe (Vice-President (2004-6)), an executive editor of the journal *Assessment in Education* (published by Taylor and Francis) and Section Editor: Assessment and Evaluation for the online academic journal CogentEducation www.cogentoa.com

Introduction

Curriculum resides in relationship with the concept of gender in complex and multifaceted ways. Such a relationship also acknowledges the interconnectedness of curriculum, with assessment and pedagogy as well as with gender and demands that we look beyond gender as 'sex-group differences' to a deeper understanding of this notion as a cultural artifact, with more nuanced and complex understandings of boys and of girls and how gender affects young people's identities as learners, as consumers of knowledge and skills, as well as differentially mediating their learning and ultimately their attainment. Furthermore, a consideration of gender in a cultural sense enables us to understand that the curriculum as defined and taught is not value-free and that subject-based curricula have associated social and cultural scripts that impact and interact with teachers' views of boys and girls as successful learners as well as learners' views of themselves and their experiences of achievement.

This chapter will start with some definitions of gender and how considerations of this term have generated over time and moved from notions of 'sex group' (males compared to females) to those of 'gender' that considers the processes and influences of masculinities and femininities as they are played out within the educational and lived experiences of boys and girls. The chapter will then consider in more detail significant issues related to gender and its interaction with curriculum that includes notions of subjects, subject knowledge and pedagogy. Next the significant associated practice/product of assessment and its interaction with gender, curriculum and pedagogy is considered. Thus the chapter explores how we have moved from considerations of gender as a dichotomous variable (male/female) against which curriculum and assessment outcomes can be measured or evaluated, into considerations of gender as a culturally, fluid understanding of how boys and girls identify as individuals and as learners and how they differentially interact with subjects, subject knowledge and skills, as well as how these

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are taught and assessed. The chapter will conclude with some remarks that suggest taking a more nuanced, cultural position around gender, curriculum, pedagogy and assessment enables a more humble approach to understanding boys and girls in education and how they learn and achieve within, and beyond, culturally diverse and complex classrooms.

Gender: considerations of definitions

The underlying premise of this chapter is that gender is a contested term and that across varying theoretical, research and practice domains there are differing interpretations of 'gender', what it means, how we study it, and how it mediates our understanding of the world and our experiences of it. The contestations surrounding gender and how it is defined are very clearly evident within the world of education, especially within the arenas of curriculum, assessment and pedagogy. Many years of scholarly work have shown how researchers and theorists within these settings have come to know and understand gender and how it interacts with the structures and functions of schooling (what is taught, what is learnt and how this is assessed) from within very different and contrasting theoretical positions (see Skelton, Francis & Smulyan, 2006 for a comprehensive review). However, what is common across all this work is the problematizing of 'gender' (however defined) within educational spheres and a search for fuller understandings of how we come to know how the lived educational experiences of teachers and students are mediated by gender and how this impacts on their practices and successes across different educational phases.

Francis (2006) discusses the ways in which the concept of gender has been understood both within wider feminist studies arenas and within the field of education. She suggests that the concept of gender is "a recent development in the study of people and society, and has been contested from a variety of quarters since inception" (p. 7). Much of the early work that considered gender and achievement in schools looked to the organising categories of male/

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female in order to understand differences in patterns of behaviour and performance between the sexes in educational achievements (e.g. Hyde 1981; Licht & Dweck, 1983; Murphy 1982). This tended then to define gender as 'sex group', which Ivinson (2014) describes as "a form of labelling and categorising of persons as either male or female with reference to biological classification(s)" (p. 160). Males and females then are considered to have defining and associated characteristics that are considered, by some researchers, as fixed and unchanging, i.e. the 'nature' debate around differences in performance between boys and girls. Francis (2006) suggests that such positions prioritise gender differences in behaviours as reflecting innate sex differences and that looking into male or female biologies and brains will provide explanations for differences in educational achievements observed. Many studies in the 1970s and '80s used 'sex' as a variable for analysing human behaviours (Acker, 1981; Hammersley, 2001). In these early studies, that looked at inequalities in provision of education and schooling, the categorising of males and females in this way played an important role in identifying significant structural and institutional differences in the equality of opportunity for boys and girls to avail of similar access to curriculum and assessment or qualifications provisions (see Arnot, David & Weiner, 1996) . While many researchers still adhere to the view that the sexes are "just naturally different" (Francis, 2006, p. 8) and also continue to use sex group as an unproblematic and straightforward categorising variable to understand differences in educational performances, many commentaries have emerged about the limitations of such a definition of gender. For example, Francis (2006) reminds us that not everyone is clearly identifiable by sex or falls easily into the categories of 'male' or 'female' for a variety of reasons. Furthermore, Ivinson (2014) warns that the allocation of males and females to these groups through, for example, self-reporting questionnaires or through ticking a box on a test paper, strengthens the possibility that stereotypes are reinforced because of the use of statistical inferences based on these categorisations to look for 'causes' of gender differences.

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In contrast to those views that see gender as sex group, there are researchers who look to social and cultural realms of knowing and understanding in order to define gender (Iverson & Murphy, 2007). Within these considerations, gender is seen as a concept that is socially constructed and any differences in the behaviours observed by males and females, girls and boys, are created by social and cultural practices and norms that influence how men/boys and women/girls come to be and act. Thus, any differences observed in behaviours or practices associated with boys or girls are seen as being ascribed to them within larger social understandings of what it means to be a girl or a boy and not part of them; i.e. they are not innate or fixed but open to change in relationship to the social, cultural and historical contexts in which boys and girls live and learn; the 'nurture' debate. Francis (2006) suggests that such positions prioritise gender relations and have replaced the terms of 'male' and 'female' with masculinity and femininity in attempts to understand the processes of gender interaction as well as behaviours. In advocating a more social understanding of gender, Iverson (2014) argues that "we cannot reduce gender to a factor or assume sex group categories (boy, girl) correspond to, or cause, socio-cultural gender norms or masculinity and femininity" (p. 160). Thus, social and cultural theoretical positions around gender allow for more nuanced complexities to emerge as well as enabling considerations of how gender interacts with other factors of diversity such as ethnicity, social class, disability, sexual identity and religion (see Chapters 19 and 20 for discussions on the first two of these equality dimensions). Furthermore, this recognition of multiple diversities and the impact of these on how young people construct their identities of self and of others has led many researchers to further consider "'masculinities' and 'femininities' in plural in order to reflect the differing ways in which masculinity and femininity are constructed and performed by different individuals" (Francis, 2006, p. 12). Studies of gender and education that prioritise a sociocultural definition of the concept tend in the main to be qualitative (Iverson, 2014; Lahelma 2014) as they focus on investigating how gender manifests itself in everyday classrooms and schools (Murphy & Gipps, 1996) and in complex interactions between students and students and teachers and students (Gipps, 1999; Iverson & Murphy,

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2007). Commonalities within these types of studies emerge around understandings of the fluidity of gender and how “gender can act as a socio-cultural resource that can be taken up and used by students and teachers in interactions and practices” (Iverson, 2014, p.160).

