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Introduction

Research on education and social inequality has been carried out since the early 1960s. There is a tradition of research in the sociology of education in most European countries and the US which endeavours to explain social differences in educational careers, in particular the educational disadvantage of working class children (see for example, Mehan, 1992, for an overview). Research on inequality and gender is more recent, but a considerable amount of work has been carried out in this field.

In this article, we analyse 15 years of Dutch research on gender and education (ten Dam *et al.*, 1992). The method we have used focuses on research results and on conceptualisations of gender inequality in education, theoretical frameworks and the research methods. The situation in the Netherlands is far from ideal. A fair amount of empirical research, mainly quantitative, has been carried out, but attention has also been given to the development of theory. However, these two levels have generally been carried out independently of each other, often in completely separate research groups. Hence, scarcely any research programmes have been instigated in which the development of theory and empirical research form an integrated whole. Not only research-internal factors have influenced research on gender and education, but research-external factors, such as central government policy and the possibilities for funding, have also played a decisive role.

Systemising the theoretical and empirical research in a particular field does not merely involve a critical survey of what has been done; drawing up guidelines for the future on the basis of the research is particularly useful. This includes exploring the possibilities for improving and consolidating each potential research programme that we found. In this article, we shall argue strongly in favour of inter-programme discussion, that is to say, discussion between researchers who adhere to different theoretical orientations. This requires the existence of alternative programmes in addition to a dominant research programme. Comparative and evaluative discussions between competing programmes benefit all the programmes involved and, moreover, may prompt new research questions. One must pay attention in the gender and education research domain to both the concept of education and the concept of gender at both the theoretical orientation level and the empirical research level.

The first part of this article discusses the research method. We then go on to describe the development of the different research programmes we identified in
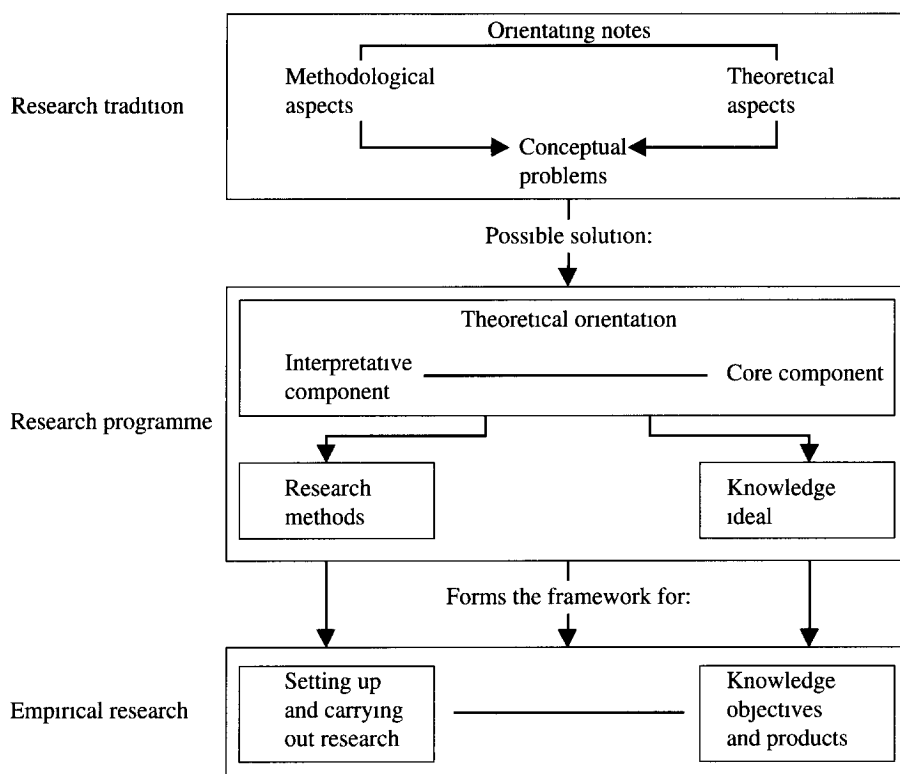
FIG. 1. Diagram showing the three levels of methodology. Adapted from Hetebrij (1983, p. 147).

our study, including a discussion of the results. Finally, we make the step from reconstruction to construction and argue that the way in which gender is conceptualised in recent postmodern feminist theory and research may reflect the development of new research programmes.

