

HIDDEN CURRICULUM AND STUDENTS' DEVELOPMENT OF
PROFESSIONALISM IN MEDICAL EDUCATION

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By

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ABSTRACT

Medical students need to acquire not only biomedical knowledge and clinical skills, but also a professional identity to become future qualified physicians. However, much of the professionalization of medical students comes not from the formal curriculum, but the implicit hidden curriculum. This thesis is based on a content and discourse analysis of 75 articles that employ the term “hidden curriculum” or “hidden curricula” in the article title or abstract in two medical education journals *Medical Education* and *Academic Medicine*. The study tries to answer two main research questions: what the components of hidden curriculum are, and why hidden curriculum is becoming a popular discourse in medical education. The purpose of this research is to use the key concepts informed by theories developed by Bourdieu and Goffman to build a theoretical framework to understand the usage and interpretation of hidden curriculum from the medical educators’ perspective. I conclude that hidden curriculum is used in a distinct and ambiguous way in medical education literature, emphasizing institutional culture, role modeling, and socialization process. A discrepancy between the usage of hidden curriculum in medical education literature and sociological study is found. Though many innovations have been initiated in both practical pedagogy and the model of medical education, there has been little change in the legitimate knowledge in medicine, the ways in which medical education is organized, the underlying institutional hierarchy, and medical students’ learning experiences.

Key words: medical education, hidden curriculum, professionalism

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CHAPTER 1. INTRODUCTION

Medical professionalism lies at the central place of becoming a good physician, which is defined by the Royal College of Physicians of London as “a set of values, behaviours, relationships that underpins the trust the public has in doctors” (2005, p. 45). Applying scientific knowledge to the diagnosing and curing processes of the human body is a crucial part of physicians’ responsibilities and clinical practice. However, providing the best health care requires more than the knowledge of disease; it also concerns the feelings, experiences, and interpretation of patients as human beings, and the social environments they live in. The translation of science into practice depends heavily on the values and attitudes physicians hold and bring to the health care they provide, which significantly influence the ways in which physicians respond to patients’ needs and expectations, and are ultimately reflected in the patients’ well-being and the quality of a nation’s health care system.

In the general field of the sociological study of the professions, the consideration and inquiry of how individuals are prepared to acquire professional attitudes and values have represented one of the most popular research areas. The problem is not so much about how the newcomers learn the required technical knowledge or skills, but mostly how they fill the professional role (Bloom, 1963). Such study is particularly significant in the medical profession. Medical school is only one part of the complex institutional structures that make up the modern medical system; however, it is the institution most responsible for the transmission of the culture of medicine. In this sense, the studies of how the new members of the profession of medicine learn to think, feel, and act like doctors focus upon the medical school (Bloom, 1963). The motivation for this thesis lies in my fascination with the ways in

which students in post-secondary education change their worldviews over the course of their studies. Medical education provides a perfect example to explore the process in which medical students, as newcomers to the profession, modify their values and attitudes, develop their professional identity and are socialized into the professional world of medicine, in other words, the process in which medical students eventually become their own medical educators.

The sociology of medical education has been a classic research area in medical sociology since its emergence in the 1950s (Brosnan & Turner, 2009). The content and model of medical education are in a continuous process of reform and transformation as they struggle to keep pace with the advancement of scientific knowledge and the changing public's expectations for the health care system, which provides contexts and empirical materials for researchers in behavioural science and social science to make sense of what is happening in medical school. However, such educational studies predominantly chose psychometric testing and surveys as research methods and focused on the cognitive learning process and the effectiveness of specific pedagogy, neglecting the critical orientation of sociology to examine the full spectrum of social factors that shape medical education, ranging from the development in educational philosophy to the changes in global health policy (Brosnan & Turner, 2009). This study focuses on medical students' learning process in relation to a particular set of values and attitudes. It relates such learning process to various groups of participants, particularly medical educators, in the overall medical education system and the medical profession, and explores how they influence medical students' development of professionalism.

The realization of and the emphasis on the significance of professionalism come from both within and outside the medical profession. According to Bloom (1992), medical education is driven by three forces: “the medical sciences, the medical profession, and the society” (p. 23). Medical education today is driven by both intellectual and social imperatives to make fundamental paradigm shifts to train physicians that are prepared for tomorrow’s challenges and society’s expectations (Bloom, 1992). The sciences basic to medical practice have experienced a paradigmatic leap and substantial advances have occurred in both behavioural science and communication science, making it essential for medical schools to identify the changes they have on the content and style of medical education. Changes in the age profile of the population and the newly altered patterns of illness and disability indicate the challenges for future physicians will have less to do with curing but preventing and maintaining function (Bloom, 1992). The public’s expectations for the health care system focuses more on physicians’ quality of caring and empathy with medical knowledge and technology expanding and advancing, and the public’s easier access to internet and information (Bloom, 1992). All the above conditions require radical reform and advancement of medical education. Among all the choices of direction for change, the promotion of the ideology of professionalism is one of the most popular ideas.

Sullivan (2005) argued that a combination of individual physicians’ unprofessional practice and the medical profession’s lax self-regulation put a threat to medicine’s traditional idealism of professionalism. Cruess and Cruess (2014) commented that many medical graduates and trainees enter the medical practice with no instruction in professionalism and the medical profession had been trying to provide the optimal intervention to make sure the

medical graduates not only become skilled physicians, but also have structured knowledge of their expected social roles as true professionals. One of the responses from the profession of medicine is to include the teaching and assessment of professionalism throughout medical students' learning process (Cruess & Cruess, 2014). Various professional associations that regulate medical education in the United States, Canada, and the United Kingdom have made efforts to identify professionalism as one of the core competencies of future physicians, and establish the principles of professionalism in medical school at a practical level (GMC, 2009). Numerous medical schools have initiated various programs and courses to teach professionalism and include professionalism in evaluation standards (Bridgwater, Cooper, Livesey, & Kinsman, 2011). Professionalism, as an educational goal, is also linked to the establishment and development of a professional identity. Focus on the idea of medical students' professional identity allows medical educators to pay more attention to who medical students will be instead of what they will do after their graduation when they organize medical education and initiate learning programs (Jarvis-Sellinger, Pratt, & Regehr, 2012).

Though it is important to include professionalism in curriculum content and evaluation standards, research has shown that such curriculum reforms and innovations make relatively few changes to students' learning experiences or the outcome of medical education, and most of the learning of values, attitudes, and identity happens not in the formal curriculum, but through a hidden curriculum, which targets the structural factors that influence medical school and the learning that happens outside of lectures or labs (Hafferty, 1998). The process of professional identity formation is further connected to the capacity and significance of role models and medical school as learning environment. It is through the learning of values,

attitudes, and identity that the teaching of professionalism and the working mechanism of hidden curriculum intersect (Cruess & Cruess, 2014).

Hidden curriculum is receiving increasing recognition from medical educators, medical schools and professional associations in medicine, and is becoming a popular discourse in medical education literature; however, it is not thoroughly examined as to how hidden curriculum, as a concept, is used and interpreted in medical education literature, how it works in medical school to influence medical students' perceptions of the medical profession, their roles in the overall health care system, and their relationships with patients, and whether the realization of the impact of hidden curriculum actually improves medical students' competency and helps to train better qualified future physicians.

The concept of hidden curriculum has its origin in educational literature (Hafferty & Castellani, 2009). Though it is used in the sociological study of education to explain mostly social inequality and social reproduction, it remains a significant pedagogical concept (Michalec & Hafferty, 2013). A thorough understanding of the hidden curriculum in medical education depends on how it is utilized by medical educators in their teaching process. Based on such context, this study tries to understand the usage of hidden curriculum in medical education from the medical educators' perspective. To achieve the above goal, content analysis and discourse analysis are utilized as research methods in this study to understand medical educators' interpretation of hidden curriculum and medical education. The materials to collect data for the content and discourse analysis are articles written by medical educators that employ "hidden curriculum" or "hidden curricula" in the article title or abstract from two medical education journals that have the longest history of publication. This study asks the

following two main research questions: how is hidden curriculum used in medical education literature, and why is hidden curriculum becoming a popular discourse in medical education literature? The objective of the study is to understand the usage of hidden curriculum in medical education literature from a sociological perspective.

The body of this thesis is divided into five parts. Chapter 2 reviews some significant reforms in medical education after World War II, the development of the sociology of medical education, the appearance of hidden curriculum in medical education literature, and the sociological examination of medicine as a profession. Chapter 3 offers a theoretical framework based on Bourdieu's theory of thinking relationally about social practice and Goffman's work on impression management that guides the research questions and the interpretation of the results. Chapter 4 introduces the methodology utilized in this research, which is a combination of content analysis and discourse analysis. The reasons for choosing the above methods, a description of the materials to collect the data, and the processes of data collecting and data analyzing are provided. Chapter 5 presents results from both the content analysis and discourse analysis, illustrating what hidden curriculum is used to teach in medical education, what the components of hidden curriculum in both journals are, how each component of hidden curriculum works to influence medical students' learning experiences and professional development, and medical educators' understanding and interpretation of hidden curriculum and medical education in general. Chapter 6 is the conclusion chapter, summarizing major results from the content analysis and discourse analysis and providing some applications of the findings to medical education, the medical profession and the sociology of medical education as a research area.

CHAPTER 2. LITERATURE REVIEW

This chapter provides a literature review on this study's topic to illustrate the contexts for this research along with the significance of the research questions asked and the sociological perspectives and methods utilized, which is consisted of the following four sections: (1) reforms in medical education; (2) the sociology of medical education; (3) the appearance of hidden curriculum in medical education; and (4) the development of the medical profession.

2.1 Reforms in Medical Education

The context for the sociological study of medical education is one in which the patterns and social environments within medical schools are continually changing. This section describes some significant reforms in medical education, with particular emphasis on changes in the model of medical education after World War II as background information. According to Bloom (1979), different nations, based on their distinct cultures, follow different institutional structures of medical education; however, the inherent model and the philosophy behind such arrangements seem closely similar, especially in North America and Europe. Both British and German medical schools of the nineteenth century were essentially guided by the dominance of sciences of biology and chemistry in laboratory settings, and the increasing development of clinical specialization (Bloom, 1979). Beginning at the end of the nineteenth century and culminating after the Flexner Report (Flexner, 1910) came out, which was initiated by the Carnegie Foundation for the Advancement of Teaching for the purpose of evaluating medical schools in the United States and Canada, and seen as the best-known evaluation inquiry of medical education for policy change, a revolutionary form in both nature and structure of American medical education was established, with a combination of

academic training in classrooms and laboratories of the university colleges and clinical teaching in university hospitals (Bloom, 1979). This general form has persisted, proved successful and produced an elite group of highly trained medical specialists that are prepared to practice science and technology-based medicine (Bloom, 1979).

