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Subject Specialism, Gender and Status: The Example of Primary School Mathematics

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Introduction

As a student primary teacher I intuitively understood the relative status of different subject specialisms. With an eye to future job prospects I chose to balance my main subject of sociology with a curriculum specialism (second subject) in mathematics and in due time followed this initial training with a part-time Advanced Course in the Teaching of Mathematics. My intuition was right and I gained first a job and then promotion largely on the basis of my expertise in mathematics.

Unfortunately my intuition failed me during the research design phase of my Ph.D. I set about studying the nature of the primary curriculum and teachers specialist roles therein without any pre-identified concern for mathematics specialists in particular. Nor did I, despite my sociological training, build into the research design a specific focus on teacher gender and position within the management structure. I naively concerned myself with systematic rather than blanket sampling and ended up with some extremely interesting but limited data on the status of mathematics specialists within the research schools. This was a side issue for my Ph.D. but it was an important one and is currently the focus of further research. This article outlines the patterns of subject related teacher status, particularly regarding mathematics teachers, as indicated by the data collected so far. It is interesting that my partial findings are supported by more eminent researchers than myself.

Research Design

A small-scale empirical study of the primary curriculum at the level of school/ classroom practice, was undertaken in twenty-two primary schools in S W Hertfordshire, between 1988 and 1990, as the implementation of the National Curriculum began. While schools at this time were clearly facing dramatic changes in the amount of direction received from central government they had yet to significantly alter their curriculum organisation as a result.

The research sought to develop an understanding of the curriculum as organised in primary schools, and as practiced in individual classrooms; of practitioners' definitions of primary curriculum specialisation: of their own specialist roles within their schools; and their relations with other curriculum specialists. It sought to do this in three ways:

- through an examination of the curriculum organisation of twenty two primary schools;
- through an examination of the curriculum as structured, planned and delivered, by sixty-three teachers in their primary classrooms;
- and through an examination of the head teachers and classroom teachers' observed and expressed curriculum roles and identities.

Interviews were conducted with all head teachers and class teachers in the sample, and the teachers' classrooms observed in action. Interviews took the form of fairly open head / teacher commentaries around their views on the primary curriculum and their practice of it. Teachers and heads were encouraged to describe in detail their classroom / school curriculum practice and to offer reasons or explanations of

'why they did what they did'. This approach enabled teachers / heads to introduce ideas, thoughts or areas that were not pre-determined by the writer. Hence, it was left to teachers / heads to specify what they meant by the primary curriculum, curriculum responsibility, and curriculum specialisation. The approach adopted for classroom observation was that of a non-participant observer.

Gender and Subject Specialism

It had not been the intention of this research to specifically explore the issue of gender in relation to primary teacher specialisation. Yet the data clearly indicates this to be an important factor relating to teachers' subject identities and their status / power positions within the management structure of many primary schools.

The differential relationship between gender and subjects studied, within education, is not a new issue. Despite some narrowing of gaps in recent years, males are more likely than females to study to advanced levels math's, technology and science-based subjects, and females are more likely to do the same in the humanities and arts-based subjects. this differential can be seen in the gender distribution of secondary and higher education subject-based teachers. It had not been anticipated that the situation in primary schools would mirror this, given its argued non-subject base / whole curriculum class teaching and the predominance of female teachers. as gender was not a particular focal point of the research design, some potentially useful data was left uncollected e.g. regarding details of all staff in respect to gender, posts of responsibility and any specific subject identity held. However, the data collected relating to the teachers interviewed in each school (selected on the basis of one of four age-ranges), clearly indicated a gender / subject / age-taught / senior position pattern.

Nationally, only 16% of primary teachers are male (cited Alexander, 1991). Disproportionately, approximately 50% of primary heads are male. One can deduce from this that, nationally, there would be a significant male presence in deputy head posts (en-route to headships). However, our data, whilst confirming such differential distributions, also throws up gendered patterns regarding the age of the children taught, and subject-based curriculum leadership roles.