Method: the reconstruction of research programmes

Meta-analyses are increasingly used to summarise the results of different studies on the same subject. Meta-analytic techniques have been developed to compare statistics. In our research, however, we were interested in comparing the research questions, conceptualisations and the research methods in the field of gender and education. To highlight this level of the research on gender inequality in education, we used the method of 'reconstruction of research programmes', the RRP method (Hetebrij, 1983). It differentiates between three levels: *empirical research*, *research traditions* and *research programmes*. By empirical research, we mean the collecting and structuring of data within the framework of a project and the testing of theories. The research traditions level refers to theoretical and philosophical research on conceptualisation issues. Lastly, the research programmes level links the empirical level and the theoretical/philosophical level.Various elements make up a research programme. The core is formed by the *theoretical orientation*. There

are a number of hypotheses which are unchallenged within this programme. They have a heuristic function in the development of theories. In the research domain we reviewed, they concern the concepts of gender and education. In our description of the research programmes we shall highlight the conceptualisation of gender and education.

A theoretical orientation has a *core component* and an interpretive element. The core component comprises conjectures on the fundamental features of the research field. The interpretative element comprises statements on the *empirical basis*. These statements are conjectures on the process of interaction between the researcher and the research, i.e. the researchability of the field.

The theoretical orientation of a research programme is developed into a *knowledge ideal* and *research methods*. The knowledge ideal concerns the conditions with which the theories must comply if they are to be verifiable, given the definition of the research field in the theoretical orientation. For example, in behaviourism, the knowledge ideal prescribes that theories on behaviour must be developed, tested, and formulated in terms of stimulus-response relationships.

The RRP method was developed to analyse in detail a limited number of studies. In our study, we used this method more globally to describe and analyse 15 years of research on gender inequality in education. We looked for theoretical orientations in relation to education, gender and the researchability of the field and for explicit and implicit knowledge ideals. The extent to which the choice of research methods had been guided by the theoretical orientation was also examined [1].

Research Programmes in the Field of Gender and Education in the 1970s and Early 1980s

In this section, we shall discuss two research programmes on school careers and on equal opportunities in education. Both originated in the 1970s but have different backgrounds.

School Careers

When research on gender and education began in the Netherlands, the issues of inequality in school careers and of the role of education in social inequality were not new. As in other countries, educational sociologists tried to explain social differences in school careers and in particular the disadvantage of working class children. At the end of the 1970s, attention focused on gender differences in school careers. A similar development was seen in other European countries and the US (Arnot, 1981; Acker, 1987). We identify this type of research as the school careers research programme. Differences between the educational careers of girls and boys are considered a problem, as they are an expression of a failing meritocracy. This is an important element of the theoretical orientation. The school careers research programme aims to develop and test theories on the non-functioning of meritocracy.

The research carried out in the Netherlands shows that the vertical differences between the sexes in education disappeared during the 1960s and 1970s. In the 1980s, girls in secondary education attained the same level as boys (de Jong *et al.*, 1982). Explanations were sought principally in school-external factors, such as the changing position of women in the labour market and the second feminist wave (Dronkers, 1987; 1991). Hence, a number of theories which could explain the

drop in vertical educational disadvantages of women were tested successively. Conclusive explanations, however, were not found.

The knowledge ideal in the research on educational careers comprises theories on the relationship between certain conditions and the extent to which gender differences occur. These studies focus on conditions which are not intrinsically gender-related, such as the social environment. Other studies examine intrinsically gender-related factors, such as school characteristics. An ideal theory would show which conditions can be changed or influenced, that is to say, it should be possible to apply the insight gained to improve the educational careers of girls and pupils from a lower social background. Arguments supporting the choice of the empirical basis and the research methods are explicit in the research on educational careers. To answer questions about educational careers or changes in them, quantitative data must be collected on a group with a large number of variables. This group must be large enough for reliable conclusions to be made on the various subgroups. Longitudinal cohort research, possibly large scale, should be preferred.