However, soon after World War II, new pressures and motivations for change appeared (Bloom, 1965). Modern medicine, as a product of modernity, is built on newly established biological science, through which doctors are expected to provide objective truths about the natural world and the human body in particular (Corrigan & Pinchen, 2009). Medicine and the process of curing are seen mostly as scientific progress. However, with the process of medical practice being defined as becoming more scientific with the help of modern knowledge and technology, and doctors claiming to become more professional, studies into doctor-patient relationship have increasingly shown that patients feel dissatisfied with the medical services they get and that doctors have very little understanding of patients' needs or knowledge of the social world in which their experiences of health and illness are embedded (Corrigan & Pinchen, 2009). According to Jewson (1976), one of the most important problems of modern medicine is that the patient, as a person, is becoming increasingly irrelevant to the practice of medicine. To a broader extent, research from both public-health and political-economy perspectives began to raise questions about whether the current medical practice is the appropriate mechanism to address a nation's health (Whitehead, Townsend, & Davidson, 1988).

Some pioneering innovations in medical program during the 1950s, particularly in medical schools at Western Reserve, Cornell, and Colorado, were initiated to address these

public concerns, which also shed light on a number of current issues influencing medical education (Light, 1983). According to Bloom (1979), the goal of these designed programs is to humanize medicine under the dehumanizing effects of scientific specialization, but also with the intention of providing the best science. Bloom (1979) also considered the 1960s as a significant era in which “the established structure of medical education was shaken to its roots” (p. 6).

The medical school at Western Reserve was the first one to act boldly, undertaking an educational experiment by revising the entire four-year curriculum, integrating academic disciplines with subject committees, and clinical experiences with scientific knowledge throughout the entire medical program; in the process, the influence of exams, grades and rankings was minimized (Horowitz, 1964; Light, 1983). Such changes represent a shift in teaching philosophy from faculty teaching to student learning (Light, 1983), which is well reflected by the statement from the Faculty Committee on Medical Education:

It is essential that the M.D. student be treated as a maturing individual, as a colleague, and as a student in the graduate professional school who is given increasing responsibility for his own education, for a knowledge of medicine, and for the care of patients. (Horowitz, 1964, p. 22)

Obvious from the name of the program, the emphasis within the Cornell Comprehensive Care and Teaching Program is comprehensive care, which:

demands attention to emotional and social as well as physical factors and continuing supervision of the patient in the clinic, hospital or home during each episode of illness for sufficient time to bring him through convalescence and rehabilitation, if such is

possible, to an optimal state of health and productivity and to maintain him in it. (Reader & Goss, 1967, p. 2)

Similar to the model at Western Reserve, this model also places compassionate care and human consideration for the patient as a person at a central place (Reader & Goss, 1967). Like the Cornell practice, the General Medical Clinic at Colorado included a separate but broadly trained and humanistic staff to help modify medical students' values and attitudes through their final year of study (Hammond & Kern, 1959).

After about two decades of waiting, evaluation and revision, these pioneering medical education reforms were widely adopted, particularly with the trend towards integration, not only across disciplines, but also between the preclinical and clinical training, the appearance of electives and in curriculum content, and attention to medical students' learning of values, attitudes and identity (Bloom, 1979). Alongside the reforms and policy changes in medical education around this time, research has been conducted to evaluate these initiatives and behavioural and social sciences were assigned a significant role in the study of medicine for the first time, contributing to the establishment and development of the sociology of medical education as a distinct research interest and research field (Bloom, 1979).

2.2 The Sociology of Medical Education

Many reviews of the study of medical education dated the beginning of this research area to the mid-1940s (Becker & Geer, 1963; Becker, Geer, & Miller, 1972; Levine et al., 1974). However, according to Bloom (1979), the early stages of it appeared in Europe and the United States when select committees and report experts started to conduct evaluation inquiry on medical schools (Flexner, 1910; Webb & Webb, 1910). One of the common themes

around this time was the selection criteria for medical students, trying to identify the characteristics of the best students that could fit the requirements of medical school and the medical profession (Bloom, 1965). This type of study was not consistent and was based mostly on descriptive surveys although it was influential in education policy and set the directions for later systematic investigation of medical education (Bloom, 1979).

Beginning soon after World War II, the study of medical education took on a new dimension (Bloom, 1979). The student culture has become a distinct study variable and researchers have been paying increasing attention to the significance of medical school as learning environment (Bloom, 1979). The physician socialization is one of the principal interests in the first two major works in the sociological study of medical education, focusing on the investigation of medical students' performance of competence (Becker, Geer, Hughes, & Strauss, 1961; Brosnan, 2009; Merton, Reader, & Kendall, 1957). Different sociological perspectives have been employed to analyze this socialization process. In the book *The student-physician*, Merton et al. (1957) adopted a structural-functionalist perspective, analyzing the socialization process of the medical student, which was defined as:

the process through which he develops his professional self, with its characteristic values, attitudes, knowledge, and skills, fusing these into a more or less consistent set of dispositions which govern his behavior in a wide variety of professional situations.
(Merton et al., 1957, p. 287)

According to Brosnan (2009), the socialization process of medical students in the study is portrayed as a straightforward process, during which they are gradually assimilated into the professional world of medicine. The analysis also emphasizes the importance of institutional

stability, asking how various social structures contribute to or function in relation to the maintenance of the whole medical education system (Hafferty & Castellani, 2009). In this sense, the socialization process is not only central to the development of individual medical students, but also significant to the function of the medical education system.

However, in the book *Boys in White*, medical students' daily experiences are privileged over the overall process of professional socialization. With a symbolic interactionist perspective, Becker and his colleagues discovered different strategies that medical students adopt to survive the medical training (Becker et al., 1961; Brosnan, 2009). While Merton and his associates' (Merton et al., 1957) study assumed the consensual acquisition of expected norms and values, and conceived medical school as an institution within the medical profession, Becker and his colleagues' (Becker et al., 1976) analysis pointed out the competing versions of reality among faculty and students, and illustrated how students learn to impress others, navigate expectations, and construct meanings and order in their everyday life, with medical school conceived of as an institution of higher learning (Bloom, 1965; Brosnan, 2009).

The debate went on for the next twenty years as to which perspective to understand the process of professional identity formation is more accurate or suitable (Bloom, 1979; Freidson, 1970; Light, 1980). According to Bloom (1979) and Light (1980), there is evidence for both perspectives to be right, depending on what dimensions one examines. Based on these two studies, subsequent works conceptualized medical education as an interactional process and focused on the performative nature of medical students, which is driven by the desire to appear competent (Atkinson, 1981; Brosnan, 2009; Sinclair, 1997). Medical

students learn to give the appearance of confidence, compassion, and knowledgeable ability to meet professional and public expectations, even though sometimes such requirements are not well founded (Brosnan, 2009). Following the tradition of ethnomethodologists, Atkinson (1981) examined how knowledge and skills are reproduced for and acquired by the next generation of physicians. Through the tension between and combination of objective nature of medical knowledge and subjective and ambiguous interpretation from medical educators, students learn a language system and set of perceptions that match those of their instructors (Atkinson, 1981).

According to Light (1983), though the debate is interesting theoretically to sociologists, it has less to do with the overall medical education than the roles that medical students play in the medical education system. For a large part, the emphasis in such research was on individual students and their traits, with medical school viewed as secondary to medical students (Bloom, 1979). These studies that view the learning of physicians' identity as a socialization process took into account neither the history, prestige and power of medical school, nor the external social structures influencing the arrangements of medical education (Brosnan, 2009). Hafferty (2000) also pointed out that most insights generated by such studies concentrated on the content and context of the socialization process, leaving the structural, cultural, and economic impact on medical education unexplored. Medical education is embedded in a complex structure of institutions, including universities, teaching hospitals, the profession of medicine, and the healthcare system, each of which has interests in the legitimate medical knowledge and how medicine's professional image is promoted in medical education (Brosnan, 2009). Insufficient attention has been given to the overall

national system of medical education and the competition among medical schools for rankings and research funding (Brosnan, 2009). Light (1988) has called for a new sociology of medical education to expand research interest from the body of work on professional socialization to institutional and comparative analysis.

In the research area of medical education, one particular issue researchers have tried to analyze at an institutional level is curriculum reform (Brosnan, 2009). As illustrated earlier in the section on reforms in medical education, curriculum reforms since the 1950s have attempted to blend the pre-clinical and clinical phases in order to transmit the expected values and attitudes alongside knowledge and skills to future medical practitioners (Brosnan, 2009). However, Good & Good (1993) discovered that even in those integrated curricula, students continue to focus on learning scientific facts and presenting competence, which led Bloom (1988) to characterize medical curriculum reform as “reform without change” (p. 294) and argue that curriculum reform serves only symbolic purposes. Vinten-Johansen & Riska (1991) argued that the American medical profession used curricular reform as a strategy to maintain autonomy when faced with government intervention. The inclusion of aspects of behavioural science and humanity in curriculum content had served a symbolic function to express the social commitment of the medical profession (Vinten-Johansen & Riska, 1991).

Bloom (1988) has argued that though medical practice had undergone radical changes for over a half century, the teaching and learning experiences within medical school still remained the same. He concluded that though the training of medical students to meet the changing health needs of the society is claimed as the objective of medical education, this ideology of humanistic medicine is subordinated by the research mission that is of major

concern for medical institution (Bloom, 1988). The Macy report (Macy Study Group, 1980) commented that the teaching of economic, social, and psychological aspects of medical care is unlikely to happen without fundamental changes, such as large-scale support for research and careers in those aspects. As medical school increasingly relied on securing greater resources, educational values become less important than the rational principles of corporate bureaucracy to accept more students and decrease the cost, and therefore policies that are determined by external interest groups that provide the funding and regulate the medical practice and organizational arrangements in medical school (Bloom, 1988). Stevens (1971) even concluded that medical school needs medical students, not to train them to provide health care of high quality but to give the entire apparatus a justification for existing.

Through this brief review of the sociology of medical education, with particular concentration on physicians' professional socialization and the failure of medical curriculum reform, it can be argued that though sociologists did not use the term hidden curriculum directly back then, most of the themes they studied are key aspects of hidden curriculum, like the changing policies and models of medical education, the socialization process of medical students, the subculture within medical school, and the resistance to curriculum inclusion of social and behavioural sciences, which all contribute to the later usage of hidden curriculum as an analytical framework to further explore medical students' experiences and medical school as learning environment and a significant social institution. Together with these trends of inquiry, there was also a significant change of focus in sociological analysis of medical education starting in the late 1970s "from the social psychology of individual development to scrutiny of the bureaucratic nature of the organization of the modern medical centre" (Bloom,

1979, p. 16). This part of inquiry concentrates on the power structure and decision-making process in medical school, which will be reviewed later in the section of the profession of medicine. In the following section, I will first review the appearance of hidden curriculum in medical education literature.

