

Exploring the role of discourse in undergraduate medical training

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ABSTRACT

Background

Medical education has traditionally adopted a structuralist approach towards curriculum design without considering the underlying values and discourses of its many stakeholder groups. It has been suggested by some that such underlying *discourses* may ultimately be the most influential force in driving educational development, as opposed to the way in which such a system is organised. In this study we used aspects of discourse analysis to identify the discourses operating amongst medical students regarding their training at Sheffield University. We then explored how these discourses have influenced curriculum development as well as the relationships that students have with their trainers.

Methodology

We explored and analysed the talk and text of medical students at the University of Sheffield to interpret features of the undergraduate curriculum important in shaping students' views of their training, and to explore the nature of the student-teacher relationship. Three hundred and fifteen text comments relating to curriculum issues were sampled from an online learning community and ten face-to-face interviews were conducted. These comments and interviews were then coded to identify common themes. This process allowed the researcher to explore the students' discourse regarding their training under a series of related themes, and identify how these influenced the relationship with their trainers.

Results and conclusions

Our analysis identified several themes including disempowerment through communication, preparation for practice, appraisal of performance and role modelling. The data highlighted a number of conflicting and contrasting elements that merit further in-depth study.

As part of our analysis we also explored the ways in which these themes compared and contrasted with the values and tenets of undergraduate medical training in the wider context. This was achieved through an examination of undergraduate medical education mission statements. Despite our findings being far from an in-depth analysis of the discourses that truly shape undergraduate medical training, both in terms of the breadth of stakeholders involved and the depth of analysis across different locations, they provide a useful insight into the subject. Further studies should explore these issues in more depth. Our findings may provide the beginnings of an alternative approach to educational development - one which is based upon a framework for understanding the operation of discourse and ideology as opposed to the potentially power-laden structuralist approaches of the past.

Introduction

Medical education has traditionally embraced structuralist approaches to curriculum development (Collins, 1986). In these systems, training directives are distributed in a 'top-down' fashion from governments, teaching unions and organisations, media and employers to school academic committees and faculties. It has been suggested by some, however, that the discourse of those that influence change may provide greater insight into educational development than a structural model alone (Popkewitz, 1991).

Defining discourse

Discourse analysis, in its broadest sense, is a term that encompasses a number of methodological approaches to the interpretation of language. However, discourse itself can be defined in various ways. Some authors consider discourse and text to be separate entities; with the former referring to verbal language forms and the latter to those of written language. Others, however, do away with such a distinction, considering discourse to encompass all forms of spoken and written language as social practice. Furthermore, Fairclough (1993) extends this to include other practices such as gesturing, pictorial images and body-language. Discourse has also been described by some as a 'count-noun' that brings about a set of ideological values and social practices (Wood and Kroger, 2000). Whilst in this study we consider our approach to be one which includes discourse as both written and spoken text, the reader should be aware that this is only one interpretation of a multi-dimensional concept.

Varieties of discourse analysis and key theorists

The rather varied definitions of discourse analysis very much reflect the range of disciplines that have taken up its practice. Although discourse analysis predominantly stems from work within linguistics, philosophy and discursive and cognitive psychology (Schiffrin, 1994); a number of other fields have drawn upon it. These include ethnography, media studies, communication, education, sociology, information technology, medicine, law and anthropology. Whilst a detailed description of the different varieties of discourse is beyond the remit of this paper, a brief introduction would help set the scene.

Fairclough (1993) suggests that a major distinction in discourse analysis lies between work which analyses texts in detail and that which does not. He suggests that the former often pays greater attention to the linguistic features of texts but doesn't engage with wider social issues, and the latter vice-versa. Whilst perhaps an oversimplification, this dichotomy captures the essence of the major differences between two commonly-adopted approaches to discourse analysis found within the research literature; namely conversational analysis (Schegloff, 1989) and critical discourse analysis (Van Dijk, 1997).

Conversation analysts have traditionally focussed on the dynamics of language use and interaction, and the practice has often been considered as the most micro-analytic variety of discourse analysis. It looks at the organisation of talk and how this constitutes meaningful action, such as 'turn-taking' (Schegloff, 2007). Critical discourse analysts have concentrated particularly on how discourse positions subjects in terms of social practice. A multi-dimensional approach is adopted through the analysis of spoken and written texts; analysis of processes of text creation; and analysis of discourse as social practice (Fairclough, 1995). Furthermore, it also considers how discourse creates particular forms of knowledge and may constitute identity. Various social theorists, including in particular Michel Foucault, have informed the practice of critical discourse analysis, introducing the notion of ideology as a form of power within social practice (Foucault, 1979). Whilst the above may reflect the more extreme poles of the discourse analytic spectrum, other approaches have informed the development of discourse analysis as a research practice.