Which theoretical orientation pertaining to gender and education is implicit in the research on school careers? Gender inequality seems to be a girl's problem. As a group, they 'lag behind', just like working class children. In their school careers, working class children anticipate their future position in society as workers and girls behave like future housewives. A discussion raged during the 1970s on the difference and deficit hypotheses with regard to the educational position of working class children (van Calcar, 1986; Mehan, 1992). Is it possible to explain their unequal educational opportunities by shortcomings in their upbringing, such as a language delay, or is it probable that they enter school with *different* socio-cognitive skills which are not altogether in keeping there? In the latter case, the middle class character of education comes out. The question 'deficit or difference' was not asked in the research on school careers in relation to the gender issue. The educational position of girls was readily defined as a problem of disadvantage in the sense of lagging behind and their school careers were explained in terms of their orientation towards a family role or the conflict between family and professional roles. Gender inequality was seen primarily as a result of the socialisation processes in the pre-school period. The role played by the school itself was ignored. Instead of emphasising the societal foundings of education, education was approached as a neutral instrument girls chose not to use to improve their position, owing to circumstances outside school.

Equal Opportunities in Education

Research on equal opportunities in education started in the early 1980s, mainly as a government initiative. Compared to other European countries and the US, the Netherlands has been fairly active in pursuing a *central* policy on equal opportunities. The Dutch policy launched in 1979 was a response to the awareness that girls were not benefiting adequately from education and that this was reflected in their later position in society (Ministry of Education and Science, 1979). The objectives of the policy are usually summarised as the elimination of sex-stereotyping, the reappraisal of feminine qualities and the redress of disadvantages. These objectives were implemented by means of 92 government measures, which included research on the position of girls in education (Arendts & Volman, 1992).

The commissioning of studies by the Ministry of Education and Science on

factors that influence girls' position in education can be seen as the initial phase of a research programme on gender differences in educational choices. The Ministry wanted an answer to the question: 'Which factors are linked to the gender-specific course of educational careers during and after secondary education?' Explanations should be sought in both primary and secondary education in differences in the development and achievements of boys and girls, in group processes between pupils, in interaction between teachers and pupils, and in the way in which subject matter is presented. The Ministry defined the issue as 'the disadvantage of girls' in the sense of lagging behind [2], caused by 'career differences' and differences in 'subject choices'. An answer was sought in the characteristics of the girls themselves and in education. This definition of the problem was not accepted by the researchers.

The first studies were literature studies on education and gender inequality and included general analyses of the problem that could be compared to the studies of Deem (1978) and Spender & Sarah (1980) in the UK and of Schultz (1980) in Germany. Exploratory and state of the art literature studies were chosen because research on education and inequality was still at an orientation phase. It was not a fundamental choice of a specific empirical basis or specific research methods. The knowledge ideal of these early studies concentrated on the development of a theory on the contribution of education to the *reproduction of gender inequality*. Researchers wanted to explain this process and focused on the development of theories on the mechanisms in education which result in gender inequality. They often adopted an explicitly feminist point of view (see Acker, 1994, for a discussion on what makes research *feminist*), arguing that the origins of gender inequality should not only be sought in women, but also in the organisation and content of education. The concepts of the 'hidden curriculum' and 'gender role socialisation' provided a vehicle to reflect on the way education contributed to the perpetuation of traditional gender relations in the 1970s and 1980s.

These studies led to an inventory of factors accounting for the unequal position of girls and boys in education. Some are pupil-related: gender differences are not due to different capabilities but to motivation (e.g. future aspirations) which is the result of sex-specific socialisation. Many are identified within education and possibly play a role in the reproduction of gender inequality (e.g. the interaction between teachers and students, the teaching material, etc.). An important role is also attributed to the division of labour between the sexes.

The theoretical orientation on gender of the first researchers on equal opportunities differed from that of the school careers researchers. The former explicitly criticised the way the Ministry had formulated its questions in terms of girls 'lagging behind'. They considered girls' disadvantages to be a result of socialisation processes in the family *and* in schools. Hence, education should be defined as the problem and attention should be paid to the reproduction of gender inequality through socialisation processes in education.

There were also differences among the researchers. On the one hand, these concerned the theoretical orientation on education, i.e. the question concerning the role of education in the reproduction of gender inequality. Despite their common criticism of the term disadvantage, they defined the problems in different terms. Some defined them in meritocratic terms. According to them, girls do not attain the maximum level of education of which they are capable. The internal mechanisms within schools which are responsible for this situation must be tackled

so that education can function more meritocratically in relation to girls (Jungbluth, 1978). Others associated themselves with the discourse on self-development and the broadening of education, i.e. the idea that education should not be exclusively cognitive on gender. Here, 'gender' does not refer exclusively to pupil characteristics. Gender inequality is considered a social phenomenon which is not only seen in the different positions of women and men, but also in the fact that certain qualities traditionally associated with femininity are undervalued in society and education.