2.3 Hidden Curriculum in Medical Education

While most medical educators continued to focus on the development and evaluation of new coursework and integration of various aspects of the already over-loaded formal curriculum, some have attempted to draw researchers' attention to structural and cultural factors of medical education and identify the existence of a hidden curriculum in medical students' learning process (Hafferty, 1998; Hafferty & Franks, 1994; Hundert, Douglas-Steele, & Bickel, 1996; Wear, 1997). Hidden curriculum, as opposed to formal curriculum or curriculum reform, has become a popular discourse in medical education literature since the 1990s (Hafferty & Castellani, 2009).

Hidden curriculum, as a concept, first appeared in educational literature and has undergone several changes through theoretical reframing (Hafferty & Castellani, 2009). At the beginning, the usage of hidden curriculum adopted a functionalist perspective, acknowledging schools' function as agents of social control through the teaching of values for the purpose of maintaining social order and stability (Jackson, 1968). Jackson (1968) explored how students' experiences in K-12 education function to contribute to broader social issues related to the acceptance of authority and gender roles. The liberal perspective around this time viewed hidden curriculum as the taken-for-granted assumptions and practices created by various participants in school life, with the appearance of accepted normality

(Hargreaves, 1967; Lacey, 1970). Later writings extended from this trend of work, explicitly adopted conflict theory, critical theory and feminist theory, illustrating how school operates in the interests of the dominant class through knowledge inclusion and exclusion and constantly reproduces the existing relations of social class and power (Apple, 2004; Lynch, 1989). Similar to the work from the liberal and critical perspective, postmodern theory was also applied to the study of hidden curriculum. Foucault (1988) sought to answer how certain types of values and norms are identified as appropriate and the process through which people accept them as legitimate, though he rejected the explanation from totalizing theory and argued that social reproduction and social forms of power are multifarious and multi-located, therefore the mechanism of how hidden curriculum works cannot be reduced to simply class interests, patriarchy or authority. Later on research on the topic of hidden curriculum adopted a symbolic interactionist perspective and focused on the active participation and negotiation of students in resisting dominant ideology and creating countervailing social forces (Hafferty & Castellani, 2009). While this concept still remains widely used in educational literature, and has generated considerable debate in educational pedagogy, it is interpreted in many instances as a mysterious and irrelevant social force in classroom and schooling (Eisner, 2001; Hafferty & Castellani, 2009; Lakomski, 1988). Skelton (1997) highlighted that there is no perfect sociological perspective to study hidden curriculum because those perspectives mentioned above are not fixed, but constantly developing. Instead, Skelton (1997) emphasized the notions of “learner experiences” and “educational processes”, which still remain popular discourses in recent medical education literature, and argued that hidden curriculum is not merely the living representation of the idealized official curriculum, but is a

set of messages mediated by learners in his or her own way, which can be “contradictory, non-linear and punctuational” (p. 188).

Hidden curriculum did not have its appearance in medical education literature until 1971 in Snyder’s study of medical students’ experiences at MIT and Wellesley College. Snyder (1973) explored the inconsistency that students experience between the formal requirements and the more implicit expectations they pick up in their everyday life. He concluded that when it comes to the determination of success, students’ ability to negotiate with faculty is more important than academic achievements, which inevitably leads to students’ feelings of cynicism. In this study, hidden curriculum is roughly interpreted as the “emotional and social surround of the formal curriculum” (Snyder, 1971, p. 4). Haas and Shaffir (1982) adopted a symbolic interactionist perspective and used hidden curriculum as an interpretive tool to examine student socialization and how students present competence through impression management when they deal with faculty members. In their analysis, hidden curriculum is used to identify and present the reality that students need to develop communication and negotiation skills to impress other groups of participants in medical school (Haas & Shaffir, 1982). Hidden curriculum has also been widely examined in the research area of specialty training within medical education like nursing (Mayson & Hayward, 1997; Partridge, 1983), residency training (Anderson, 1992), dental education (DeSchepper, 1987), emergency room, internal medicine, and others related to healthcare analysis across countries, particularly in the US, Canada, and UK (Hafferty & Castellani, 2009).

One of the reasons and motivations for reforms in medical education is the realization of the distinction between what medical educators teach and what students learn, which is one

of the key elements of hidden curriculum (Hafferty, 2000). Researchers that study medical sociology have long drawn attention to the mismatch between the manifest and latent aspects of medical education (Fox, 1989; Light, 1983). Starting with the National Board of Medical Examiners in the US and the American Board of Internal Medicine, hidden curriculum has been adopted as the focus of one of the special sessions of national and international conferences for the discussion of its impact on and potential for medical education (Hafferty & Castellani, 2009).

Medical educators have made an explicit attempt to move beyond technical medical training to focus on medical socialization, emphasizing the inherent roles of values, attitudes, and identity for physicians. Earlier research on student socialization focused on the effect of signal roles and milestone happenings (Fox, 1989), while more recent studies have extended more broadly to invisible routines, like the arrangements of class schedules, timing of residency rotations, the organization of hospitals and medical work, and the interpersonal conversations that happen outside of classroom and lab, in the elevator, the cafeteria, the lounge, or the on-call room (Christakis & Feudtner, 1997). The ways in which scientific knowledge is transmitted are value-laden and the distinction between knowledge and values is not so clear, which is the reason that hidden curriculum has an impact on students' personal and social development.

However, only in 1998 did Hafferty explicitly define hidden curriculum and provide four aspects of hidden curriculum that can be further examined. According to Hafferty (1998):

The hidden curriculum highlights the importance and impact of structural factors on the learning process. Focusing on this level and type of influence draws our attention to,

among other things, the commonly held ‘understandings,’ customs, rituals, and taken-for-granted aspects of what goes on in the life-space we call medical education. (p. 404)

The four areas that Hafferty (1998) mentioned that medical educators should pay attention to are: “(1) policy development, (2) evaluation, (3) resource allocation, and (4) institutional ‘slang’ or nomenclature” (p. 404). This definition of hidden curriculum is widely adopted by both sociologists and medical educators when they study and interpret hidden curriculum, though the four areas are rarely explored in empirical research, which reflects the difficulty of revealing what hidden curriculum is or how hidden curriculum works. Another significant aspect of this definition that is quite relevant to this thesis is that in the same article, Hafferty (1998) also defined informal curriculum, which “targets learning at the level of interpersonal interactions” (p. 404). However, in the new chapter on hidden curriculum that Hafferty and Castellani (2009) wrote for the *Handbook of Sociology of Medical Education*, there was no definition of either concept nor a clear distinction between hidden curriculum and informal curriculum; instead the authors pointed out the theme of “disconnects”, which was further explained with reference to the four following disconnects:

What is taught in the basic science versus clinical years; what is taught in “the classroom” versus “the clinic”; what role models preach and what they practice; how formal organizational policies are transformed on the shop floor. (p. 19)

This combination of the usage of informal curriculum and hidden curriculum, and the tension between formal curriculum and informal or hidden curriculum will be further explored in this thesis through discourse analysis. The following section will provide a review of the analysis

of medicine as a profession, professionalism as an increasing expectation of future physicians, and their relationship with the appearance of hidden curriculum in medical education.

2.4 The profession of Medicine

The analysis of doctors as professionals has a long history (Freidson, 1970). With the ownership of a specialized body of knowledge and valuable skills, doctors diagnose sickness and adopt various methods for curing it. However, in order to be professionals, doctors also need to have an altruistic orientation towards the public they serve (Freidson, 1970). Besides the individual commitment, a code of ethics is established, through which the area of medicine defines itself (Carr-Saunders & Wilson, 1933). A profession as an occupation not only is a dominant position in the division of labour that distinguishes certain kinds of people from others, but also plays a significant role in the stable function of a society (Freidson, 1970). From Parsons's (1951) point of view, doctors use the expected knowledge and skills to heal illness, together with the functional requirement of managing and controlling sickness as a form of deviation. Parsons (1951) also viewed the commitment of doctors to patients as a desirable bridge that connects the rationality of market relationships in the public sphere to the affective relations of the private realm.

There is a large amount of research on medicine as a profession and the professional dominance it enjoys (Abbott, 1988; Freidson, 1986; Parsons, 1951; Starr, 1982). Light (1989) documented the history of American medical profession fighting against several competing forces in the early 1900s and achieving organizational and financial control. According to Hafferty (2000), "The concept of professional dominance refers to the ways in which a profession uses legal and clinical autonomy to gain control over other competing professional

groups, over the profession's institutional domain, and over its financing" (p. 202). Johnson (1972) and Larson (1977) explained that professionalization is the process of gaining market control and locking monopoly through concerted effort. Further extending from this framework, Light (1995) regarded the medical profession as one of the countervailing powers in society, each of which has different interests and goals that are in conflict with each other. The model of countervailing powers focuses on the interactions of those powerful actors in a given field, in which each power is inherently distinct but interdependent, and defines and shapes each other over time (Johnson, 1995; Light, 1995). In this sense, the definition and content of the profession not only have influence well beyond a particular professional area and members within that, but also are influenced by the external circumstances.

The argument of Freidson (1970) that medical profession can remain autonomous as long as it has control over its technical core of work, even if other countervailing powers have autonomy over external resources, is questionable. The development of the medical profession shows that there exists a symbiotic relationship between the state and the profession, in which they both pursue governance and shape each other (Johnson, 1995; Waitzkin, 1983). Waitzkin (1983) also illustrated how the medical profession had become increasingly dependent on corporations that provide information technology, tools and equipment. He argued that by constantly upgrading products, expanding current markets and building new markets, and "rewarding doctors for generating revenues" (p. 204), the biomedical industries maximize their growth and profits, and at the same time significantly enhance medicine's professional power and income, by strengthening not only its scientific base, but also its scientific image.

From another point of view, Johnson (1995) argued that the professions were “the outcome of governing” (p. 12) in that they were created, constructed, and further developed as tools for governing. Professional autonomy at both collective and individual levels was not autonomous as Freidson (1994) or McKinlay and Stoeckle (1988) presented, but a socially constructed reality (Atkinson, 1995; Frankford, 1997). According to Light (1983), society’s needs for health care and medical practitioners lie in the nature and distribution of disease and other health problems, most of which are self-limiting, minor, chronic and emotional, and require a large amount of primary care with a significant volume of counselling with regard to patient education and emotional problems. As authorities in their respective specialties, medical educators believe that graduates with four-year medical training are not competent or qualified enough and even subspecialists have difficulty keeping pace with advances in technology and biomedical knowledge (Light, 1983). However, according to a report by the Graduate Medical Education National Advisory Committee (1980), 22 percent of all medical services could be performed by nonphysicians with equal quality, which provides a picture that sharply contrasts with medical educators’ worldview. The inadequate distribution of doctors by number and type is one of the realities that reflect the discrepancy between professional ambitions and society’s needs, and increasingly society’s expectations (Light, 1983).