Discursive psychologists such as Wetherell and Potter have introduced the concept of interpretative repertoires which explore the beliefs and values that people draw on when using language (Wetherell and Potter, 1988). Pragmatics has also informed discourse analytic practice in terms of understanding not only how elements of language (words, grammar) convey meaning, but also understanding the influence of context, location, setting and the actors involved (Grice, 1989).

Discourse analysis as a methodology has been used by health researchers previously. Examples include the interpretation of modes of communication in gendered nursing identities, the political context of talk in nursing documentation, and a poststructuralist account of language that constructs individual illness experiences (Traynor, 2006). Other work has looked at how language constructs professional practice in the primary care environment and examines the 'rhetorical duel' between patients and healthcare practitioners in primary care settings (Roberts and Sarangi, 2005). In this study, we wished to use a theme-oriented approach to analyse discourse regarding students' experience of their training and medical school; and explore the concept of 'power' in the relationship that medical students have with their trainers.

Methodology

In this study, we wished to consider the talk and text of medical students as discourse, and how this constructed their experience of medical training. Furthermore, we wished to interpret their discourse to explore the notion of power within the relationship that students had with their teachers.

By way of overview; we drew upon aspects of discourse analysis to inform various stages of our study. Firstly, we developed an approach to categorise and analyse written and spoken discourse (text) produced by the social actors within this study. We felt this would provide the most useful means by which to explore discourse within the potentially large data sets that could be derived from the study. In addition, we felt this would be the most useful technique to serve our latter study aims. These included the adoption of a critical discourse analytic stance in considering the notion of power in the relationship that medical students have with their teachers, and also exploring the intertextuality of our obtained discourse. Thus, whilst this study cannot be considered as discourse analysis in its truest sense, we have drawn upon various theoretical strands to design our study.

The analysis of discourse

We explored the written and spoken text of medical students at the University of Sheffield to identify categories of discourse relating to their perceptions of their undergraduate training experience at Sheffield Medical School. The methodology used to code and analyse the data will be described later.

From a critical discourse analytic perspective, we then explored how these discourses may influence the relationships that medical students have amongst different groups within the medical profession (Gordon, 2000), focussing particularly on notions of power within the student-teacher relationship and how these may influence medical students' education.

Setting and data collection

The study was conducted in 2005-6 at Sheffield University Medical School. The discourse of medical students was explored through two avenues. The first was through internet-based conversation recorded within the discussion boards on 'Minerva' (Roberts et al, 2005), the Medical School's online Networked Learning Environment. This is a form of 'virtual community' where students can discuss issues with their peers and their teachers via the Internet.

Such communities have previously proved a rich source in understanding professionalism in medicine (Fox and Roberts, 1999), and allowed us to sample a broad range of student discourse regarding training issues from all years of the course. The second avenue was through in-depth interviews with ten different students at Sheffield Medical School. These individuals encompassed all of the Medical School committee representatives for each year of study. It was believed, therefore, that these individuals would have much exposure to issues relating to course and curriculum design; thus providing a rich source of data for the study. In these interviews, we captured discourse regarding the students' medical training and also explored the concept of power within the relationship with their trainers.

Whilst we were aware that these two pools of data may produce very different sets of discourses, we felt this was a risk worth taking in order to maximise the number of 'voices' represented within our data set so that it was as representative as possible of the large numbers of students within Sheffield Medical School.

Three hundred and fifteen messages were logged on Minerva relating to training issues from the beginning of the academic year in September 2005 to its end in June 2006. The students who had logged these messages were based in many different hospitals in the South Yorkshire area including Sheffield, Barnsley, Rotherham, Doncaster, Worksop, Chesterfield, Hull and Grimsby. Ten face-to-face individual interviews were conducted in late 2005. These ten individuals represented all of the student-year course representatives across the Medical School years (at the time there were two representatives for each of the five medical school years). Each interview was carried out as an open discussion (Silverman, 2000), as it has been suggested that such a format is more suitable for recreating a natural environment in which to capture discourse. The dialogue was tape-recorded. Material was transcribed using standard notation (Lofland, 1995).