Research Programmes on Gender and Education in the late 1980s and the 1990s

The research programmes discussed above developed further during this period. In this section, we shall analyse these developments, first in the school careers research programme and then in the equal opportunities research programme.

School Careers and Effective Schools

Research on school careers was further developed during the 1980s. Although the vertical differences in the careers of girls and boys disappeared during the 1960s and 1970s, horizontal differences did not. Girls continued to choose subjects and courses which did not give them the best opportunities to go on to higher education and hence led to a less favourable position in the labour market. As a result, horizontal inequality in education became topical in the research of the late 1980s. This was accompanied by greater interest in identifying the school factors that were responsible for this inequality and what constituted an 'effective school' for girls (Bosker, 1990). As yet, there is no unequivocal answer. The results of the research on the relationship between school characteristics and the choices and achievements of girls in mathematics and science can be summarised as follows. Factors that are favourable to pupils' careers in general—involvement of the head teacher in the style and content of the education provided, reasoned maintenance of discipline, a positive image of pupils' efforts and emphasis on achievement and personal development—proved also to be effective in encouraging the choices and achievements of girls in mathematics and science. It is striking that measures and attributes specifically aimed at eliminating sex-stereotyping and improving equal opportunities were not found to have any effect on girls' school careers. Examples of such measures include the introduction of an equal opportunity policy and the standardisation of time spent on counselling. No 'effective school for girls' was found (Dekkers, 1985; Kristensen & Jenneskens, 1990).

Research on effective schools is a programme that is developing strongly. This can be attributed primarily to the fact that researchers could work within a mainstream educational programme whose 'academic qualities' were not in dispute. This comparatively recent line of research seems to offer many opportunities for research on gender equality. A good example is the research on girls from immigrant groups. These studies pose such questions as: 'To what extent are the characteristics of effective schools in general also effective for this specific group of pupils?' (van Erp *et al.*, 1992). The effectiveness of schools for girls from immigrant groups seems to be determined by the emphasis on achievement, counselling on welfare

and careers, prevention of absenteeism, ethnic composition and the type of school (Hüpscher-Post, 1990).

Little interest is shown in theoretical explanations of the relationship between education and gender equality. 'Girl' is the designation of a pupil characteristic that is linked to disadvantage. The focus is on 'effective schools' but the meaning of effectiveness is scarcely discussed. In the knowledge ideal, emphasis is on identifying the variables which can be linked to the level of success of girls as a disadvantaged group, with very little focus on the underlying processes. Special attention is given to relations between the variables at classroom or school level and the school careers of students. Multi-level analysis techniques are often used to determine these relationships.

Equal Opportunities in Mathematics and Science: the teacher and the curriculum

Following the first literature studies, research questions on equal educational opportunities in the Netherlands continued to be identified, yet work on the theoretical orientation virtually ceased. There is a clear dividing line between the periods before and after 1985.

As from the second half of the 1980s, researchers focused almost exclusively on the issue of choices. This was mainly because of the policy of the Government, the main financer of educational research. The underrepresentation of girls in mathematics and science was stressed in both government policy and research, as this was considered a disadvantage for their position in the labour market. As with the research on equal opportunities, hypotheses concerning internal factors in the school and classroom, i.e. teachers and subject matter, were tested empirically. The theoretical orientation, however, differed during this period. Researchers considered choices and achievements to be mainly the product of pupils' attitudes towards a subject and of how they rated their chances of success. Theoretical models such as that of Parsons/Eccles (Meece *et al.*, 1982; Eccles, 1987) or of Fishbein and Ajzen (1975) were used. The culture critical approach, which claims that gender inequality in education is seen in the undervaluation of affective, social and practical knowledge and skills, disappeared. Although the role of teachers, material and subject matter were studied, there was a tendency to 'forget' that gender inequality is closely linked to deep-rooted social relationships that have developed over a long period.

The research confirms that boys choose mathematics and science more often than girls and, on average, obtain better results. The sex of the teacher is less important than his being aware of the problem of gender and education (van der Werf *et al.*, 1984). It could not be proved that girls received less attention but it was clear that teachers often expected boys to obtain better results (Kuyper & Meulenbeld, 1989). There is no unequivocal answer to the question: 'how far does the content of mathematics and science influence choices and achievements?' A mathematics programme that was expected to have a positive effect on girls did result in a growing number of girls and boys choosing this subject. Yet girls chose options which did not help them to go on to higher education. There were still strong differences in boys' and girls' levels of achievement (van der Werf, 1988).