Parsons (1951) realized a long time ago, as medicine entered its “golden age” in the 1950s, the anxiety, helplessness, vulnerability that patients experience due to their lack of technical knowledge. From the perspective of post-modernism, the development of medicine cannot be restricted to scientific knowledge or the progress of technology and machines. The

uncertainty of social life requires medical practice to pay more attention to the social world and the environment of the political economy that makes a huge impact on how medicine is organized and practiced (Fox, 1999).

The social authority of the medical profession was first challenged on a large scale in the 1970s when reports came out about the social pathologies of the medical profession, and its ignorance of the poor, those with chronic illness, or issues related to public health (Ehrenreich & Ehrenreich, 1971; Greenberg, 1971). Deprofessionalized knowledge over the Internet and patient groups also started to challenge medicine's professional powers (Haug, 1988). The idea grew that medicine's professional dominance experienced decline throughout the 1980s (Hafferty, 2000). With evidences of medical errors, overtreatment, and uneven quality among physicians, there was growing distrust of the judgments and values of physicians, and also their competency and qualifications (Hafferty, 2000). The autonomy enjoyed by medicine turned out to result in large variations in clinical judgments and practice styles, with the quality of care for patients not being the first priority of medical practice (Matheson, 1999; Mayor, 1998; Smith, 1998). There appeared a paradigm shift from granting physicians exclusive autonomy over how they practice medicine to close monitoring and evaluation of their performance, which led to a large amount of research conducted by physician-led research teams, specialists' societies, and academic medical centers to look inside the 'black box' of medicine's professional autonomy and identify what kinds of interventions are effective in responding to the critique of medical practice and providing evidence-based procedures and better outcomes (Hafferty, 2000).

While profession refers to specific qualities of organized medicine as an occupational

entity, professionalism indicates the traits, attitudes and behaviours at the individual level (Michalec & Hafferty, 2013; Swick, 2000); professionalization refers to “the processes and mechanisms by which medical students ‘learn’ to become professional health care practitioners” (Michalec & Hafferty, 2013, p. 401). Extensive research and policy statements have urged the organized medicine to recommit to principles of professionalism, make renewed social contract with the public it serves, maintain high levels of both clinical competence and ethical standards, adopt patient-centered approach, and practice teamwork with other health care providers (Cruess & Cruess, 2008; Institute of Medicine, 2003; Stern, 2006).

Although sociologists had been documenting medicine’s fall from professional grace since the late 1960s, the profession of medicine as an organized field did not itself begin to acknowledge its loss of professional status, or critically reflect on its crisis of professionalism until the early 1990s (Hafferty & Castellani, 2008). One of the most important apparatuses to maintain or regain medicine’s professional status is medical school, whose expected purpose is to train future doctors (Bloom, 1988). Institutional bridges were built between medical school and the profession of medicine, and hidden curriculum became a tool by which medical educators sought to respond to such change and discovery (Frankford & Konrad, 1998). According to Evetts (2011), the discourse of professionalism can be utilized by a profession to build its occupational identity and promote its professional image. Within the large amount of literature on practical pedagogy in medical education, hidden curriculum is most often linked to issues of professionalization, professional socialization, and paradigm shift or fundamental change in the organizational culture of medical school (Hafferty &

Castellani, 2009). Hidden curriculum determines the ways in which the various participants play the game, read the cues, and adapt to their immediate educational circumstances. It also determines the basis for all participants' sense of worth and self-esteem. It is the hidden curriculum that influences the adaptation of both medical students and medical educators the most (Hafferty & Castellani, 2009). Overall, hidden curriculum is interpreted as having negative impact on students' learning by promoting cynicism or preventing professionalism; however, the realization of the effect of hidden curriculum provides medical educators an analytical framework to reconsider the failure of medical education and to reconceptualize the whole medical education system (Hafferty & Castellani, 2009). Educators have begun to call for fundamental changes in the content, process, and structure of the entire medical education to "transform a faculty-centric emphasis on teaching to a student-centric emphasis on learning" (Hafferty & Castellani, 2009, p. 19).

The sociological study of medical education started to show interest in questions related to power in medical school since the 1970s (Bucher & Stelling, 1977; Duff & Hollingshead, 1968). The center of such inquiry has shifted from medical students as socializee to medical school, the socializing agency as a social institution (Bloom, 1979). The analysis of the power structure behind the decision-making process, how medical schools are operated and how everyday life is organized, and the interorganizational relations within the expanded medical center has illustrated and explained why so many innovative reforms in medical education have failed, and how professionalization operates as a mechanism for social reproduction (Bloom, 1979).

Like other professional schools, medical school is paradoxically the foundation of the

medical profession; however, it can be separated from it. On one hand, medical school creates and transmits knowledge and skills on which the profession of medicine is based, through which medical educators influence the ways in which medical practice is organized and carried out. On the other hand, medical school is a social institution with a huge concern for its own research achievements, academic prestige and national or world influence (Light, 1983). Professions strive to gain control over a domain of services and a market of clients (Freidson, 1970; Larson, 1977). The educators are the elite of a profession and they try to dominate professional school to serve their own interests. Through educating their students and influencing their graduates, they attempt to maintain their dominant positions in the structure of the society (Light, 1983).

According to Michalec (2011), hidden curriculum in medical education has potential for separateness and distinction, fostering distance between physicians and laypersons, and further establishing status hierarchy and stratification among health professionals, which apparently contradicts the elements of professionalism. Michalec and Hafferty (2013) argued that two significant lessons embedded within hidden curriculum are authority and autonomy, which are also traditional characteristics of the profession of medicine and fundamental elements to preserve its professional status. Michalec (2011) discovered through his interviews with first- and second-year medical students that they are taught by both faculty and administrators that they are of more social worth than those outside of the medical profession repeatedly in both explicit and implicit ways. Role modeling provides a significant medium for medical students to internalize the professional identity and responsibilities (Batlle, 2004; Lempp & Seale, 2004; Reuler & Nardone, 1994). Bad role modeling stunts

medical students' development of professionalism through negative learning experiences (Kenny, Mann, & MacLeod, 2003). Research has shown that medical students witness physicians putting patients' life at risk, disrespecting and making fun of patients, looking down on other health care workers, and breaking hospital rules and ethical standards without facing punishment or sanction (Ginsburg, Regehr, Stern, & Lingard, 2002; Michalec, 2012). As for the relationship between medical educators and medical students, Lempp and Seale (2004) found that students reported numerous instances of humiliation from their educators based on their own experiences or observation. They concluded that the teaching that involves humiliation is a principal way in which students learn the importance of hierarchy in the medical profession.

The purpose of this thesis is to employ sociological perspectives, particularly Bourdieu's work on the dynamics between habitus and field, and Goffman's work on the presentation of self in social practice, to combine the above reviewed parts through the analysis of medical educators' interpretation of hidden curriculum, and explain how this significant and interesting phenomenon in medical education is influenced by factors outside medical school, and makes an impact on students' development of professionalism, their experiences through medical training, which will be further explored in the following chapter of theoretical framework.

CHAPTER 3. THEORETICAL FRAMEWORK

The theoretical framework utilized in this study to help guide the research questions, the analyzing process, and the explanation of the results is a combination of Bourdieu's theory of thinking relationally about social practice and Goffman's work on impression management. The contexts in which a combination of both theorists' work is essential, the application of Bourdieu's theoretical framework and key concepts of habitus and field to medical education, and how Goffman's understanding of the presentation of self is related to Bourdieu's emphasis on agency are discussed in this chapter.

3.1 Overall Theoretical Framework

Hafferty (2000) has pointed out an analytical gap in the study of medical education between most of the studies focusing on student socialization, and a less developed interest in organizational structure. This divide can be reflected in the usage of theory, which privileges agency over structure (Brosnan, 2009). The two issues of medical students' socialization and curriculum reform in medical education are treated by researchers as two separate phenomena, and the interrelation of the two problems is not fully explored. As a result, sociology lacks a comprehensive theoretical understanding, taking into consideration both institutional arrangements and student practice, and the relationships between them (Brosnan, 2009). Part of the reason that hidden curriculum receives significant recognition from researchers is that it connects student socialization to organizational structure, which can be used not only as a practical pedagogical concept, but also an analytical framework to understand educational practice. As Wacquant (2005) highlights, "A full analysis of practice thus requires a triple elucidation of the social genesis and structures of habitus and field, and of the dynamics of

their dialectical confrontation” (p. 318). Bourdieu’s theory and key concepts are widely adopted in medical education literature in overcoming the theoretical opposition between structure and agency, and paying attention to the interrelation between them, especially in Brosnan’s (2009) review of previous research on medical students’ socialization and curriculum reform, connecting Bourdieu’s theory of thinking relationally about social practice to medical habitus and the field of medical education. At the same time, Goffman’s work on impression management can be connected to Bourdieu’s analysis of individuals having agency, and provide a more comprehensive understanding of medical students as active participants in their learning environments.

3.2 Bourdieu’s Theoretical Framework

Bourdieu has developed an approach to understanding social practice that takes into consideration both the objective social forces that shape attitudes and behaviours, and individuals’ subjectivity and actions in the world (Bourdieu, 1977). According to Joas and Knöbl (2009), Bourdieu emphasizes the profound and causal impact of the objective structures of fields, but also highlights that structures are made and continuously reproduced by social actors within them. Social actors are constantly constrained by the external environments in which they practice and establish relationships with others. Fields offer certain options for action and exclude other options (Joas & Knöbl, 2009). Based on the habitus they develop from former experiences, social actors adopt the solutions of similarly shaped problems (Bourdieu, 1977). However, there is an element of unpredictability clearly inherent in human action, which provides actors the motivation to manipulate rules and patterns (Joas & Knöbl, 2009). Social actors are not merely the passive receivers of the social

classification system. For Bourdieu, it is not useful to analyze the behaviours of individual actors in isolation; it is the relations between actors or the relations between the positions within a field that matters (Joas & Knöbl, 2009). Within the various fields, both individuals and institutions occupy different relative positions, which are objectively defined by the amount of capital they possess (Bourdieu, 1998). Each field is characterized as a game in which different forms of capital are competed for, and the definition of legitimate capital is also struggled over (Brosnan, 2009). Along with the establishment of his theoretical framework and empirical research, Bourdieu has introduced a number of concepts that are of great value to the understanding of hidden curriculum in medical education.