The analysis of discourse within the *entire* dataset (Minerva postings and interviews) was conducted using a process of coding and analysis. This involved reading through the interview transcripts and comments gathered from Minerva postings and identifying common words, phrases and sentences within the text. These were collated into categories relating to curriculum issues. Further analysis involved an examination of coded material to explore the way in which language was used and meaning implied through stressed words and phrases, as well as non-verbal cues.

Exploring power issues and intertextuality

We took a critical analytical stance to explore how each of the themes identified in the study influenced the nature of the relationships between trainees and trainers. This exploratory stage of the study, as will become apparent later, was to some extent informed by Foucauldian notions of power relationships. Furthermore, we wished to consider the intertextuality of gathered data; and, if possible, compare and contrast our findings with discourse contained within other documents that pertain to the design and delivery of the undergraduate medical curriculum (Richardson, 2002). We hoped this would provide an avenue to allow the researchers to explore the extent to which the discourses held by medical students at Sheffield University compare to those of key stakeholders involved in designing the curriculum. However, much of the medical education literature in this area often does not consider the broader objectives of undergraduate medical education on a macro-level. Captured data is not considered from a constructionist perspective, and is often considered against location-specific findings from other studies. We decided that the most appropriate texts to compare our findings against were the mission statements for undergraduate medical education as a whole. For this reason, we analysed themes within *Tomorrow's Doctors* (General Medical Council, 1993). This is the 'gold standard' document upon which undergraduate medical education is based within the United Kingdom.

Ethical issues

All interviewees provided informed consent. Students who made comments on Minerva provided written informed consent for their material to be used in this study. The analysis was carried out anonymously within an ethical framework of research, and University approval was gained (Roberts et al, 2002).

Findings

Analysis of the dataset exposed much discourse relating to students' training experiences. The themes identified were those of communication, preparation for future practice, responsibility, feedback and role modelling. Extracts from the dataset are given to illustrate the analysis and textual data collected from the interviews has been transcribed using standard notation.

Communication

Discourse relating to the importance of communication in the curriculum focused upon the accessibility of staff; for instance the availability of more senior staff for discussion, as well as the opportunity to discuss ideas and feelings with peers. Much of the discourse suggested dissatisfaction with levels of support from medical teachers and Faculty. Indeed, interview material suggests some frustration with this process since students may be aware of the need for a solid knowledge base as a pre-requisite for their roles as newly qualified doctors, yet feel that they are prevented from gaining this.

We are being constantly told that we need to know our basic sciences before starting our clinical attachments, yet we are not being provided with the teaching to back that up. (Minerva 233)

If we don't have access to notes from lectures from our teachers it has a negative impact on our learning. This is especially true of content-rich lecture notes where we cannot be expected to copy AND listen to the lecture. (Minerva 165)

Much of the time I've spent here I've had trouble being able to talk to people and get information when I've needed it. I really hope it's not like this when I leave. (Minerva 55)

Eryeah. Well like if a lecture was cancelled, no-one ever knew about it, we were never told. All they [Faculty – implied] can do is be obstructive and criticise. (Interview 6)

Nevertheless, there was discourse relating to this theme which indicates that there are aspects of medical training which may empower students:

I like these Integrated Learning Activity things. They're active and we can take charge, but there's someone around to ask questions if we need it. They're a good chance for people to get to know each other and share ideas. (Minerva 284)

Examples such as this suggest that at least some elements of a self-directed but well supported approach to training may be well-accepted by the students.

Preparation for practice

The need to prepare for the future was another prominent theme, and was evident in students' recognition of the need for self-directed learning, adequate knowledge of core principles and the ability to problem-solve. The data suggest that students felt the course was deficient in providing them with the competencies that were required for the job of a new doctor. Much discourse relates to the necessity to be able to take the initiative for one's learning, but suggests a lack of

opportunities to do this. The first extract, for example, suggests that the student has doubts regarding the capacity of the course to prepare him for this role; it is his own volition and drive that has achieved this. The second extract however, may highlight a different interpretation of this with the student contemplating whether 'finding the knowledge yourself' is a good thing. It is possible that the student believes that they should not have had to find knowledge out to this extent and that more direction should have been provided, contrary to the self-directed notions implied in the other selected examples.