The position of this author is that such definitions of gender, rather than seen as either/or, are better understood as a continua of understandings of the concept that reflect theoretical differences, with the ‘sex-group’ definition at one end and the cultural positioning of gender at the other. Differing views of gender can themselves be seen as fluid, so that they allow researchers to understand various formulations of the term and its manifestations within research outcomes and narratives. By understanding the variations in how such concepts, as gender, are understood, considered and used within theoretical, research and practice spaces, we are better able to account for the realities we investigate and the patterns of gendered learning and outcomes we come across. Ultimately what is advocated in this chapter is that positions that prioritise the cultural and see gender as a social and cultural artifact, that interacts in complex and detailed ways with how boys and girls experience education, schooling and learning, are those that provide better understandings of the realities of students’ and teachers’ experiences. However, the chapter also recognises the place and importance of early pioneering ‘sex-group’ studies that problematized gender-based differences in outcomes and experiences in the first place.

Gender and the curriculum

Not only is gender a contested term, so too is ‘curriculum’. As much of the research within the field of curriculum studies shows (the contributions in this collection included), the term ‘curriculum’ is positioned differently depending on the theoretical and ideological leanings of the

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scholars working within the field (Scott, 2001)¹. A classic definition of curriculum comes from Lawton (1975) who argued that, rather than it being “that which is taught in classrooms” (p. 6) curriculum is “essentially a selection from the culture of society ... certain aspects of our way of life, certain kinds of knowledge, certain attitudes and values are regarded as so important that their transmission to the next generation is not left to chance” (p. 6). Thus across many settings and societies, curriculum is formed, and informed, by social and cultural values, knowledge and skills that are deemed necessary for young people to know to prepare them for future work and life (Riddell, 1992). Curriculum then is not a fixed “‘thing’ but a ‘dynamic identity’” (Riddell, 1992, p. 1) that is continuously influenced by the ideological positions of politicians and policymakers, the changes in economies and societies as well as the beliefs, traditions and values of those who teach and of those who learn.

The turning point that starts to make notions of curriculum contentious is Lawton’s consideration of curriculum as being about ‘*selection* from the culture of society’ (my emphasis). It is in relation to ‘selection’ where those who have considered gender and its interaction with curriculum as problematic take issue; i.e. that the selection from the culture is not neutral and is dominated by particular, powerful groups who dictate what is taught, how it is taught and also how it is assessed. Feminist critiques of this ‘selection from the culture’ detail how traditional, hegemonic, gendered, classed and socially elite influences of the curriculum perpetuate, leaving the values, experiences and influences of women, and people of lower social classes and different ethnic backgrounds unselected and invisible (Apple, 1989; Gipps & Murphy, 1994; Weiner, 1994). As Weiner (1994) has argued, the curriculum is the site where the selection from the culture is of crucial interest because it highlights and problematizes taken for granted

¹ It is not possible in this chapter to rehearse those arguments about the nature of curriculum that other colleagues will have covered in other chapters in this collection, so I will concentrate on arguments that specifically relate to gender and curriculum issues.

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assumptions about knowledge, gender and culture and also mediates these assumptions within educational institutions and classrooms. Thus curriculum is “socially constructed and as such is both a reflection of the dominant ideas and a place where these ideas are played out or restricted through practice...as well as implicated in the definition and construction of gendered relations” (Weiner, 1994, p. 4) especially in how curriculum reflects or promotes gender-appropriate behaviour and perceptions about boys and about girls and how/what they should learn.

Gender and curriculum: subjects and subject choice

The main way in which young people experience the socially constructed curriculum in schools is through subjects (Goodson, 1993); the ‘selection from the culture’ is formulated at policy level and implemented at school level through subject disciplines. Whether curriculum is nationally or locally determined, the subject-based curriculum normally and commonly reflects the main received knowledge domains within the spheres of the sciences, arts and humanities, agreed upon by policy makers, subject experts and learned societies - those deemed by society to have authority in these matters for determining what is taught in schools. It is around and within these received knowledge domains and their structure in to subjects where Weiner’s (1994) site of curriculum contestation mainly resides as well as who is powerful in the final decisions about what should be taught and what is deemed appropriate curricula for schools. As Goodson (1993) argued, even the notion of ‘subjects’ assumes an agreed consensus of what these collections of intellectual ideas and knowledge should be. Furthermore, that subject hierarchies exists to the extent that within schools, subjects compete for status, resources and even territory. Even with large-scale curriculum changes across many nations through the adoption of national curriculum systems, the content and form of subjects within these systems are perpetually contested, ideologically and politically re-formulated and continually struggled over as to what constitutes valuable knowledge. What has emerged from contexts of socially

constructed curricula and subject knowledges are notions of what constitutes an appropriate education for boys and girls and what subjects are appropriate for them to study.

While these considerations of subject appropriateness may have differed over time (Weiner 1994), there continues to be deep curriculum roots that underpin the problem of gender and differential achievement, where particular knowledge has historically been, and continues to be, associated with different groups (Murphy 2008). The different discourses of particular disciplines have signalled to learners their relevance to them and legitimised learners' choices of particular subjects. Hence many studies have shown how subjects within the categorisations of the sciences, mathematics and technologies have long been considered more relevant and legitimate for males as appropriate spheres of learning, whereas subjects within the categorisations of languages (mother tongue and foreign languages), humanities and arts are considered more relevant and appropriate for girls (Elwood & Gipps, 1999). Patterns of performance in international tests and assessments, such as PISA² and TIMSS³ tend to reinforce these messages (Hadjar, Krolak-Schwerdt, Priem & Glock, 2014; OECD, 2015). In these international tests of achievement, distinct patterns of performance for males and females across time and across the subjects of language (native), maths and science have been identified. For example, in the assessment of English language, females tend to perform better than males in all main aspects of the subject, especially in reading and writing (Gipps & Murphy, 1994; OECD, 2004, 2015). The gaps in performance between males and females tend to show themselves in the beginning of primary school and continue to grow until females perform better than males to a significant degree by the end of compulsory schooling. In maths, international surveys of achievement (Mullis, Martin, Gonzalez & Chrostowski, 2004; OECD 2013, 2015) show that on average males and females in the earlier stages of schooling perform similarly, but as age increases, males generally tend to outperform females, and by age 15/16, males achieve better performances in virtually all aspects of mathematics tested. In science, evidence from large-scale assessment programs at international level show that males perform better

² The Programme for International Student Assessment

³ Trends in International Mathematics and Science Study

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than females in science, but that the gaps in science are the smallest across the three subject areas and are tending to close (Neuschmidt, Barth & Hastedt, 2008; OECD 2013, 2015).