3.3 Habitus in the profession of medicine

The analysis of habitus is basically Bourdieu's theory of socialization and the concept of habitus provides a more comprehensive theory of medical students' socialization, which moves beyond the student-centered focus and further examines the processes during which particular values and behaviours are reproduced in medical school (Brosnan, 2009). Habitus is defined by Bourdieu as:

a system of lasting, transposable dispositions which, integrating past experiences, functions at every moment as a matrix of perceptions, appreciations, and actions and makes possible the achievement of infinitely diversified tasks, thanks to analogical transfers of schemes permitting the solution of similarly shaped problems. (1977, p. 82-83)

Though Bourdieu did not write on medical education directly, he has claimed that education is one of the central mechanisms of the reproduction of habitus in a given field

(Bourdieu & Passeron, 1990). Many empirical studies have found evidence for distinct medical habitus established through medical education (Becker et al., 1961; Good, 1995; Light, 1979; Merton et al., 1957; Sinclair, 1997). Sinclair (1997) concluded that medical education is embedded within a set of dispositions that form a medical habitus that is essential for success in the profession of medicine. However, many studies have concluded that most of the medical habitus developed suppresses caring dispositions and produces competent practice (Becker et al., 1961; Brosnan, 2009; Lempp, 2009; Sinclair, 1997). Medical students' performance of competence is a social production largely affected by the structure and habitus of the medical-education field through medical students' perceptions of legitimate medical knowledge and practice, which is defined not only by formal curriculum but also, to a great degree, by hidden curriculum (Brosnan, 2009). Luke (2003) portrayed the ways in which medical students, being at the bottom of the hierarchy, gradually learn to play the game of medicine. Bourdieu's concept of habitus explains, "how professions succeed in reproducing themselves in the form of durable dispositions" (Luke, 2003, p. 52). Light (1979) and Luke (2003) concluded that medical students adopting different types of strategies to succeed in medical education could turn into an unconscious practical sense and lead to cynicism being an inevitable part of the medical habitus. As these problematic dispositions become a part of medical students' habitus, they are unable to reflect critically when reality clashes with idealistic dispositions (Brosnan, 2009). These types of evidence are the reasons that medical educators have argued that hidden curriculum could undermine the desired goals of formal curriculum (Hafferty & Castellani, 2009).

3.4 The field of medical education

Medical education can be seen as a field. A field is “a network, or configuration, of objective relations between positions” (Bourdieu, 1992, p. 97). In the book *Homo Academic*, Bourdieu (1988) documented the struggles between scientists and clinicians to distinguish themselves through legitimating different types of knowledge in the medical faculty. The concept of field helps to explain the competition among not only medical students, but also physicians from different specialties and different groups of health care providers. In *The State Nobility*, Bourdieu (1996) extended the framework to a broader field, illustrating the struggles for capital among elite French universities, and argued that the field of French higher education was structured by a double characteristic of autonomy and heteronomy. Robbins (1993) commented that every university’s institutional culture, curriculum content and organizational goals and mission together comprise a “marketable commodity” (p. 158), which attracts students who in turn add to that university’s capital and helps to reproduce the field structure. In this sense, the employing of hidden curriculum to promote students’ professional development is not only a change in pedagogy for better educational outcome, but also a strategy to compete for symbolic capital, and other forms of capital it can be translated into within the field of medical education, and to a larger extent, to serve a symbolic purpose in legitimating the existence of medical school as a social institution. The difference between medical schools’ emphasis on hidden curriculum, which illustrates the difference in institutional culture demonstrates their relative positioning in a given field, and the social strategies adopted by them to gain power or maintain their status (Brosnan, 2009).

The field concept can also help to unpack the relationship between the internal and

external factors influencing how hidden curriculum is used in medical education, which takes into account the multiple influences of biomedical research, public needs and expectations, and the policies on medical education made by professional associations (Bronson, 2009). The significance of medical school itself is that, as a social institution, it mediates the interaction of habitus and field, and contributes to the reproduction of the culture of medicine and the stability of the overall medical education system. Medical schools adopt variant strategies to perpetuate the perceptions among their students of what these institutions view as the most legitimate form of capital, which is accomplished, to a significant extent, through hidden curriculum and its delivery. There is already evidence that the reproduction of medical school's institutional culture takes place through the habitus of their students in the medical-education field (Bland, Meurer, & Maldonado, 1995; Roath et al., 1977). Roath et al.'s (1977) study demonstrated a social grouping of medical schools, whose practices can be reflected by students' preferences and concerns with regard to curriculum type and institutional atmosphere, with traditional and conventional medical schools placing emphasis on scientific knowledge and clinical practice, while innovative medical schools being more likely to provide community-based practice and include social and behavioural sciences in curriculum content. According to Bland et al. (1995), there exists an association between the type of medical school and primary-care specialization: public medical schools that have less research funding tend to produce primary-care doctors.

Bourdieu's theoretical framework of thinking relationally, along with key concepts of habitus, field and symbolic capital, can be utilized to connect students' perceptions of legitimate practice and curriculum reform at the institutional level (Bronson, 2009). Medical

education is a process, during which medical students develop the expected dispositions that provide them access to different kinds of capital that are held by insiders to the medical profession. Medical students' socialization process takes place within the medical-education field, and as a result reflects the changes at the organizational level. However, medical education as a particular field is not fixed and has undergone significant changes together with medical practice, and the social status of medicine as a profession. With the emergence of medicine organized as a marketplace, the low quality in health services, and the public's greater access to information and knowledge and demands for better health care, both the epidemiological and social changes have contributed to a reduction in the status of the medical profession (Brosnan, 2009). The crises and challenges met by medicine as a field have a huge impact on how medical education is delivered, creating pressure on medical school to make fundamental changes to train professional doctors that could deal with not only the uncertainty of modern life but also greater public expectation for doctors to have professional knowledge and skills and at the same time humanistic attitudes. To further apply successful interventions in medical education, it is significant to conduct empirical investigation to reveal the dynamics between and interaction of habitus and field, and how medical school as a social institution works to mediate such dynamics and interaction.

3.5 Goffman's Work on Impression Management

Goffman (1959) developed his theoretical framework around the idea of the presentation of self, utilizing the metaphor of social life as staged performance in the theatre. Goffman (1959) highlighted that individuals engage in managed interactions and performances both culturally and strategically to present themselves. According to Goffman (1959), self is not a

fixed independent entity residing in the individual; rather it is a process and outcome of social interactions. Similar to Bourdieu viewing each field in society as a game, Goffman (1959) also saw social actors' behaviours as elements within a game of representation and a process of negotiation. From Bourdieu's perspective, medical students adopt strategies to survive medical training, internalize institutional values intentionally or unintentionally and act as members of the professional community, through observation, discussion with peers, and role playing, which eventually help to maintain the professional status of physicians as a whole group. This particular aspect of hidden curriculum as an analytical framework can be connected to Goffman's work on impression management.

One important contribution that Goffman's theory can offer to the analysis of hidden curriculum is his inclusion of setting, especially his distinction between front-stage and back-stage action (Hafferty & Castellani, 2009). The linking of this perspective and social roles highlights that individuals can give different performances to different types of audience and what social actors present may contradict what they think or believe (Hafferty & Castellani, 2009). According to Tseelon (1992), while the private self at back-stage is more sincere and represents the true self, the public self at front-stage is designed to present a false impression and is always associated with concepts like strategies, manipulation and control. Medical students are in a particular position in the profession of medicine: they are not doctors right now, but they are on their ways to become doctors. In order to get through the medical program and have a bright career, medical students need to get highly involved in the institutional culture of that particular medical school, know the power relations within that institution, and learn to gain more social capital through the display of competence and

professionalism. The concept of situated identity, which is essential to Goffman's theoretical framework, can be connected to situated learning, a key theme of hidden curriculum, especially when interpreted as learning environment (Brosnan, 2009).

Hafferty and Castellani (2009) argued that it is interesting to sketch out how hidden curriculum, as an analytical framework, might look when connected to different sociological concepts and perspectives, especially linked to a complexity science perspective; however, it is still necessary to build a defensible model with regard to critical reflection and empirical research. With emphasis turning from formal curriculum to hidden curriculum and calls for institutional change to promote students' development of professionalism, it is significant to draw on Bourdieu's and Goffman's perspectives to connect what happens at individual medical schools to the social structure of the overall medical education system, and other relevant external social factors. In order to achieve such an objective, this thesis concentrates on the understanding and interpretation of hidden curriculum from a particular group of people, medical educators, who play a significant role in the delivery of medical education, and the overall health care system. The following chapter of methodology provides the methods utilized and the materials to collect the data in this study to reveal medical educators' understanding and interpretation of hidden curriculum and medical education.

CHAPTER 4. METHODOLOGY

This chapter introduces the methodology utilized in this study, which is a combination of content analysis and discourse analysis. The combination of these two methods provides both quantitative and qualitative results to help explain the understanding and interpretation of hidden curriculum in medical education literature. The reasons for choosing the above methods, the materials to collect the data, and how the data are collected and analyzed are provided in this chapter.

4.1 Overall Methodology

The research on medical education continues to diversify both methodologically and theoretically. Researchers that study medical education have been trying increasingly to challenge the taken-for-granted assumptions about the content, structure, and function of medical education (Kuper, Whitehead, & Hodges, 2013). Based on the literature review, much study has been conducted to reveal medical students' experiences through medical school, however less has been done from medical educators' perspective to understand how their roles as medical practitioners affect their perceptions of medical education and their ways of teaching. Besides the research conducted by sociologists, much of the inquiry into hidden curriculum is done by medical educators, who are insiders to the profession of medicine, compared to medical students as newcomers. Studying their understanding and interpretation of hidden curriculum can provide a clearer picture of medical students' experiences and the ways in which the overall medical education system is organized.

The methodology utilized in this study is a combination of content analysis and discourse analysis. The two methods are used to answer two different, however interrelated, research

questions: how and why is hidden curriculum, as an analytical concept, used in medical education literature? Content analysis is conducted to answer how hidden curriculum is used by medical educators, in other words, what the components of hidden curriculum are in medical education literature. Discourse analysis is conducted to study why hidden curriculum is becoming a popular discourse in medical education, and how medical educators interpret hidden curriculum and medical education in general.

4.2 Descriptions of the Data

For the purpose of providing a thorough picture of the development of hidden curriculum in medical education literature, the materials to conduct content and discourse analysis are articles that have “hidden curriculum” or “hidden curricula” in the article title or abstract from two medical education journals that have the longest history of publication, one North American, one British. The two journals are both publications from national professional associations that regulate and provide guidance for medical education.

The first journal *Academic Medicine* is “the official monthly, peer-reviewed journal of the AAMC, the Association of American Medical Colleges, which serves as an international forum for the exchange of ideas and information on undergraduate, graduate, and continuing medical education” (Academic Medicine, 2012). AAMC, “founded in 1876 and based in Washington, D.C., is a not-for-profit association representing all 141 accredited U.S. and 17 accredited Canadian medical schools” (Academic Medicine, 2015). *Academic Medicine* was preceded by the *Journal of Medical Education*, although during which publication period from 1951 to 1988 there was no article that employs “hidden curriculum” or “hidden curricula” in the article title or abstract. There are 202 articles that employ “hidden

curriculum” in full text since 2000, in which year the journal published its first article that have “hidden curriculum” in full text.

The second journal *Medical Education* is one of the three journals published by ASME, the Association for the Study of Medical Education. ASME is “a UK & Ireland focused, internationally facing association, supporting research-informed, best practice across the continuum of medical education to meet the needs of teachers, trainers and learners in medical education” (Mission Statement, 2015). *Medical Education* was first published in 1966, though the first article that employs “hidden curriculum” in full text did not appear until 1978, since when 370 such articles have been published, with 60 by 2000.