Err, ummm... Yes, but that's mainly because I've put a lot more effort myself into learning how to become a house officer. (Interview 1)

You've got to take the initiative, and quite often you have to make your own opportunities to learn, but I don't really feel the course itself prepares you to learn for yourself, and you need to have that to some extent. (Interview 3)

You have to find the knowledge yourself a lot of the time,...erm... and maybe that's a good thing as they say you'll be doing that most of your career. Erm... It's hard as there are loads of us sometimes. That took me by surprise and the course doesn't give you the knowledge. (Interview 5)

I'm really worried that I won't be good enough to do the job of a doc. I don't really feel like I know enough, or how to do enough and I feel like I might be in real trouble for that. I don't feel like I've been taught the basics and I want to be able to care for my patients properly. (Minerva 5)

Appraisal of Performance

Analysis of both the interview transcripts and the Minerva postings suggests that appraisal is an important theme in the students' medical training, highlighted particularly by talk and text relating to methods of involving students in curriculum design and development.

I do understand that we have a duty to reflect and it is better to practise and struggle now than attempt to learn when situations arise as a house officer. It is a shame the emphasis lay with reflections of key events and not the whole period of training, I'm glad it's not up to me to assess us but we need to take more of a stand in it. (Minerva 76)

Too little involvement in course design. Well I suppose students are really where it's at, students are in the course. (Interview 4)

Well, I know there are students on course design committees and so on. But I suppose you've got a forum there to raise issues. It doesn't really seem like much comes out of them though. (Interview 8)

They should have a tutorial that you have to go and fill in a form for half an hour or so at the end of every module. (Minerva 33)

The data suggest that students perceive reflection to be an important part of professional development and even feel that there is scope to expand this activity within their training. Whilst it is suggested that students may be under-represented within curriculum development activities, there is acknowledgement that opportunities do exist for this to change. Nevertheless, the third extract may highlight other issues surrounding this. Perhaps, although students are involved in educational activities, their input may not be appreciated. Alternatively, for whatever reason, student representatives may not participate to the extent that is wished by their peers.

Role modelling

Role modelling was highlighted in a number of Minerva comments and also in the interview data. Discussion on this theme seemed to follow two separate strands; the influence of teachers (in particular consultants) as role models and that of senior medical students through the 'buddy scheme' set up at Sheffield Medical School in which senior students act as mentors to juniors.

Yeah, consultants were far too much, far too aggressive if we didn't know the intricacies of their specialty and this made me feel really low. (Interview 3)

I think some students pressurise other students to be the same way and that leads to the culture of partying and stuff. It sets a bad example really and I try my hardest not to fall into the trap. (Minerva 20)

Energy, enthusiasm directed at my level and not wanting to teach me everything about their specialty. (Interview 5)

Every consultant thinks that you should be just like him or her when they were at medical school. They don't realise that times change, and the breadth and depth of knowledge you need has changed. They need to pitch it at our level and make it interesting. (Interview 2)

Two different strands are seen within the discourse of the students regarding the influence of teachers. Role modelling appears to have both a positive and, in some instances, a negative impact upon the way that students perceive their trainers and their teaching. The 'positive' strand implies that 'good' role models should be able to deliver teaching in a way that enables students to learn in ways appropriate to their individual needs and abilities. This is not new information, since the importance of such role modelling behaviours within medical training has been noted previously (Wright et al, 1997). A critical discourse analytic interpretation, however, suggests that students felt behaviour patterns were imposed by their teachers in different ways; be it positive teaching experiences or detrimental instances of 'vicarious learning' in which students adopt the 'bad habits' of their teachers; for example a 'bullying' approach to teaching in which students learn by fear and intimidation (Paice et al, 2002). As we will go on to discuss in the following section, some argue that such discursive practice has profound consequences, in that the values and ideologies of those delivering teaching are adopted by those learning through the teacher-pupil relationship. In this way, teachers pass their discourses (and their discursive practices) on to their students in a self-perpetuating cycle.

Discussion

Discourse and power relationships

We adopted a critical stance towards our captured discourse to provide insight into the ways in which power and control are exercised within the relationships that students have with their trainers. Our first observation is that there is a deficit in communication between staff and students evidenced by difficulty in accessing information pertaining to the course; lack of notification regarding cancellations, and problems obtaining lecture notes. It is suggested by some that a form of 'master-pupil' relationship may develop in this way (Gagne, 1985) since students feel disempowered within such an environment. It has been argued elsewhere that this is detrimental to educational development (Tiberius et al, 2002). It could be suggested therefore that within a 'master-pupil' relationship of this nature, the voice of the student is not heard. This is irrespective of whether the student feels that there are adequate opportunities for their voice to be heard, since their message is devalued through the dominance of the master.