Early explanations for why such differences occur tended to reflect the above premises that different subjects are naturally suited to boys and to girls and thus sex-group outcomes in achievement were, if not expected, then not surprising (Gipps & Murphy, 1994; Hyde, 2005; Willingham & Cole, 1994). However, more detailed analyses that have looked at boys' and girls' preferences and choices within curriculum subjects have argued that perhaps the differences observed are more to do with access to the range of curriculum subjects on offer as well as subject choices that interact with gender-identities and how these are played out in school rather than natural tendencies within males and females to be better at certain subjects (Murphy & Gipps, 1998).

The propensity for subject choice to become polarized is well known (Clark & Millard, 1998; Elwood & Gipps 1999) and affects boys and well as girls. The gendered connotations associated with subjects outlined above, end up restricting individuals' freedom of choice. The 'cafeteria style' (Riddell, 1992 p.8) selection of option choices offered to students at certain ages of their schooling (in the UK at 14 years old) sees students selecting curriculum subjects that show a 'gendered spectrum' in subject choice (Riddell, 1992, p.8) which continues to be extremely marked and reflected through differential entry and performance outcomes across national assessment systems (Elwood, 2005). Thus students tend to select those subjects for which they have a preference and research has indicated that these preferences become more gendered as age increases (Colley & Comber, 2003). While many scholars looked with optimism to the introduction of national curricular systems to reduce gendered choices and differential access to subjects through the compulsory study of science, arts and humanities for both boys and girls through to school-leaving age (Paechter 2003), there is still evidence that the gendered-spectrum of subject choices continues to exist (Lahelma, 2014). This is because

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choices of subjects by girls and boys are seen as reflecting more than their preferences and are more likely to be linked to broader and more prevailing influences from society and how gender roles and beliefs are seen as manifested within the school curriculum. Ridell (1992) argued that they reflect a complex mix of choice and coercion due to the boundaries and constraints put on boys' and girls' option choices by schools, as well as reflecting ongoing processes of 'identity construction' involving boys and girls, their peer groups and their social circles to the "extent where personal curriculum represent[s] a statement of their gender identities" (p. 15).

Gender and curriculum: subjects, pedagogical values and cultural legacies

Emerging socio-cultural perspectives in relation to gender, subject knowledge and choice suggest that the deep curriculum roots to gender and (under)achievement are more affected by how gender values are privileged in subject communities in schools and how teachers mediate these gender values (often unconsciously) through their own pedagogical subject knowledge and practice (Murphy 2008). Sociocultural understandings of learning prioritize humans as social actors who are continuously acting upon the world and who learn and come to know in relationship; learning is between people in activity, "in and arising from the socially and culturally structured world" (Lave & Wenger, 1991, p. 51). Ivinson and Murphy (2007) therefore suggest that gender in this context is an "aspect of the social order, incorporated within symbolic networks and a dimension of social situations" (p. 7). They go on to suggest that learners are in interaction and relation with subjects and in consequence develop identities that are shaped by the subject settings they encounter, the different positions within subjects afforded to them depending on whether they are a boy or a girl and the gendered, cultural legacies associated with subjects that are replicated and mediated by both male and female teachers in the guise of classic subject knowledge.

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For example, Ivinson and Murphy (2007, pp. 82-83) discuss in detail teachers' reflections on their own pedagogical practices as they taught their subjects within single-sex classroom settings which were formulated as a way of tackling boys' (perceived) underachievement. The teaching of their subject to boys and girls separately raised tensions for teachers that were linked to their beliefs about which students legitimately belonged to their subject and how far they felt the need to change (or not) their subject to accommodate boys or girls. In science, one male teacher maintained the traditional beliefs and pedagogical subject knowledge of the power of scientific method and its links with a masculine idea of science. In promoting these practices, he tended to exclude girls from his subject and aligned his subject with boys; extending to girls an identity of non-participation. Furthermore, in English, one female teacher, articulated her subject's knowledge-gender dynamic of creative writing and novels being associated with subjective-feminine knowledge and grammar, syntax and structure being association with objective/masculine knowledge. In aiming to include boys in what she suggested they perceived as a predominantly female subject, she emphasized the objective/masculine knowledge within English and changed the subject for boys, without reflecting on how such changes again had gendered connotations of an homogenous learning preference by all boys.

So even if girls and boys are creating personalized curricula and selecting and participating in subjects that are outside traditional gendered choices, they are still exposed to dominant gender narratives within subjects that are drawn on by teachers' own pedagogical practices and discourses. Thus boys and girls may develop "different positional identities in subject settings because they are afforded different positions within them... [which ultimately] mediates students' experiences of agency, and of identification, and therefore their potential to develop expertise" (Ivinson & Murphy, 2007, p. 51). Therefore, what we learn from cultural views of gender that prioritize the resources that masculinities and femininities present as well as

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socioculturalist views of learning is that there are more complex and nuanced understandings and experiences of curriculum, subjects, pedagogy, gender and achievement that may account for the differences in performance that we find on national and international assessments as well as in school-based outcomes more generally. Another significant aspect that can be added to this complex mix is that of assessment and its interaction with curriculum, gender and pedagogy; how socially constructed subjects and learning are assessed and the extent to which assessment practices and structures, in their mediation with gender, produce the differential performance observed. It is to this aspect that I turn next.