In this sample of schools eleven of twenty-two heads were male, all of whom were heads of junior schools or JMI schools (11/16). There were no male heads of infant schools. No such figure is available for deputy heads, given that the empirical focus had been on heads and the teachers of four different age-ranges - Reception, Year 1, Year 2, Year 3 and Year 6. However, within the sample, well over a third of Year 6 teachers were also deputy heads (7/16), most of them were male (5/7), and more than two-thirds of them held posts of responsibility for math's and / or science (13/16). The following can be said about this sample:

- there was a greater tendency for year 6 teachers to be responsible for mathematics and / or science than for teachers of the other age-ranges covered;
- there was a greater tendency for Year 6 teachers to also be the deputy head than for teachers of the other age-ranges covered;
- there was a much greater tendency for Year 6 teachers to be male than for teachers of the other ages covered (of a total of ten, eight males taught year 6 and two Year 3).

Each statement is in fact independent of the other, involving different groupings of the Year 6 teachers in the sample (total of 16), so it is not possible to combine the statements i.e. that most Year 6 teachers were also deputy heads, responsible for

math's and science in their schools and male. the combined statement in fact applied to just over 25% of Year 6 teachers (5/16).

Whilst head teacher's appointment priorities, and curriculum leadership credibility amongst peers, accorded higher status and power to child / primary specialisation, there was also evidence of a patterned connection between senior management positions, a math's and / or science subject identity, teaching the eldest primary pupils and maleness. Whilst these were not heads' stated appointment priorities, gender, subject and age-taught, do appear to be clearly related to promotion prospects and ultimate power / status in these primary schools.

Primary Teacher Status

Despite their prime areas of expertise lying in generalist class teaching and breadth of curriculum coverage there is, for many primary teachers, a degree of subject identity associated with either ITT, INSET and / or the curriculum leadership posts they hold. Within these schools, in relation to curriculum leadership, there were clear connections between male teachers, teaching older children, responsibility for high status subjects such as math's, science and deputy headship.

In teaching in general, higher status (and subsequently authority and power) goes with the teaching of older pupils, having an overt subject identity (especially if that subject identity is math's or science), and maleness. Whilst the patterns presented above emerge from a focus on Year 6 teachers in sixteen schools (the remaining schools were infant and thus had no Year 6 classes), similar patterns and issues of gender-related power / status have emerged from other studies with a different focal point e.g. Loizou and Rossiter's (1987) study of the role of math's post-holders, and Alexander's (1991) study of the role of 'primary needs' coordinators in Leeds.

In Loizou and Rossiter's (1987) example, their finding, that "most math's post-holders were teaching in the upper years of primary school", was not subject to further explanation. However, Alexander's (1991) work examined in more detail the status and gender of post-holders for the seven most frequently coordinated curriculum areas in a representative sample of thirty Leeds schools. It was found, in that sample, that "all male math's post-holders were of a higher status than MPG (Main Professional Grade); i.e. they received additional salary in the form of an incentive allowance. Female teachers on MPG held posts of responsibility for math's in half the sample of schools; i.e. they received no extra salary for doing so, but "...in only 3 of the 17 schools which had any male staff at all were women rather than men responsible for math's" (p131). Also, "A third of the sample's deputies coordinated math's", and 38% of the sample's deputies were male. Alexander states:

".....schools in the sample consistently gave priority to developing curriculum areas coordinated by high status teachers (e.g. deputy heads and allowance holders), and these areas tended to have a high proportion of male teachers holding responsibility...." (p135)

Despite data relating to age-range taught i.e. older pupils / Year 6 not being available from this study, Alexander's findings, taken with Loizou and Rossiter's, parallel those derived from my sample. In each case there is a connection between subject, age-range taught, power / status and maleness.

The management and curriculum hierarchy in each of these samples reflect the higher status (and financial reward) accorded to male teachers, older pupils, and math's and science subjects, despite heads' stated commitment, in my sample, to generalist class teaching and whole curriculum coverage when appointing new

teachers. As Alexander (1991) points out, the significance of such features will not be missed by children. Teachers are role models, and this is part of the hidden curriculum messages they convey.

Conclusion

The data from this research suggests a hidden curriculum message for primary teacher's careers:

- it is better to teach older children,
- to be identified with math's, science or both, and
- to be male.

Unfortunately, the introduction of the National Curriculum has the propensity to reinforce these divisions related to subject specialisation through the prioritising of three core subjects, two of which largely and traditionally have been associated with males.

References

Alexander, Robin J. (1991) *Primary Education in Leeds: Twelfth and final report from the Primary Needs Independent Evaluation Project,* University of Leeds.

Loizou, C. D. and Rossiter, D. (1987) *The Role of the Mathematics Post-Holder in Primary School,* University of Birmingham.