Research on mathematics and science focused on the relationship between independent and dependent variables. In the knowledge ideal, stress is on searching for links. Processes and mechanisms that could help to understand relations

between different factors, e.g. *how* pupils develop ideas about a subject and *how* the presence or absence of women teachers play a role here have hardly been researched (Volman *et al.*, 1995). With the curtailment of the issue of education and gender inequality to the choice of mathematics and science by girls, gender inequality was once again more or less synonymous with their lagging behind. They were increasingly viewed from the perspective of future employees and education was dealt with as a context within which girls make choices. Education does not seem to provide them with the qualifications that give them an equal footing with men in the labour market. They are expected to become like boys in their achievements, choice of subjects and expectations. Little attention was given in policy and research to the factors which would urge them to change and to whether this would be desirable. The Government, and, following in its footsteps, the researchers are striving for 'equality' under a 'masculine' norm.

Developments in Theoretical Orientations on Gender and Education: an interim evaluation

With the help of the RRP method, we have described above two research programmes which originated in the late 1970s: a programme on gender differences in educational careers and a programme on equal opportunities in education. The theoretical orientation of the former conceptualises 'gender' as a pupil characteristic connected with disadvantage and 'education' from a meritocratic point of view. Researchers in the equal opportunities programme challenged the 'disadvantage approach' (disadvantage in the sense of lagging behind). They were particularly critical of the fact that girls were considered to be the problem and emphasised the social restrictions on educational choice. These researchers saw gender inequality as the product of 'gender role socialisation' which imposes restrictions on the personal development of girls in particular. The issue of educational inequality was formulated in similar terms; education itself functioned as role-confirming. Research on the mechanisms in education that reproduce inequality connected with sex roles was badly needed. Some researchers tried, moreover, to formulate the problem more broadly than merely in terms of the pupil and the school. They formulated a more comprehensive culture criticism on the absence of 'feminine' attributes in education, making use of the existing discourses on self-development and the broadening of education.

During the second half of the 1980s the programme on gender-linked school careers developed into a programme which focused on the characteristics of effective schools for girls. In both these programmes, gender was only an issue in so far as the educational careers of girls differed systematically from those of boys. An important difference, however, is that school characteristics have recently become the focal point of the theoretical orientation of the effective schools research programme. This brings it closer to the equal opportunities research programme which studies the relationship between girls' choices and educational factors, such as teacher behaviour and subject matter. Given the choice of research themes, the programme in which factors determining girls' choices and achievements in mathematics and science are studied can be seen as a continuation of the interest in socialisation at school of the equal opportunities programme. However, two important elements of the early programme on equal opportunities have disappeared: the criticism of the definition of 'girls lagging behind' and the criticism of

the undervaluation of 'the feminine' in education. Moreover, socialisation is not seen as a classroom process; rather, it is assumed to be the cause of attitudes and choices as assessed through pupil questionnaires. The link between education variables and gender-related achievements and choices is to be found in processes at the level of the individual pupil. Research on these processes should therefore provide us with a better understanding of the mechanisms which explain the educational careers of girls and boys. Like the 'effective school' research, psychologically-orientated research on achievements and choices also concentrates on the search for connections between variables. Very little research has been done on *how* school internal factors influence pupils in their decision-making. Still using the model of Parsons/Eccles: what circumstances and events can instigate or change the expectations and values of pupils? Does the absence or presence of female teachers, for example, influence pupils' ideas about a subject?

An explanation for the developments in research on gender and education may partly be found in the policy-oriented character of this research. The choices made in any given period in connection with research are seldom exclusively the choices of individual researchers. The relationship between research, policy and politics plays an important role in determining which definitions of a problem should be dealt with and how, in addition to, of course, the theoretical and methodological aspects. The changes in theoretical orientations described above clearly reflect the changing concern of government policy with equal opportunities in education. It is in this context that much of the research discussed was carried out. At first, this policy had three objectives: the elimination of sex-stereotyping, the reappraisal of feminine qualities and the redress of disadvantages. In the years that followed, there was an increasing emphasis on the redress of disadvantages. Scarcely any progress was made in reappraising feminity and it disappeared from the research scene. The idea that girls must qualify for as favourable a position as possible in the labour market reflected the tendency in the general policy on equal opportunities in the late 1980s and 1990s to equate equal opportunities with the participation of women in the labour force. The call to reappraise feminine qualities and the feminisation of education disappeared at the same time as the demise of the appeal to broaden education in non-cognitive directions and to promote self-realisation unrestricted by sex role stereotypes.