Gender and assessment

Gender and its interaction with assessment practices and structures has a considerable history as a focus of research (Elwood, 2010) and continues to be a very popular area of debate and tension. As outlined above, most international assessment systems and surveys continually promote comparisons between the overall performances of boys and girls and many nations also publish national assessment results by gender which become the focus of various commentaries (media- and policy-based) as to why such differences (which are quite large in some subjects) occur (Elwood 2005; Mills & Keddie 2010; Lehelma 2014). Thus our definitions and understandings of achievement/underachievement and our knowledge as to whether one gender is performing better or worse than another perpetually emerge from the outcomes of large-scale assessment systems that end up providing powerful, symbolic messages to policy makers, schools, teachers, students and parents that become the perceived reality about what boys and girls know, as well as the 'truth' as to who is over/under achieving

So for example, in the jurisdictions in which I research and work, the main national assessment/examination systems at 16 and 18 are the General Certificate of Secondary Education (GCSE) and the General Certificate of Education Advanced Level (A level)

respectively. These are taken by young people across England, Northern Ireland and Wales⁴ and the benchmark of success in these examinations is for young people to obtain grades A*-C and to do so in at least 5 subjects (including English and mathematics). If we take gender as a dichotomous variable and review outcome data across all major examining organisations within these jurisdictions for GCSEs and A Levels at these benchmarks then some very significant patterns emerge. The results for 2014 are as follows:

- Slightly more females than males were entered for GCSEs - 51 per cent of the entry for GCSE were female;
- Females obtained more GCSEs than males at the benchmark level – 9.4 per cent more females obtained GCSEs at grades A*-C compared to males
- More females were entered for A levels - 54 per cent of A level entrants were female
- Females obtained more A levels than males at the benchmark level – 4.9 per cent more females obtained A levels at grades A*-C compared to males

(JCGQ 20014a; 20014b).

These figures are for 2014 only but patterns over time show that entry figures for GCSEs have increased for males and females generally, but the difference in the entry ratio has remained relatively stable with slightly more girls being entered than boys even though they make up a smaller percentage than males of the 16-year-old cohort (Stobart, Elwood & Quinlan, 1992). The patterns of outcomes at this level have also remained constant, with girls achieving at least 8% or 9% more GCSEs at the higher levels than boys. Entry figures for A level have changed dramatically over the last 40 years or so. In 1970, only 30% of the entry for A level was female, compared in 2014 with 54%. Result patterns too have changed at A level with females now obtaining more A levels at the benchmark levels compared with their male counterparts, who had been ahead in results terms in the 1980s and 1990s (Elwood 2005). In looking at these

⁴ These are 3 of the 4 constituent countries of the UK, the other being Scotland. It has a different education and assessment/examining system

types of overall statistics over time and for present day, they do present some every large differences in entry and result patterns between the two groups that might well be cause for concern. Taken at face value they suggest a number of things: (i) that not all boys are performing as well as all girls and may well be at a disadvantage when it comes to obtaining those qualifications that are needed for career and educational advancement; and (ii) that all girls are obtaining more qualifications at the end of compulsory and advanced stages of schooling and may be advantaged by the examination systems in obtaining more valuable qualifications that they can trade for university and college places. However, as many of my own and others' analyses have shown (Connolly, 2006; Elwood, 1995 & 2005; Strand, 2014) such interpretations belie the complexities of factors and processes going on behind these statistics which can impact on the differences observed. I have argued elsewhere (Elwood 1995, 2005; Elwood & Gipps, 1999; Elwood & Murphy 2002; Stobart et al., 1992,) that much is hidden behind these overall statistics and that more in-depth investigations into these types of statistics reveal very different patterns of results that demand that we look into: the 'types' of girls and boys that are being entered (looking at higher achieving students, plus their ethic and social backgrounds) and indeed, not entered; the patterns of results that occur within girl groupings and with boy groupings across class and ethnic minority categorisations (which end up being of more significance) and to what is going on at individual grade level as well as the formats of assessment that are being used within large scale examination systems that may well produce the differential achievement noted above.

Responses to these perceived gender disparities in national assessment and qualifications like those presented above, have been policy and research agendas both nationally and internationally that have focused on the raising of boys' achievements. While the rhetoric with regard to both large- and small-scale educational innovations implemented since the late 1990s has been about the raising of standards for all children, research has shown that many such innovations, across many jurisdictions have been primarily geared towards solutions to boys'

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underachievement (Younger, Warrington & McLellan, 2005). To accompany these disparities in achievement that seem to favour girls and disenfranchise boys, there have been associated discourses that created new gender stereotypes in education. The discourses surrounding boys suggest that they are: problem boys, poor boys, damaged boys, boys at the mercy of feminist teachers and boys outperformed by girls (Epstein, Elwood, Hey & Maw, 1998; Mills & Kerrie, 2010; Ivinson 2014; Lehelma 2014). Whereas the discourses surrounding girls suggest that they are: overachieving winners in the qualifications market place, of excessive value to schools in terms of raising examinations success and the direct beneficiaries of the 'girl power' movement with girls' (perceived) greater visibilities and freedoms (Ball & Gewirtz, 1997; Epstein et al., 1998; Elwood, 2005; Hadjar et al., 2014; Ringrose 2007). However, rather than being helpful, these types of discourses tend only to obscure the more complex stories that lie behind them, some of which have been outlined above in terms of curriculum and its interaction with gender. As the sections above have indicated, many researchers have looked into the complexities of curriculum and teaching, as well as into boys and girls themselves in terms of attitudes, perspectives and identities, to understand why these differences in achievement exist (Zyngiar 2009). For those of us who are interested in the field of gender and assessment, there is considerable interest in how the assessment practices and processes themselves interact with boys' and girls' learning, identities and educational experiences that may create the differences observed.

Understandings of assessment

Across the field of assessment there are differing understandings (old established ones and new emerging ones) of what assessment is, what it does and what its purposes should be (Black 1999). These differing understandings emerge from a range of theoretical approaches that underpin the development of assessment systems and which are aligned to different views of what learning is, how it happens and how it then should be assessed (Murphy 1998); in this way considerations of assessment are shifting and reflect re-considerations within the fields of gender and /or curriculum that have been discussed earlier. A long-standing and historically

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predominant theoretical position within assessment is the traditional psychometric model with its associated understandings of learning, which articulate the presence of underlying, fixed psychological attributes that can be observed and evaluated through responses to test items. Within this tradition assessment is considered something that is done to the individual to measure that individual's learning (the behaviourist approach) (Elwood, 2006; James 2006).