Both journals publish research reports and other types of articles covering a full range of issues faced by medical schools and teaching hospitals. Most of the articles from both journals are written by medical educators from different departments in different medical institutions. In this sense, the articles that have “hidden curriculum” or “hidden curricula” from the two journals reflect how medical educators understand and represent hidden curriculum, and how they think hidden curriculum should be integrated into the teaching of medicine and help promote medical education.

Though the two journals are publications of one North American association and one British association with significant differences with regard to the first appearance of “hidden curriculum” article in full text and the number of articles with “hidden curriculum” in the article title or abstract published afterwards, I did not intend to provide a comprehensive comparison of the two journals or explanation of such differences in the study. The reason is that while 90 percent of the articles from *Academic Medicine* are based on an American

medical education context, only 50 percent of the articles from *Medical Education* are based on a British context, with the rest of them internationally-focused. The two journals are used in the study as two data sources to reflect on the trend of the usage of hidden curriculum in medical education literature.

Altogether, 79 articles that have “hidden curriculum” or “hidden curricula” in the article title or abstract have been published in the two journals until October, 2014, when the data were collected and analysis was conducted. Among the 79 articles, four articles that focus on faculty development were excluded to concentrate on students’ professional development. The final number of the articles analyzed is 75. To avoid multiple counting, quotation and citation are excluded from the data collecting in both content analysis and discourse analysis.

Table 4.1. Summary of the types of the 75 articles from *Medical Education* and *Academic Medicine*

	<i>Medical Education (25)</i>	<i>Academic Medicine (50)</i>
Research Report	14	18
Commentary	3	3
Letter to the Editor	1	0
Discussion and Review	7	29

Table 4.1 summarizes the type of the articles analyzed. In *Medical Education*, research reports and other types of articles are basically evenly distributed. While in *Academic Medicine*, only 36 percent of the articles are research reports, with 58 percent of the articles being either a discussion article or review article.

Table 4.2 is a summary of the articles based on: 1) the level of medical education; 2) the stage of medical education; and 3) the division within medical education. For both journals, among the articles that clearly identify the level of medical education, they concentrate on undergraduate education. As for the stage of medical education, medical educators tend not to clearly identify it, although there are 15 articles from *Academic Medicine* that explicitly state

that the analysis of hidden curriculum is based on clinical or clerkship environments. Both journals focus on general medical education, with eight articles from *Medical Education* consisting of the topics on veterinary medicine, surgery, primary medical care, higher specialist training, palliative care, and autopsy, and ten articles from *Academic Medicine* made up of the topics on emergency department, psychiatry, palliative care, primary care, pharmaceutical industry, internal medicine, obstetrics-gynecology, and family medicine.

Table 4.2. Summary of the 75 articles from *Medical Education* and *Academic Medicine* based on the level of medical education, the stage of medical education, and the division within medical education

	<i>Medical Education (25)</i>	<i>Academic Medicine (50)</i>
Level of medical education		
Undergraduate	12	19
Graduate and Postgraduate	1	5
Not clear	12	26
Stage of medical education		
Pre-clinical	1	2
Clinical or clerkship	3	15
Both	4	2
Not clear	17	31
Division within medical education		
General medical education	17	40
Specialty	8	10

4.3 Content Analysis

The analysis of text is one of the oldest and most widely used methods in intellectual inquiry (McCormack, 1982). Content analysis has huge potential to study not only social psychology of public opinion and phenomena of collective behaviour, but also the understanding of attitude formation and attitude change with careful sampling and analysis procedures (McCormack, 1982; Woodrum, 1984). As the purpose of this study is to find out the perceptions of hidden curriculum from one particular group of people, which is medical educators, content analysis works well to present quantitative data, with its explicit linkage to

qualitative symbols to show the trend of the usage of hidden curriculum and reveal their understanding of hidden curriculum.

One of the fundamental assumptions of content analysis is that there exists an interactive process between two observable and measurable dimensions of experience, one of which is text (McCormack, 1982). In this study, the assumption is that there is a relationship between the external factors that influence the profession of medicine, medical practice, and medical education and medical educators' perceptions of hidden curriculum, which can be reflected by the ways they phrase their interpretation of hidden curriculum in commentary and discussion type of articles, and the ways they present results and make suggestions for future practice in research reports.

The materials used to conduct the content analysis are 25 articles from *Medical Education* and 50 articles from *Academic Medicine* that have "hidden curriculum" or "hidden curricula" in the article title or abstract. Content analysis is utilized to study the following two questions: 1) what is hidden curriculum used to teach in medical education; 2) how is hidden curriculum used in medical education literature. The first question is to show the distribution of the topics of the articles. The second question is to show the distribution of the components of hidden curriculum in those articles.

As this research is a grounded theory study, seven articles from *Medical Education* and 14 articles from *Academic Medicine* are analyzed to develop the codebook for the content analysis. The content analysis in this study is a combination of manifest content analysis and latent content analysis. In manifest content analysis, words or phrases are counted to provide an idea of the importance of different perspectives in the text analyzed. While latent content

analysis focuses more on the themes implicit in the text but less on specific words or phrases counts (Arai, 2012). Manifest content analysis is used to answer the first question: what hidden curriculum is used to teach in medical education? Specific qualities with exact words or phrases that students need to acquire through medical education are classified into the following nine categories: professionalism; cultural competency; ethics; autonomy; commitment; values, attitudes, and identity; reflection; team-work; and communication skills. Patient-doctor relationship is a summary category that includes the qualities of providing patient-centered care, showing respect and compassion to patients, providing emotional response, and including patients' perspective in the decision-making process. There are three other topics that are not explicit qualities required of medical students but relevant to their professional development, which are characteristic of specific specialty, career choice, and cultural reproduction in medical education. Latent content analysis is conducted to answer the second question: how is hidden curriculum used in medical education literature? While I was developing the codebook for the content analysis, I realized the ways in which hidden curriculum is described are not constrained to forms covered by the definition made by Hafferty in 1998, which was mentioned earlier in the literature review chapter. Also, since the purpose of this thesis is to understand how medical educators interpret that particular term, hidden curriculum in this study is defined as a broad concept and refers to what medical students learn outside the formal curriculum. Based on the literature review of the definition and development of hidden curriculum in both the sociology of education and the sociology of medical education, together with the grounded theory method on the development of the codebook, seven following themes are established: informal curriculum; peer relationship;

role modeling; institutional culture; power structure; socialization process; and patient encounters. There are also subthemes under the themes of institutional culture, power structure, and socialization process, which will be discussed later in the chapter of results and discussion.

4.4 Discourse Analysis

Based on an understanding of how hidden curriculum is used in medical education literature derived from the content analysis, a discourse analysis is conducted to study why hidden curriculum is becoming a popular discourse in medical education literature, and how medical educators understand and interpret hidden curriculum and medical education in general. One of the barriers to make meaningful changes in medical education is that medical educators assume that the structure and content of medical education are rational and inevitable. However, discourse analysis can help to reveal the underlying factors that establish the current medical education models, and enhance our understanding of the take-for-granted assumptions, and the arrangements accepted by medical educators as normal and natural (Kuper et al., 2013).

A large part of medical education is constructed in particular ways with medical educators, medical students, other health care providers, and patients playing specific roles, and hospitals, clinics and classrooms set in certain ways (Kuper et al., 2013). However, the question remains whether the organization and delivery of medical education are developed to provide students and patients the most benefit, or to maintain the status enjoyed by medical educators, medical school, and the profession of medicine as a whole. It has been argued in sociological literature of medical education that the power structure, the inherent power

imbalance and hierarchy between medical educators and medical students are significant factors that make an impact on students' experiences through medical school (Michalec & Hafferty, 2013). The purpose of the discourse analysis is to reveal how hidden curriculum is socially constructed from medical educators' perspective.

Discourse analysis is an influential tool to study how knowledge has power, and how social practice and power are interrelated. Discourse is an increasingly recognized concept in medical education literature, whose meaning is often ambiguously defined, but can be used practically to express a range of different constructs (Kuper et al., 2013). The discourse analysis used in this study is a critical discourse analysis. Critical discourse analysis provides an effective approach for questioning the taken-for-granted assumptions, and examines how discourse shapes and is shaped by power relations (Kuper et al., 2013). Critical discourse analysis is characterized by a transmission from description and interpretation to explanation of how discourse systematically establishes a certain version of the social world. Although some of the text analyzed includes research results, the research questions asked, the methodology chosen, and the ways in which results are presented reflect researchers' standpoint, which, in this case, is medical educators' standpoint. It is through certain statements that certain ways of thinking are made possible, and certain voices are heard and valued, while others are not. Though discourses are characterized by certain ways of thinking and talking, they also encounter other discrete but interrelated elements (Kuper et al., 2013). Hidden curriculum as an increasingly popular discourse in medical education literature is the result of many significant changes in medical practice and medical education since the 1970s. One thing that needs to be clarified at this point is that the discourse analysis in this study is

not a complete discourse analysis, but rather a more detailed analysis of how hidden curriculum is discussed and interpreted from the medical educators' standpoint in the context of the articles in the two medical education journals.

The interpretation and definition of several key concepts like curriculum, formal curriculum, informal curriculum and hidden curriculum can be complicated and ambiguous to distinguish, especially when the discussion of hidden curriculum is only a small portion of the entire article. To maintain the reliability of the interpretation of hidden curriculum as a discourse, the materials to conduct discourse analysis are 11 articles from *Medical Education* and 17 articles from *Academic Medicine* that have "hidden curriculum" or "hidden curricula" in the article title, which makes sure that the topics of these articles concentrate on hidden curriculum. The reading and analyzing processes of the discourse analysis are intimately bound up with each other, with the theoretical framework utilized, the research questions asked, and particularly some significant discourses from the literature review in mind.

The results of the content analysis will be presented with tables, summary of the research results in research reports and medical educators' understanding and interpretation in other types of articles in the two medical education journals under different themes. The results of the discourse analysis will be presented with quotations from the articles under the following three topics: 1) expectations of medical education; 2) student experience; and 3) the usage of different types of curriculum in medical education. The following chapter provides the results from both analyses and the discussion of the results.

CHAPTER 5. RESULTS AND DISCUSSION

The chapter is divided into two main sections. The first section is the results and discussion of the content analysis; the second section is the results and discussion of the discourse analysis. Conclusions are also provided at the end of both sections.

5.1 Content Analysis Results and Discussion

In this section of the results and discussion chapter, I want to provide an overall picture of the data gathered from the two medical education journals: the relationship between hidden curriculum and medical students' learning of professionalism; the trend of how hidden curriculum is used in medical education literature; and a summary of how the components of hidden curriculum and the categories within each component revealed work to influence medical students' professional development.