Much discourse relating to preparation for practice centres on the emphasis placed on self-directed learning. Whilst one student suggests this is a 'good thing', a critical perspective suggests that such practice may have impacted adversely on the relationship that students have with their teachers. Indeed, our data suggest that the students may even resent their teachers in that they feel that they have been of minimal assistance in helping develop their knowledge, skills and behavioural practices.

Our data suggest that student behaviour is shaped by both positive and negative learning experiences. The practice of vicarious learning may reinforce the boundaries of power that the master possesses over their student; reminding them 'who is boss' in colloquial terms. A Foucauldian analysis suggests that such teacher behaviours are in turn adopted by the students, who may themselves become teachers in the future. From such a standpoint, therefore, one could argue that educational doctrine cannot change without critical reflection on these underlying ideologies, beyond the more traditional evaluation of teaching styles often seen within the medical literature. The question remains, however, as to how to address this concern in practice. A 'top-down' approach has been to introduce instruction on good teaching, for example through 'Teach the Teachers' courses and education degrees. However, these approaches tend to adopt traditional, structuralist, teacher-orientated models of how students learn, often without considering how underlying discursive practices impact upon educational development. A more open interactive approach, in which stakeholders lay down their discourses on the table for discussion, may provide a more fruitful way of addressing power imbalances and exposing underlying discourses. Better understanding and indeed recognition of these discourses could allow the development of new models of educational development, based upon shared values and ideology as opposed to systematic teacher-driven tools.

Exploring intertextuality

As the purpose of our study was to explore the attitudes of medical students towards their training, we felt it would be interesting to compare our student data with the mission statement of the undergraduate curriculum in 'Tomorrow's Doctors' (GMC, 1993). A coding process identical to that applied to the student data was used to analyse this document.

As in the student data, the importance of preparing for future practice and lifelong learning are recurring themes in this document:

...we can at least strive to educate doctors capable of adapting to change, with minds that can encompass new ideas and developments... (page 4)

...the greatest educational opportunities will be afforded by that part of the course that goes beyond the limits of the core. (page 7)

Another theme in the document is the appraisal of performance. However, much of this is related to the adequacy of supervision provided by trainers:

...some undertook posts as resident house officers where they carried out surgical operations and gave anaesthetics without supervision. (page 5)

Little relates to the role of pro-active student involvement in curriculum design, implementation and evaluation which was raised in the student data. Notably, the themes of disempowerment through communication and the influence of role modelling on learning behaviours are also not addressed in this document.

Conclusions

Discourse analysis considers the underlying values and beliefs of individual agents. It could have a valuable role in helping to develop new curriculum models based upon shared ideology and common goals, as opposed to the traditional top-down teacher-driven approaches of previous years. It can demystify the relationships between particular agents and explore issues of power that help and hinder educational development.

Although in this study we have not performed discourse analysis in its purest form we have drawn upon aspects of discourse analytic approaches including critical discourse analysis to provide insight into medical student discourse relating to curriculum issues and the nature of the trainee-teacher relationship at Sheffield Medical School. The fact that our study is location-specific must be noted as a potential limitation of our findings. However, as medical students are a relatively homogenous group with generally similar outcome aims the insights generated from this study can be considered to have wider generalisability. Whilst being far from an in-depth analysis of the subject of medical education, this study provides a base from which to explore these themes further.

Perhaps the most limited aspect of our study relates to the exploration of intertextuality in our discourses. The use of 'Tomorrow's Doctors' is problematic since this document in itself is the hallmark of structuralist philosophy delivered in a top-down manner to the students it seeks 'to train'. Curriculum objectives presented in this way may not allow the researcher to fully explore the discourses that underlie them, since the raw data which created such mission statements is not available. Similar studies to our own, conducted from a constructionist perspective, are lacking.

Some of the themes we have identified, such as the need to prepare for future practice and undertake self-directed learning, are closely linked with values of professionalism in medicine such as altruism and humanity. These are of universal concern, since society places increasing pressure on students to quickly achieve the highest standards of practice and behaviour. The discursive themes we have identified, however, are not simply aspects of professionalism, they are *tenets of change* that can be integrated into educational curricula. Change can only begin to be made if we first become aware of the discourses that direct patterns of behaviour, since actions are trapped within the web of ideologies that define them. Once this is achieved, entrenched relations of power can begin to be addressed and change can begin to take place.