This approach also assumes that assessments are activities that take place in isolation from the teacher and other learners and that assessment tasks are neutral, stable across learners and the testing system itself has no influence on the performances observed (Elwood & Murphy 2015). Here the premise is that tests or examinations are independently checking up on a student's ability - what students can do on their own. The psychometric tradition is still very powerful in the field of assessment (Elwood & Murphy, 2015; Lemann, 2000) as systems move from nation-centric affairs into the global enterprise of international surveys and comparisons (such as PISA, TIMMS and PIRLS⁵) with the associated influences of international bodies (such as OECD) to determine almost all forms of international assessments.

More recent considerations of assessment reflect on it as a more social and cultural construction. This is particularly observed within those re-emerging debates that suggest that more formative approaches to assessment will improve students' learning (Black & William 1998, 2005; Darling-Hammond et al., 2013; Shepard 2000). Within this position, assessment (mostly formative assessment carried out in classrooms, by teachers, with and for students' learning) is promoted as something that will enhance student attainment and develop teachers' own assessment practice (the social constructivist approach) (Elwood, 2006; James 2006). Further debates within the field of assessment, place emphasis on the culturally mediated nature of assessment (Cowie & Moreland, 2015; Hickey 2015). Within this emerging position, assessment is seen as a process inherently facilitated by cultural actors, where the very complex interactions of assessment, curriculum and pedagogy are considered fundamental to

⁵ Progress in International Reading Literacy Study

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understand how learning happens and the cultural and social contexts within which assessment takes place are prioritized (Fleer, 2015). Acknowledging and understanding the relationships that occur within cultural settings (e.g. classrooms) between teacher and student, and student with student, is key in comprehending the mediation of learning in such settings (the socio-cultural approach) (Elwood, 2006; James 2006; Willis, 2011).

These fluctuating views of assessment and associated alternative views of learning (Elwood 2006) are aligned with the shifting views of gender and curriculum outlined above. So within the psychometric tradition, the notion of gender as 'sex-group' is dominant. Within the social constructivist tradition gender as well as assessment are considered as social constructs where aspects of assessment techniques and structures interact with gender and impact on how boys and girls understand what is necessary from them for a successful response. From the socio-cultural perspective, gender and assessment are considered as cultural artifacts with more complex relationships in practice. Such relationships show gender manifesting itself in everyday classrooms in ways that reflect how it is in the world more generally, how it is played out by girls and boys in their lives and how it then impacts on their learning. Thus the educational experiences of boys and girls of the subjects they study, the assessments they encounter and the contexts in which all of this happens, are not gender neutral, but are profoundly impacted upon by the social roles and identities taken up by boys and girls and by their teachers. All of which ultimately has influence on educational success.

Gender and assessment: sex group differences defining achievement

As outlined above, early research into differences between boys' and girls' achievements on tests and assessments considered the sex-group of the candidate as a key variable in helping to understand differential achievement and discrimination between learner groups in education more generally (see Gipps & Murphy 1994 and Willingham & Cole, 1997 for comprehensive overviews). Analyses of assessment outcomes in these studies used the definition of gender as a static, fixed, dichotomous variable (male/female) against which results could be analyzed and

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reported. Such analyses were helpful and valuable to establish a field of research into differential achievement, and to explore what was happening to girls' and boys' performances on national and international tests such as those discussed above. Much of the drive for this type of analysis emerged from early feminist research that highlighted inequalities in many areas of schooling, not least in terms of curriculum access and exposure (Epstein, Elwood, Hay & Maw, 1998) but also in terms of access to examinations and thus to successful, higher level qualifications on leaving school (Murphy & Elwood, 1998; Stobart et al., 1992).

Such sex-group analyses from the UK allowed those inequalities in entries for examinations as well as in final outcomes outlined above to be better investigated which suggested that unequal opportunities for girls and boys perpetuated in terms of curriculum exposure and teachers' decision making around access and entry to particular subjects (Stobart et al., 1992; Elwood, 1995). Research in the field of gender and assessment has greatly benefited from these types of analyses, especially as much of the data can now be disaggregated at a number of levels – the test as a whole, the test papers and other assessment components, and the test questions in terms of mode of response and content and skills sampled from the domain. Such analyses have enhanced our knowledge of stable patterns of differences in performances between boys and girls. They have also allowed us to monitor patterns of performance across different types of assessment and have enabled researchers to pursue questions of fairness and equity at system and policy levels.

Limitations of such approaches and analyses, however, have become more evident in relation to trying to understand why such patterns persist and researchers who reject the more psychometric traditions with regard to views of learning and assessment have been forced to rethink their reliance on such analyses alone (Elwood & Murphy, 2015). For example, one major limitation is that such approaches focus on differences between girls and boys that are actually small or of little significance (in statistical terms). Differences between boys and girls across many tests actually show an overlap on performance while there are bigger differences

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occurring within female and within male groupings (Hyde, 2005). Data analyses by a dichotomous male/female variable can only show us what is happening in relation differential performance across any one test or set of tests, but cannot offer illuminative reasons as to 'why' such differences occur. It becomes difficult to extract whether the differences observed are an artifact of the assessment itself or whether there is fundamentally something more important interacting with the assessment experiences of boys and girls more generally. A further limitation is that single variable analyses means that data are being considered along one dimension only, i.e. sex group. With the development of more sophisticated, multidimensional analyses, it is the intersectionality of gender with other social variables such as ethnicity and social class that needs to be the focus of future analyses so that more profound presentations of differential achievement might become the norm (Strand, 2014). Such analyses would enable multilayered questions to be answered such as why is it that boys and girls from similar social classes and/or ethnic minority backgrounds perform so differently on assessments of educational achievement; what are the factors that might lead to children, even from the same families, to so disparately achieve when their educational circumstances (school attended, opportunities to learn etc.) might be considered almost identical.

Gender and assessment: as social and cultural concepts in interaction

There is a considerable body of research in the area of gender and assessment that has taken seriously the limitations of the 'gender as sex-group variable' approach outlined above and has developed alternative frameworks within which to consider the interaction of assessment and gender (Elwood 2006). Within these arenas gender and assessment are positioned as socially and culturally constructed and are in much more complicated relationship to one another. Thus gender interacts, not only with assessment techniques, structures and systems (at the summative level) but also with assessment practice carried out between the teacher and student and/or peer and the context in which it occurs (at the formative level) (Elwood 2006; Elwood & Murphy 2015; Murphy, 1999, 2008; Iverson & Murphy, 2007).