5.1.1 What is Hidden Curriculum Used to Teach in Medical Education

Table 5.1. Summary of the topics of the articles from *Medical Education* and *Academic Medicine*

What HC is Used to Teach	<i>Medical Education</i> (25)	<i>Academic Medicine</i> (50)
Professionalism	40%	54%
Cultural Competency	12%	10%
Ethics	28%	30%
Autonomy	0%	2%
Commitment	8%	2%
Values, Attitudes and Identity	68%	58%
Patient-doctor Relationship	24%	58%
Specific Specialty	12%	10%
Reflection	24%	32%
Teamwork	12%	18%
Communication Skills	12%	18%
Career Choice	16%	2%
Cultural reproduction	12%	4%

Table 5.1 shows the distribution of the topics of the articles from *Medical Education* and *Academic Medicine*, which illustrates some of the essential qualities required by the medical

profession that should be taught and can be strengthened by hidden curriculum. The five most emphasized qualities in the two journals are the following: values, attitudes, and identity; professionalism; patient-doctor relationship; ethics; and reflection. While the first two of them are generally not clearly defined or can be interpreted differently by different researchers or medical educators, they remain popular discourses in medical education, especially medical students' learning of social perspectives, and are closely connected to calls for institutional change to produce qualified physicians to meet future challenges. Patient- and family- centered care is becoming a significant element in curriculum content to better physicians' relationships with patients and their families, and ultimately improve the quality of the health care system. Ethics has always been at the center stage of curriculum reforms and targets the inherent cultural and ethical problems in clinical practice. The last one, reflection, parallels the general expectations for graduates in the technology and information age, which includes qualities of self-direction, critical thinking and life-long learning. Most of the qualities that appeared in the two journals represent various aspects of physicians' roles and responsibilities, however they are not separated from each other, which can be reflected in the following example: "Most cultural competency training appeared in connection with teaching about interview technique and the patient-doctor relationship. Cultural competency in combination with ethical discussions and lectures about epidemiology was also part of the taught curriculum" (Wachtler & Troein, 2003, p. 863). The table results show that hidden curriculum is closely related to the learning of professionalism, and the professionalization of medicine. Even in medical education, where curriculum design is still centered on science, hidden curriculum is not about teaching biomedical knowledge or clinical skills, but about

students' personal and professional development, though such ideology of professionalism is always phrased in different ways. In the case of *Medical Education* and *Academic Medicine*, values, attitudes, and identity remained the most popular discourse. Another result from this table that is relevant to the following discussion is the low percentage of the category cultural reproduction in both journals, which consists of the stereotypes based on gender and ethnics in medical education and leads further to inequality among physicians in income and career opportunities in certain specialties. The least cited category is autonomy, which reported to be one of the key objectives of medicine's movement towards embracing professionalism and utilizing hidden curriculum in sociological study of the medical profession and medical education, however it almost never appeared in medical educators' discussion and interpretation of hidden curriculum. The reproduction process of the professional power and autonomy enjoyed by physicians and the medical profession is not well revealed in these two journals and remains hidden within the hidden curriculum. The above two aspects illustrate the disparity between the usage of hidden curriculum in medical education literature and sociological literature or educational literature in general.

5.1.2 How is Hidden Curriculum Used in Medical Education Literature

The second question to be answered in the content analysis is how hidden curriculum is used by medical educators in research reports and commentary articles. The data collection and data analysis have led to the final seven themes that represent how hidden curriculum is used in the two medical education journals. There is a similar trend in which components are emphasized by medical educators in *Academic Medicine* and *Medical Education*, with slight differences in which one is the most emphasized, and the percentage of articles that covered

each theme.

Table 5.2. Percentage of the components of hidden curriculum used in the articles from *Medical Education* and *Academic Medicine*

Components of HC	<i>Medical Education</i> (25)	<i>Academic Medicine</i> (50)
Informal Curriculum	24%	30%
Peer Relationship	8%	18%
Role Modeling	52%	58%
Institutional Culture	48%	66%
Power Structure	16%	22%
Socialization Process	44%	46%
Patient Encounters	8%	20%

Table 5.2 shows the percentage of articles from each journal that drew on a theme at least once. The concept of hidden curriculum is used in both journals to refer to: (1) informal curriculum; (2) peer relationship; (3) role modeling; (4) institutional culture; (5) power structure; (6) socialization process; and (7) patient encounters. Three most emphasized components of hidden curriculum in both journals are institutional culture, role modeling, and socialization process, with institutional culture being the most emphasized one in *Academic Medicine*, and role modeling in *Medical Education*. The quantitative results of the content analysis show where medical educators' emphases are and what their focus is when they discuss hidden curriculum. The following discussion of the content analysis results, starting with the three most emphasized themes, is based on qualitative descriptions of the seven themes, and the categories within themes, and how these aspects implicitly make an impact on medical students' professional development. Some categories can be put into different themes, and are closely related to other categories, which explains the complexity of medical school as learning environment and the difficulty that researchers expressed studying hidden curriculum in medical institution.

5.1.2.1 Institutional Culture

Sixty-six percent of the articles in *Academic Medicine* used institutional culture as one component of hidden curriculum, which is the highest cited category in all the seven themes in this journal. It also appeared in 48 percent of the articles in *Medical Education*. Institutional culture in the analysis refers to the culture atmosphere established in different medical schools. Though medical schools are regulated by national and most of the time, provincial professional associations, with regards to curriculum arrangements, textbooks, and clerkship model, as social institutions, they have their own agendas, which define what is and is not important in certain learning environments. Even for medical schools that are seen as a part of the university, there exists a separate identity of medical schools from central universities, which gives them the autonomy to build their own policies and culture to guide and regulate both faculty and students. Institutional culture influences the outcomes of medical education: the knowledge and skills that medical students acquire, and how prepared they are when they enter the real professional world. This significant theme includes the categories of the learning atmosphere for medical students, the evaluation standards and procedures, the institutional priorities, the resource-allocation decisions, and other institutional policies, norms, rules, and expectations.

The importance of the learning atmosphere is emphasized by medical educators as it influences medical students' perceptions of self-reflection, adult learning, and life-long learning. The feeling of community is most likely to be present in newly established medical schools since innovative and experimental settings encourage various participants to break the boundaries of responsibilities and roles. As medical students move from the phases of

pre-clerkship learning to real clerkship experience, it is of huge value for medical schools and faculty members to provide them emotional support and encouragement. The style of leadership and management group also plays an important role. The kind of leadership that welcomes perspectives from different interest groups and encourages communication among these groups helps to engage students' participation in case study, group discussion and community service, which improves students' performance in hands-on experiences and critical thinking. The distinction between strongly supportive institutional culture and less supportive practice environment can be huge. A sense of community and belonging is important as medical students assimilate the values and behaviours of role models.

The evaluation standards and procedures also reflect the institutional culture, which influence not only medical students, but also faculty members. Even before medical students are accepted by medical schools, the selecting process of entry shows them what kinds of qualities the institutions are looking for. Though from the learning objectives in textbooks and other learning materials, students are required to develop a sense of humanity, to identify and solve ethical problems, to perform patient-centered care, these aspects are not included in the exams or evaluations but the scientific facts and clinical skills. From this hidden curriculum, medical students learn what is truly valued by their medical educators, who will eventually give the exam questions and complete their evaluation forms to decide whether they are qualified to practice medicine. Faculty members also modify their behaviours and balance their schedules according to what is valued by the institutions they work at. The qualifications set for the recruitment of faculty members, the evaluation standards of tenure track, the criteria for promotion and awards' selection influence faculty members' distribution

of attention and efforts.

The changing priority of medical school from teaching to clinical care and biomedical research is one of the most significant shifts in institutional culture in recent years. As medical school increasingly depends on research funding and clinical care to pay for the infrastructure, the equipment, and the salary of faculty and staff, the long-before first priority of training future physicians has been subordinated by getting more research grants and seeing more patients. Faculty members who devote their time and efforts to teaching cannot see a clear career pathway and lose motivation. Feeling the urgency and pressure to meet performance target to get funding, to achieve medical schools' organizational goals of risk-free and time-efficiency, faculty members are spending less and less time in teaching outside of lectures and labs, leaving students feeling vulnerable and confused even when they have the willingness and determination to learn and improve. At the same time, more and more organizational resources go to supporting research activities and providing more beds to get more patients, which leads to medical school not being able to recruit enough faculty members to teach courses in social science or behavioural science, or courses that help students to better communicate with patients from multicultural backgrounds and understand how illness and health are closely related to social environments.

Institutional culture implicitly establishes a baseline for what medical students should learn and how they should learn it. It shows medical students, despite what is in their textbooks or handbooks, what qualities they should manage to acquire. It also provides medical students an understanding of the culture of medicine before they enter the real world of clinical practice. It takes time and efforts to make actual changes to institutional culture,

however, the first step is to acknowledge the impact of it. In the reality of medical education, there is always a big gap between the learning objectives and organizational arrangements of medical education in institutional statements and medical students' performance, which is influenced by role modeling in medical institutions and the socialization process of medical students. If the institutional culture is the more implicit part of the hidden curriculum, the values and behaviours of medical educators and how medical students respond to those can be viewed as the more explicit part of the hidden curriculum.

5.1.2.2 Role Modeling

Fifty-two percent of the articles in *Medical Education* drew on the theme of role modeling, which is the highest percentage among all the seven themes in this journal. In *Academic Medicine*, the number is 58 percent, which is the second highest for that journal. Role modeling in the analysis refers to the values, attitudes and behaviours of medical educators. Clerkship is an important part of medical education, during which time medical students observe how physicians work and learn from real clinical experience. Though there are examples of role modeling in lectures and lab studies in the phase of pre-clerkship, most of the role modeling happens during the two years of clerkship when medical students' daily life is centered on observation and practice.

All groups of people that medical students encounter during their clerkship are role models in general, whether in a good way or a bad way, no matter if they are faculty members, attendants, residents, nurses, technicians, or hospital staff, in the sense that they are all working in or contributing to the medical profession and have interactions with medical students. In the phase of clerkship, medical students constantly observe and check whether

their role models follow the standards and procedures when they examine patients, perform operations, and communicate with patients and their families. They also constantly decide whether the role models they encounter provide patient-centered care, show respect and compassion to patients, and collaborate with their colleagues. This observation process leads medical students to build their own value system of the profession, to get to know what types of working environment and institutional culture to expect, and discover what kinds of physicians they want to be when they become members of the medical profession, not only when the values, attitudes, and behaviours of role models comply with the standards that students learn from pre-clerkship education, which reinforces their understanding of professionalism, but also when the role models make mistakes, break the rules, or act unprofessionally. When medical students witness residents humiliating and making fun of patients who are obese, homosexual, or have ethnic backgrounds, or physicians from certain specialties thinking less of other specialties, they modify their perceptions of physicians as an occupation, their attitudes towards patients, and their roles and responsibilities as health care providers, and their future career choice. Medical education is not a one-way process, medical students actively respond to the explicit and implicit messages they receive, develop various types of strategies, build their own social networks and participate intentionally in their learning environments.