The financing of Dutch research on education also played a part in the situation just described. In the Netherlands, the Institute for Educational Research is the most important organisation in the field of programming and financing educational research, apart from the universities. Specific policy problems as identified by the central Government rather than the accumulation of knowledge determined the choice of research. About 4% of the projects financed by the Institute were on 'gender-issues'. Not surprisingly, given the Institute's policy role, these projects were related to government policy, virtually all of them addressing the assumed disadvantage of girls. There is no evidence of the reappraisal objective in the research carried out.

Education in Recent Feminist Research: the influence of postmodernism

From the second half of the 1980s, the development of feminist theory by the women's studies departments of the universities progressed rapidly. Socialisation theories, which initially had been so useful, increasingly became the object of

criticism. From a postmodern point of view, these theories were unequivocal and linear in their approach to the 'reproduction of gender relations'. They erroneously suggest that the effects of socialisation are always similar and predictable. The concept of '*constructions* of feminity and masculinity' (Malson *et al.*, 1989) was used to explain that masculinity, femininity and the power relationship between men and women are social manifestations which can take on a different form, depending on time, place and cultural context.

Postmodernism enabled Dutch feminists to accentuate gender at the level of the discourse rather than at the level of individual women and men. This emphasis resulted in research on the gender-bias of discourses. Historical case studies were the primary result of this approach. Although those engaged in feminist theory have occasionally criticised the existing research on gender inequality, hardly any research has been done in which such criticism is used as a new approach to empirical research on contemporary issues. The problematic relationship between postmodern feminist research and empirical educational research is, in our opinion, due first and foremost to the fact that a large part of educational research deals with learning processes, individual developmental processes, and the educational context in which these processes occur. Individuals, in this case pupils and teachers, are the units of analysis. They are conceptualised as human agents. In the late 1980s, postmodern feminists in the Netherlands, however, primarily defined the 'subject' and 'subjectivity' as determined by discourses: there was no room for an 'active subject'. The situation was different in many other countries, where postmodern theories were used by feminists to accentuate the active role of the individual in the process of 'socialisation' (Davies, 1989a and 1989b; Weiner, 1994). Secondly, the type of educational research for which funding was available was policy-oriented research which often strove to improve educational and developmental processes. An approach that analyses and deconstructs is not appropriate for 'constructing' the sort of answers expected from subsidised research prompted by policy. Moreover, educational research financed by the Government was dominated by quantitative research. It was the only kind that was highly valued. Dutch postmodern feminists favoured qualitative research methods which hence further restricted the possibilities for funding.

International research, however, shows that a postmodern approach can make a valuable contribution to answering the questions of how social meanings of gender permeate the way in which *individuals* develop and the role of education in this. Davies (1989a), for example, puts forward the view that pupils actively give meaning to a gendered world. Children learn what it is to be a man or woman by participating in the existing discursive practices and occupying their own place within these. This is a never-ending process which also takes place at school. As 'woman' and 'man' have no unequivocal meaning, and categories other than gender also play a role in the development of identity, it is a process that is not without conflict.

A number of empirical studies have been carried out in the Netherlands in recent years on the production of meaning at the level of pupils and teachers, as well as at the 'discourse level'. In our own research we looked at the production of gender identity in women's history lessons (ten Dam & Rijkschroeff, 1996; ten Dam & Farkas-Teekens, forthcoming) and computer education (Volman, 1994).

On the basis of the few existing studies and the articles and discussions of those engaged in feminist theory on research on gender inequality, the contours of a

potential, new feminist research programme can be discerned. What are the theoretical orientation, the knowledge ideal and research method(s) favoured by this embryonic programme?

The postmodernist assumptions on the discursive character of social reality resulted in criticism of the interpretation of gender in educational research as a fact and as an unequivocal variable. A theoretical orientation was proposed in which gender was seen as social construction and did not have the same meaning in every context. As for education, it was suggested that it should not be conceptualised as an institution where gender inequality is reproduced and socialisation is maintained, but as one of the producers of meanings of gender (ten Dam & Volman, 1995). Gender is not interpreted firstly as a characteristic of pupils or teachers with the same invariable meaning, unlike most of the research discussed in this article. It is presumed to be a social category which acquires meaning in processes and practices, such as education.