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In terms of summative assessment, research has considered the social nature of assessment structures and techniques to help understand why differences between boys and girls occur within assessment systems (Gipps & Murphy, 1994; Stobart, et al., 1992; Elwood 1995 & 2005; Willingham & Cole, 1997). Factors identified from various research studies have shown that gender interacts significantly and consistently with aspects of assessment practices that show the latter to be more socially fluid in reality. For example, research has explored the interaction of gender with: the mode of response of test items (multiple-choice vs open ended responses)(Beller & Gafni, 1996; Murphy 1992); the degree of students' familiarity with the assessment items and tasks (Willingham & Cole, 1997); the choice of curriculum content selected from subject domains to be assessed (White, 1996); the use of context in assessment items and tasks (Boaler, 1994); teacher-assessed components of national assessment systems (also known as coursework or school-based assessment)(Elwood 2005); and the use of different levels of assessment with restricted grade ranges within the same qualification (known as tiering or targeted assessment)(Elwood 1995; Quingping He, Opposs, Glanville & Lampreia-Carvalho 2015; Stobart et al., 1992). What is common from this body of research is that not only do different assessment structures, components and techniques not operate in practice in the same way for boys and as they do for girls, but that boys and girls pay very different attention to different assessment tasks and formats (Murphy & Elwood, 1998) with their preferences for dissimilar types of assessment format impacting differentially on their achievements. Moreover, teachers also hold gendered perceptions of how different types of assessment contribute to the final success of boys and girls (Elwood, 2005; Gipps & Murphy 1994). Thus the validity of the various assessment modes used to evaluate students' learning comes into question, if they interact differentially with different groups of students. I have argued elsewhere that the social consequences of differential validity are considerable backwash effects on boys' and girls' curricula experiences as well as educational successes (Elwood, 2010).

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Similar investigations into the interactions of gender and formative assessment are less common in the field as this requires detailed explorations of classroom settings as well as research approaches that investigate perspectives within teachers' own pedagogical practices and aim to make problematic what transpires there. Emerging interests in the field of assessment, like those in curriculum outlined above are considering sociocultural theoretical positions to better understand how gender is integral to students' learning experiences and is embedded in assessment practices and outcomes (Elwood & Murphy 2015; Ivinson & Murphy 2007; Moss et al., 2008). Views of assessment from sociocultural perspectives suggest that it cannot be considered in isolation from the social, historical and cultural contexts in which it occurs (Fleer 2015). Gender is part of these contexts and presents itself as a sociocultural resource around a set of ideas, conventions and norms that boys and girls can perform and through which their social beings are created and played out. The gendered lives of students and their teachers are not left at the classroom door but are brought into these social situations where relationships interact significantly with those subject-based curriculum cultural legacies that mediate what is taught, how it is taught and how, ultimately, what is equated with achievement. All these aspects are seen to be of importance in comprehending why boys and girls perform differently on assessment tasks and tests.

For example, not only are boys and girls bombarded within subject cultural legacies with notions of belonging or not to subjects (as discussed above), such legacies also contain gendered messages about preferential ways of assessing the subject, about what knowledge equates with success and who is more likely to be successful using preferred assessment systems. Murphy (2008) has argued that boys and girls interact with these messages in different ways, in relation to what they see as relevant to them and their lives and also what are gendered-acceptable things to know and to 'be seen to know' within their own gendered, social identities and what they can, and choose, to then demonstrate to know through assessment opportunities. She has further argued that how teachers view success in the community of the subject, its conventions, forms, practices and cultural settings can significantly influence their

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judgments of boys' and girls' abilities that are then manifested in teachers' formative assessment outcomes (Elwood, 2006). Students themselves become agentic in how they view, and seek success across subjects and associated assessment practices that determine their own evaluations of how to be successful in both summative and formative assessment situations. Definitions of under/over achievement then are entangled with teachers' and students' experiences of the curriculum, learning and assessment; it is only by looking in to these experiences in detail can we obtain a fuller understanding of how the concept of gender plays out in the educational lives of students and teachers.

Concluding remarks

This chapter explored the concepts of gender, curriculum and assessment and attempted to show how differing positions within each of these areas offer us a range of ways of thinking about these concepts, as well as ways of understanding more fully boys' and girls' relationships to learning identities, subject cultural legacies, pedagogical practices and assessment techniques as they manifest themselves in educational outcomes. The growth in accountability mechanisms with associated reporting and evaluating of performance of students by male/female subgroups have allowed more simple comparisons of boys and girls achievements to dominate the debates and discourses in the area of (in)equality and education (Iverson 2014; Lahelma, 2014). Furthermore, such reporting has led to headline figures that conceal real stories of male and female achievements that show increases in outcomes generally, year-on-year, for both groups as well as varying patterns of performance across subjects and at individual grade level (Elwood, 2005; Murphy 2008). Thus those positions that see gender as something that is fixed, curriculum and assessment as systems and practices that are neutral and uncontested provide us with a limited, and ultimately distorted view of the educational experiences of boys and girls and suggest that solutions to any differential access, opportunities and/or achievements lie within the deficiencies of boys and girls themselves. Such

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understandings “reduce gender to a matter of biology [and] sex groups are treated as homogenous and within group diversity is ignored” (Murphy, 2008, p. 161). What is less explored when gender is seen as a static variable are the unequal structures of schooling, the culturally complex narratives of subjects with associated hierarchies of position and power within curricula, and national systems of assessment that are socially and politically manipulated as well as promote techniques that are differentially valid.

Taking the position that sees the concepts of gender, curriculum and assessment as culturally constructed, fluid and complex, allows for more in-depth understandings and explorations of these ideas and how they are mediated, interrelated and changed in interaction between learners’ own educational identities and teachers’ own views of their subject positions. Many researchers that locate themselves within the field of gender and curriculum and/or gender and assessment are advocating such a position if we wish to fully understand curriculum, assessment and pedagogical systems as they play out in schooling arenas. Looking into poststructuralist ideas of masculinities/femininities, and sociocultural ideas of learning and being will allow for better curriculum, assessment and pedagogical systems because they will reflect the true realities of gender and of boys’ and girls’ educational experiences. The multifaceted nature of classrooms, the involved role of subject cultural legacies, the gendered nature of students’ and teachers’ lives, the complex relations between these actors as well as the socially-constructed nature of assessment practice must all be recognized as playing significant roles in the education systems we devise and support. Embedding such perspectives in the future designs of curriculum, assessment and pedagogical systems can only improve our knowledge of what we are attempting to do when we aim to educate boys and girls.