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References

- Collins, R. (1986). *Weberian Sociological Theory*. Cambridge: Cambridge University Press.
- Fairclough, N. (1993). *Analysing Discourse - Textual Analysis for Social Research*. New York: Routledge.
- Fairclough, N. (1995). *Critical Discourse Analysis: The critical study of language*. London: Longman.
- Foucault, M. (1979). Governmentality. *Ideology and Consciousness*, 6: 5-22.
- Foucault, M. (1980). *Power/Knowledge: Selected Interviews and Other Writings 1972-1977*. New York: Pantheon Books.
- Fox N, J. and Roberts, C. (1999). GPs in cyberspace: "a virtual community." *Sociological Review*, 47(4): 643-671.

- Gagne, R.M. (1985). *The Conditions of Learning and Theory of Instruction*. New York, Holt, Rinehart and Winston.
- General Medical Council. (1993). *Tomorrow's Doctors. Recommendations on Undergraduate Medical Education*. London: General Medical Council.
- Gordon, D. (2000). Power, Autonomy, Authorship and Community: Foucault as Educational Guru. (A review of 'Procedures of Power and Curriculum Change'). *Curriculum Inquiry*, 30(22): 215-236.
- Grice, P. (1989). *Studies in the Way of Words*. Cambridge (MA): Harvard University Press.
- Lofland, J. (1995). *Analyzing Social Settings: a guide to qualitative observation and analysis*. Belmont: Wadsworth Publishing.
- Paice, E., Moss, F., Heard, S., Winder, B. and McManus, I.C. (2002). The relationship between pre-registration house officers and their consultants. *Medical Education*, 36(1): 26-32.
- Popkewitz, T. (1991). *A political sociology of Educational Reform Power/Knowledge in Teaching, Teacher Education and Research*. New York: Teachers College Press.
- Richardson, J.T.E. (2002). *Handbook of Qualitative Research Methods for Psychology and the Social Sciences*. Oxford: Blackwell.
- Roberts, C., Lawson, M., Newble, D.I. and Self, A. (2005). Managing the learning environment in undergraduate medical education: the Sheffield Approach. *Medical Teacher*, 25(6): 297-301.
- Roberts, C. and Sarangi, S. (2005). Theme-oriented Discourse analysis of medical encounters. *Medical Education*, 39(6): 632-40.
- Roberts, L.W., Geppert, C., Connor, R., Nguyen, K. and Warner, T.D. (2002). An Invitation for Medical Educators to Focus on Ethical and Policy Issues in Research and Scholarly Practice. *Academic Medicine*. 76(9): 876-885.
- Schegloff, E.A. (1989). 'Reflections on Language, Development, and the Interactional Character of Talk-in-Interaction'. in M.H. Bornstein and J.S. Bruner (eds.), *Interaction in Human Development*. New York: Lawrence Erlbaum Associates.
- Schegloff, E.A. (2007). *Sequence Organisation in Interaction: A Primer in Conversation Analysis*. Cambridge: Cambridge University Press.
- Schegloff, E.A. (1997). Whose text? Whose context? *Discourse and Society*, 9: 413-416.
- Schiffrin, D. (1994). *Approaches to Discourse*. Oxford: Blackwell
- Silverman, D. (2000). *Doing Qualitative Research: A Practical Handbook*. London: Sage.
- Tiberius, R.G., Sinai, J. and Flak, E.A. (2002). The role of teacher-learner relationships in medical education. In G. Norman, C.M. Van der Vleuten and D.I. Newble (Eds.), *International Handbook of Research in Medical Education*. Amsterdam: Kluwer.
- Traynor, M. (2006). Discourse analysis: theoretical and historical overview and review of papers in the Journal of Advanced Nursing 1996-2004. *Journal of Advanced Nursing*, 54(1): 62-72.
- Van Dijk, T. (1997). Analysing Discourse Analysis. *Discourse and Society*, 8: 5-6.
- Wetherell, M. and Potter, J. (1988). Discourse analysis and the identification of interpretive repertoires in C. Antaki (Ed.), *Analysing everyday explanation: A casebook of methods*. Newbury Park, CA: Sage.
- Wood, L. A., and Kroger, R. (2000). *Doing Discourse Analysis*. London: Sage.
- Wright, S., Wong, A. and Newill, C. (1997). The impact of role models on medical students. *Journal of General Internal Medicine*, 12(1): 230-231.

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