Discourse analysis is the most suitable research method for identifying the processes in which meanings are produced. The knowledge ideal of this type of research can be called 'deconstruction'. An example of a research question is: 'how do 'femininity' and 'masculinity' acquire meaning in the discussions in a specific pedagogical movement in a given period of time?' (Vossen, 1991).

Conclusion

In this article, we have reviewed 15 years of Dutch research on gender and education. If we look at the research *results* in this field, the 'history' of gender inequality in education emerges as one of great change but at the same time manifesting certain factors that remain constant. Girls have started to participate in ever increasing numbers in more and more different forms of education. However, their underrepresentation in mathematics and science and in technical courses remains an intractable problem.

Another level of this history is that of the research *questions* and *conceptualisations*. This level is relevant when research results are not regarded as 'facts' but as the product, or partly the product, of the formulation of the questions, methods used, etc. Both changes and constant factors can be discerned at this level. Changing preconceptions of what girls are or ought to be, and of what the role of education in this is or ought to be, are apparent. What is constant is the fact that girls run the risk of being constructed as a special category, as 'different', which is readily equated with 'lagging behind'. With the exception of the first feminist research projects in the 1990s, questions are often formulated in terms of 'why do girls not ...?'.

There has been little research on gender inequality from a postmodern feminist perspective in recent years in the Netherlands in comparison to other countries. This can partly be explained by research-external factors. An approach that analyses and deconstructs is not suitable for policy research, the aim of which, when implemented, is to bring about improvements. In turn, this implicitly limits the possible sources of funding. Research-internal factors have also played a role. Postmodern feminists in the Netherlands have concentrated on the analysis of social meanings of gender. They were not interested in the production of meaning at the level of the individual, while research questions on education were for the

most part on the learning processes experienced by pupils as individuals. In the intellectual climate of the Netherlands, quantitative research was clearly preferred to qualitative research. Most postmodern feminists were opposed on principle to quantitative research.

Even though relatively little research on gender and education from the post-modern feminist perspective has been carried out in the Netherlands, we have endeavoured to outline a potential research programme on gender and education. A research programme of this kind is important in our opinion because it challenges researchers to look further than 'identifying variables which can be linked with girls' success in mathematics and science'. The strength of the present research programmes is primarily that they reveal a structure of correlated variables concerning, for example, girls and mathematics and science, whereas the focus of a postmodern feminist research programme would be on the underlying processes. A postmodern feminist approach can be used to look 'beyond' the connections between certain school or classroom characteristics on the one hand and the achievements, attitudes and choices of girls on the other. At school, girls and boys are confronted with all kinds of conflicting discourses on gender and equality and it is within this context that they develop an identity. Research which takes this into account can help render the 'choices' which pupils make during their school careers understandable. Two such research questions are: 'Which learning processes on gender and gender relationships take place in the classroom?' and 'What do the discourses in which students learn to participate at school say about men and women?'.

The 'gender and education' research domain benefits from explicit debate between the different research programmes. The contribution of postmodern feminists to this debate lies in their educational insight as well as in their approach to gender. Instead of conceptualising gender as merely a characteristic of individual pupils, they emphasise the role of education in the creation and perpetuation of social meanings of gender. Gender continually acquires new meanings in education as a result of associations being made between subjects, skills, knowledge, etc. and the concepts of femininity and masculinity. Examples of such associations are the lines between technical skills and masculinity and between neatness and femininity. At an individual level, education can be seen as a practice in which gender identities are produced. Gender is a factor which influences the learning processes of pupils: both 'what' and 'how' they learn is related to gender. And, at the same time, gender is the outcome of learning processes in schools.

NOTES

[1] In our study, we focused on the products of Dutch research between 1979 and 1992. Research intentions such as programme documents, research proposals, etc. were not included. Non-research reports and evaluations of emancipation projects in education were only discussed globally in relation to trends. Moreover, we restricted ourselves to bibliographically retrievable literature.

[2] The Dutch term for this issue is usually translated as 'disadvantage'. The Dutch term 'disadvantage', however, is primarily used in the sense of 'lagging behind'.

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