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References

- Acker, S. (1981). No-woman's land: British sociology of education 1960-79. *Sociological Review*, 29(1), 77-104.
- Apple, M. (1989). How Equality has been Redefined in the Conservative Restoration. In W Secada, (Ed.), *Equity and Education* (pp. 7-25). New York: Falmer Press.
- Annot, M., David, M. & Weiner, G. (1996). *Educational reform and gender equality in schools*. Manchester: Equal Opportunities Commission.
- Black, P. (1999). Assessment, Learning Theories and Testing Systems. In P. Murphy (Ed.), *Learners, Learning and Assessment* (pp. 118-134). London: Paul Chapman.
- Black, P. & Wiliam, D. (1998). Assessment and Classroom Learning. *Assessment in Education*, 5, 7-71.
- Black, P. and Wiliam, D. (2005). Lessons from around the world: how policies, politics and cultures constrain and afford assessment practices. *Curriculum Journal*, 16, 249–61.
- Centre for Educational Research and Innovation (CERI). (2005). *Formative Assessment: improving learning in secondary classrooms*. Paris: OECD.
- Cowie B. & Moreland J. (2015). Leveraging disciplinary practices to support students' active participation in formative assessment. *Assessment in Education: Principles, Policy & Practice*, 22(2), 247-264,
- Clark, A. & Millard, E. (1998). (Eds.) *Gender and the Secondary Curriculum*. London: Routledge.
- Colley A. & Comber C. (2003). School Subject Preferences: Age and gender differences revisited. *Educational Studies*, 29, 59-67,
- Connolly P. (2006). The effects of social class and ethnicity on gender differences in GCSE attainment: a secondary analysis of the Youth Cohort Study of England and Wales 1997–2001. *British Educational Research Journal*, 32, 3-21,
- Darling-Hammond, L., Herman, J., Pellegrino, J., et al. (2013). *Criteria for high-quality assessment*. Stanford, CA: Stanford Center for Opportunity Policy in Education.

Full reference: Elwood J (2016 forthcoming). Gender and the Curriculum in Wyse, D., Hayward, L and Pandya J (Eds.) *The Sage Handbook of Curriculum, Pedagogy and Assessment*. SAGE.

Elwood, J. (1995). Undermining gender stereotypes: examination and coursework performance in the UK at 16. *Assessment in Education*, 2, 283-303.

Elwood, J. (2001). Examination techniques: issues of validity and effects on pupils' performance. In D. Scott (Ed.) *Curriculum and Assessment* (pp. 83–104). Westport, CT: Ablex.

Elwood, J. (2005). Gender and achievement: what have exams got to do with it? *Oxford Review of Education*, 31, 373-393.

Elwood, J. (2006). Gender Issues in Testing and Assessment. In C. Skelton, B. Francis & L. Smulyan (Eds.), *The SAGE Handbook of Gender and Education* (pp. 262-278). London: SAGE.

Elwood, J. (2010). Exploring girls' relationship to and with achievement: linking assessment, learning, mind and gender. In C. Jackson, C. Paechter, and E. Renold (Eds.) *Girls and Education 3-16: Continuing Concerns, New Agendas* (pp. 38-49). Maidenhead, England: McGraw-Hill/Open University Press.

Elwood, J. & Gipps, C. (1999). *Review of research on the achievement of girls in single-sex schools*. London: Institute of Education.

Elwood, J. & Murphy, P. (2002). Tests, tiers and achievement: gender and performance at 16 and 14 in England. *European Journal of Education*, 37, 395–416.

Elwood, J. & Murphy, P. (2015) Assessment systems as cultural scripts: a sociocultural theoretical lens on assessment practice and products. *Assessment in Education: Principles, Policy & Practice*, 22(2), 182-192

Epstein, D, Elwood, J, Hey, V & Maw, J (eds) (1998) *Failing Boys? Issues in gender and achievement*. Buckingham UK: Open University Press.

Fleer, F. (2015). Developing an assessment pedagogy: the tensions and struggles in re-theorising assessment from a cultural–historical perspective. *Assessment in Education: Principles, Policy & Practice*, 22(2), 224-246,

Francis, B. (2006). The Nature of Gender. In C. Skelton, B. Francis & L. Smulyan (Eds.) *The SAGE Handbook of Gender and Education* (pp. 7-17). London: SAGE.

Gipps, C. (1999) Socio-Cultural Aspects of Assessment. *Review of Research in Education*, 24, 355-392.

Full reference: Elwood J (2016 forthcoming). Gender and the Curriculum in Wyse, D., Hayward, L and Pandya J (Eds.) *The Sage Handbook of Curriculum, Pedagogy and Assessment*. SAGE.

Gipps, C. & Murphy, P. (1994). *A Fair Test? Assessment, achievement and equity*.

Buckingham: Open University Press.

Goodson, I. (1993). (3rd Edition) *School Subjects and Curriculum Change*. London: Routledge.

Hadjar, A., Krolak-Schwerdt, S., Priem, K. & Glock, S. (2014). Gender and educational achievement. *Educational Research* 52, 117-125.

Hammersely, M. (2001). Obvious, all too obvious? Methodological issues in using sex/gender as a variable in educational research. In B. Francis & C. Skelton (Eds.) *Investigating gender: contemporary perspectives in education* (pp. 27-39). Buckingham, UK: Open University Press.

Hickey D. T. (2015). A situative response to the conundrum of formative assessment.

Assessment in Education: Principles, Policy & Practice, 22 (2), 202-223.

Hyde, J. (1981). How large are cognitive gender differences. *American Psychologist*, 36(8), 892-901.

Hyde, J. S. (2005). The gender similarities hypothesis. *American Psychologist*, 60: 581-592.

Iverson, G. (2014). How gender became sex: mapping the gendered effects of sex-group categorization on to pedagogy, policy and practice. *Educational Research*, 56, 155-170.

Iverson, G. & Murphy, P. (2007). *Rethinking single-sex teaching: gender, school subjects and learning*. Berkshire, England: Open University Press/McGraw-Hill Education.

Joint Council for General Qualifications (JCGQ). (2014a). National provisional GCSE full course results June 2014 (all UK candidates). www.jcgq.org.uk/exam-result-data/gcse-statsisticssummer.2014.pdf (accessed on 6th January 2015).

Joint Council for General Qualifications (JCGQ). (2014b). National provisional GCE full course results June 2014 (all UK candidates). www.jcgq.org.uk/exam-result-data/gce-statsisticssummer.2014.pdf (accessed on 6th January 2015).

James, M. (2006). Assessment, teaching and theories of learning. In J. Gardner (Ed.) *Assessment and Learning* (pp. 47-60). London: Sage.

Lahelma, E. (2014). Troubling discourses on gender and education. *Educational Research*, 56, 171-183.

Lave, J. & Wenger, E. (1991). *Situated learning: legitimate peripheral participation*. Cambridge: Cambridge University Press.

Full reference: Elwood J (2016 forthcoming). Gender and the Curriculum in Wyse, D., Hayward, L and Pandya J (Eds.) *The Sage Handbook of Curriculum, Pedagogy and Assessment*. SAGE.

Lawton, D. (1975). *Class, Culture and the Curriculum*. London: Routledge.

Lemann, N. (2000). *The big test: the secret history of the American meritocracy*. New York: Farrar, Straus and Giroux.

Licht, B. G. & Dweck, C. S. (1984). Sex differences in achievement orientations: consequences for academic choices and attainments. In M. Marland (Ed.), *Sex Differentiation and Schooling* (pp. 72-97). London: Heinemann.

Mills, M. & Keddie, A. (2010). Gender justice and education: constructions of boys within discourses of resentment, neoliberalism and security. *Educational Review*, 62, 407-420.

Moss, P., Pullin, D., Gee, J., Haertel, E., & Jones Young, L. (2008). *Assessment, equity, and opportunity to learn learning in doing: Social, cognitive and computational perspectives*. New York, NY: Cambridge University Press.

Mullis, I. V. S., Martin, M. O., Gonzalez, E. J. & Chrostowski, S. J. (2004) *TIMSS 2003 International Maths Report: Findings from the IEA's Trends in International Mathematics and Science Study at Fourth and Eighth Grades*. Boston: TIMSS and PIRLS International Study Centre.

Murphy, P. (Ed.). (1999). *Learners, learning and assessment*. London: Paul Chapman.

Murphy, P. (2008). Gender and subject cultures in practice, in P. Murphy & K. Hall (Eds.) *Learning and Practice: Agency and Identities* (pp. 161-172). London: Sage/Open University Press.

Murphy, P. & Elwood, J. (1998). Gendered experiences, choices and achievement: exploring the links. *International Journal of Inclusive Education* 2, 85-118.

Murphy, P. & Gipps, C. (Eds.). (1996). *Equity in the Classroom: Towards Effective Pedagogy for Girls and Boys*. London/Paris: Falmer Press/UNESCO Publishing.

Murphy, P. & Iverson, G. (2004). Gender differences in educational achievement: a socio-cultural analysis. In M. Olssen (Ed.) *Culture and learning: access and opportunity in the curriculum*. Greenwich, CT: Information Age Publishing.

Full reference: Elwood J (2016 forthcoming). Gender and the Curriculum in Wyse, D., Hayward, L and Pandya J (Eds.) *The Sage Handbook of Curriculum, Pedagogy and Assessment*. SAGE.

Murphy, P. & Whitelegg, E. (2006). *Girls in the Physics Classroom*. London: Institute of Physics Publications.

Murphy, R. (1982). Sex differences in objective test performance. *British Journal of Educational Psychology*, 52, 213-219.

Neuschmidt, O., Barth, J. & Hastedt, D. (2008). Trends in gender differences in mathematics and science (TIMSS 1995-2003). *Studies in Educational Evaluation*, 34, 56-72.

Organization for Economic Co-operation and Development (OECD). (2004). *Learning for tomorrow's world - first results from PISA 2003*. Paris: OECD.

Organization for Economic Co-operation and Development (OECD). (2013). *PISA 2012 Results: what students know and can do - student Performance in Mathematics, Reading and Science*. Paris: OECD.

Organization for Economic Co-operation and Development (OECD). (2015). *The ABC of Gender Equality in Education: Aptitude, Behaviour, Confidence*. PISA OECD Publishing <http://dx.doi.org/10.1787/9789264229945-en>

Paechter, C. (2003). Power/Knowledge, gender and curriculum change. *Journal of Educational Change*, 4, 129-148.

Qingping H., Opposs, D. Glanville M. & Lampreia-Carvalho, F. (2015). Assessing pupils at the age of 16 in England– approaches for effective examinations. *The Curriculum Journal*, 26, 70-90.

Ringrose J. (2007). Successful girls? Complicating post-feminist, neoliberal discourses of educational achievement and gender equality. *Gender and Education*, 19(4), 471-489.

Ridell, S. (1992). *Gender and the Politics of the Curriculum*. London: Routledge.

Scott, D. (Ed.) (2001) *Curriculum and Assessment*. Westport, CT: Ablex.

Shepard, L. (2000). The role of assessment in a learning culture. *Educational Researcher*, 29, 4-14.

Skelton, C., Francis, B. & Smulyan, L. (Eds.) (2006). *The SAGE Handbook of Gender and Education*. London: SAGE.

Full reference: Elwood J (2016 forthcoming). Gender and the Curriculum in Wyse, D., Hayward, L and Pandya J (Eds.) *The Sage Handbook of Curriculum, Pedagogy and Assessment*. SAGE.

Strand, S. (2014). Ethnicity, gender, social class and achievement gaps at age 16: intersectionality and 'getting it' for the white working class. *Research Papers in Education*, 29, 131-171.

Stobart, G., Elwood, J. & Quinlan, M. (1992). Gender bias in examinations: how equal are the opportunities? *British Educational Research Journal*, 18, 261–76.

Weiner, G. (1994). *Feminisms in Education –An Introduction*. London: Open University Press.

Willingham, W. W. & Cole, N. S. (1997). *Gender and fair assessment*. New Jersey: Lawrence Erlbaum Associates.

Willis, J. (2011). Affiliation, autonomy and Assessment for Learning. *Assessment in Education: Principles, Policy & Practice*, 18(4), 399-415,

Zyngier, D. (2009). Doing it to (for) boys (again): do we really need more books telling us there is a problem with boys' underachievement in education? *Gender and Education*, 21(1), 111-118.