5.1.2.3 Socialization Process

Socialization in medical education refers to the process in which medical students define themselves and come to be defined by others as physicians. Based on the knowledge and skills they acquire, and their clinical experiences, medical students need to develop a

professional identity and have their own ideas of what it means to be physicians. Forty-six percent of articles in *Academic Medicine* and 44 percent of articles in *Medical Education* emphasize socialization process as an important component of hidden curriculum in medical education. This socialization theme includes the categories of the value conflict and the pressures, demands and changing expectations that medical students face, and their responses as active learners and contributors to the whole medical education system.

Before medical students enter medical school, they have their understanding of physicians as a profession, and what kinds of physicians they want to be in the future based on previous experiences, their social background, and their reasons for choosing to go to medical school. After they become medical students, in both pre-clerkship and clerkship learning experiences, they get to learn biomedical knowledge, clinical skills and how to apply them to clinical practice. However, there is always a disconnect between what students know previously, learn from pre-clerkship education and what they actually observe in the real clinical world during their clerkship, which contributes to a value conflict experienced by medical students. The value conflict can be caused by the inconsistencies between the new learning environments and their formal experiences and understanding. It can also be caused by the contradictions between what medical educators preach medical students to do and how they actually perform the medical practice. These mixed messages students receive give rise to their role confusion. Medical students have to face multiple tasks and changing demands and expectations, live with the developmental and systematic pressure dealing with illness and death, and are constantly required to make judgements and decisions based on those mixed messages.

Though there is no clear information to guide medical students to efficiently complete their medical training, they are active learners in their dynamic learning environments and have their own responses to survive medical school. In the theme of peer relationship, one category that is quite relevant to students' socialization is the competitiveness among medical students. They always keep in mind the need to get ahead of others, whether it is reflected in grades or performance, especially those who are so determined to be physicians in the first place. Even in such complex learning environments, medical students can still figure out their own ways to present competency, confidence, and commitment to the medical profession to impress their educators and peers, fit in the group, and earn themselves better clerkship and career opportunities.

Same as the effect of role modeling, most of the socialization process happens in the final two years of clerkship. Medical students develop their own strategies to cope with the negative role modeling and gain participation in the group. This process also makes a huge impact on students' future career choice. When they see themselves as not the kind of people who are able to fit in the culture of the medical profession as it has too much conflict with their own worldview or value system, or to achieve the requirements set out by their medical institutions, they develop negative perceptions of the profession and resist the assimilation. Others, who find themselves comfortable within the culture of medicine, or those who have no choice but have to make internal transformation in order to stay in the competition, comply with or conform to such culture and socialize themselves into the profession. Even when they don't totally agree with how medicine is actually practiced by the attendants or residents they work with, or when they are not prepared to work on their own to perform

procedures or to communicate effectively with patients and their families, they fake it to show the people around them who might evaluate them in a hidden manner that they are qualified and have the determination to stay in the game. This is what medical students tend to do at the front stage of their education, such as when they examine patients or go to the wards with residents, have conversations with patients and their family members, or have group discussion and presentation. However, at the back stage, when they have conversations with peers outside of the lecture, in the cafeteria, or in the lounge, or with people from the outside of the medical profession, during which time they have no surveillance from their medical educators or patients, they tend to show cynicism.

While medical students, as active learners, go through the process of role transmission and role identification, they at the same time intentionally or unintentionally support the leadership and management of their medical schools and contribute to the reproduction of the institutions' values and the culture of medicine. Like the ways in which children are socialized by family and formal education into the society, medical students are socialized by medical schools into the profession of medicine. Same as some children who don't make smooth transition from childhood to adulthood due to multiple individual and social reasons; there are medical students who drop out along the way of medical training to pursue other careers, and others who are socialized into the profession with characteristics that are opposed to the public's expectations. One of the significant reasons that this socialization process does not turn out to be what medical educators want or according to the blueprint drawn by professional associations is that there exists the inherent power imbalance and hierarchy in medical education and the medical profession.

5.1.2.4 Power Structure

Twenty-two percent of the articles in *Academic Medicine* identified power structure as one component of hidden curriculum; while in *Medical Education*, the number is only 16 percent. Though power structure is not a common theme in the two journals, it actually includes many aspects that influence medical students' learning experiences when they are trained to be future physicians. The power relationship exists not only between medical educators and medical students, but also between physicians and patients, between medical schools and professional associations of medical education, and among different departments and specialties.

The hierarchy that exists in teacher-learner relationship is obvious as medical educators are already equipped with knowledge and skills, and are already insiders to the medical profession, who have the power to evaluate medical students as future physicians. Medical students, as outsiders who are trying to get into the profession of medicine, constantly feel inferior for the lack of knowledge and skills, and the uncertainty of whether the investment to go to medical school will eventually pay off. Research from medical students' perspective has revealed that student mistreatment is an important part of the hidden curriculum in medical education, establishing a culture of abuse in the learning environment. Medical students are humiliated not only by attendants, residents, but also by nurses, technicians and hospital staff. However, medical students still need to build good relationships with those groups of people for the purpose to fit in the environment and be accepted. To achieve that goal, medical students accept that such humiliation and mistreatment are inevitable parts of their assessment and evaluation, and get to know that they just have to deal with them and keep

those negative feelings and reflections to themselves.

Power imbalance also exists among different departments and specialties in medical school. Research from both faculty and students' perspectives has discovered the particular expectations and routines in various departments and specialties. The departments and specialties that could get more research funding, see more patients and bring more profit to the medical institution have higher status and as a return, receive more financial support from the institution. The physicians and medical educators from such departments and specialties try to maintain their social status by acknowledging the legitimate institutional goals of research and clinical care, and emphasizing the importance of biomedical knowledge and high-technology equipment for research and patients' examination. Medical educators that teach social science and behavioural science complain the lack of resources and staff members, whose classes as elective courses are generally arranged at less preferred times. These implicit messages, though not included in the institutional statements or students' handbooks, are reported to be common sense in medical school and influence students' perceptions of what specialties they should choose in the future, not based on what they are interested in, or what they are good at, but based on what can bring them higher income and social status.

Though medical schools continue to claim their autonomy over the content and delivery of medical education, they are facing more and more interference from the government, professional associations, and biomedical companies due to the reorganization of medical education and medical practice, and the public's changing expectations for health care. Medical schools have to meet the accreditation and evaluation standards from professional

associations of medical education to maintain authority, build reputation, get higher rankings to attract more students and gain opportunities to cooperate with the government, organizations and companies. Old traditional medical schools are facing the competitiveness from newly established ones with innovations in problem-based models, student-centered education, and the integration of pre-clerkship and clerkship education. Medical schools are fighting for their legitimate status through balancing the institutional goals of education, research, and clinical care. The standards and criteria set by professional associations of medical education to evaluate medical schools also send out a particular hidden curriculum. Research pointed out the gap between the guidance books published by professional associations identifying what kinds of knowledge, skills, and values medical students should develop and the criteria to evaluate the outcomes of medical schools' efforts. The evaluation and accreditation questions are simplified into quantitative data, emphasizing the number of graduates and the average score of the standard examination, and ignoring the living experiences of and perspectives from medical students, and qualitative evaluation of the teaching and learning processes.

The theme of power structure points out the vulnerability of medical students being at the bottom of the hierarchy in, and outsiders to the profession of medicine. With the promise of a bright future with a job of high income and social status, medical students have to map out the explicit and implicit messages, develop their own strategies, and deal with the humiliation to get through medical training to become future medical practitioners. Though research has revealed that medical schools are still largely occupied by students from middle and upper classes, with the rising tuition and competition in the labor market, medical students still have

to deal with the uncertainty of the investment to go to medical school. The power structure within and outside medical school, to a large extent, influences and decides the institutional culture, how role models act, and how students respond. The low percentage of this theme in these two medical education journals can be explained by the facts that most articles are written from medical educators' standpoint and most of the research is conducted in medical educators' own institutions. Due to their positions being at the top of the hierarchy in medical school, they couldn't critically reflect on medical students' experiences and the influence they have on medical students. Because of the potential conflict of interest, there is still a big gap between the research results and medical educators' interpretation and the reality in medical school.

5.1.2.5 Informal Curriculum

Thirty percent of the articles in *Academic Medicine*, and 24 percent of the articles in *Medical Education* revealed the theme informal curriculum. There is a trend to combine the usage of informal curriculum and hidden curriculum, as an integrated concept to explain medical students' learning outside the formal curriculum in medical education in both journals, which will be further discussed in the following discourse analysis. Informal curriculum in the analysis refers to the teacher intention, the subtle preaches, and the interpersonal relationships between medical educators and students. The difference between informal curriculum and role modeling in this content analysis is that informal curriculum mostly happens in pre-clerkship years. It emphasizes the behaviours of medical educators in lectures and labs, but not the real clinical settings. Even in pre-clerkship years, when the teaching methods concentrate on lectures and lab learning, medical educators still

intentionally or unintentionally transmit to students what types of knowledge are more legitimate, their own experiences of getting into the medical profession, and their attitudes towards patients and the health care system. These informal messages also contribute to medical students' role identification and transformation process. The other two themes patient encounters and peer relationship have the lowest percentage in both journals, however, they represent two important groups of participants in medical students' daily life and learning process.

5.1.2.6 Patient Encounters

Eighteen percent of the articles in *Academic Medicine* draw on the theme patient encounters, while in *Medical Education*, the number is only eight percent. Patient encounters refer to medical students' real clinical experiences with patients, whether they are supervised by residents and attendants or practice alone. Only when students start to see patients and make judgements and decisions in real clinical settings, they come to realize and understand the complexity of medicine and medical practice, and the daily activities of physicians. Most of the biomedical knowledge and clinical procedures medical students learn from lectures and labs cannot explain the complex functioning of the human body and the complicated situations in hospitals. Some of the situations that medical students encounter that influence their values and attitudes are when they have to face death for the first time, take care of the dying patients, or deliver bad news to patients and their families. When medical students encounter the above situations on their own without emotional support from peers or medical educators, especially when others quickly move on and see those as unavoidable parts of being physicians, they learn to objectify patients, not to take it personal when they encounter

patients, and not to develop interpersonal relationships with patients, which ruins their idealism of professionalism and patient-centered care. Another significant aspect that medical students start to realize when they encounter patients is the limitation and uncertainty of medicine and medical practice. There is so much that is out of control of physicians at clinical settings. Patient encounters provide many learning opportunities that allow medical students to apply the knowledge and skills they acquire, reflect on their practice and modify their perceptions, values, and attitudes.

5.1.2.7 Peer Relationship

The last theme is peer relationship, which was covered by 18 percent of the articles in *Academic Medicine*, and eight percent of the articles in *Medical Education*. Peer relationship refers to the interactions among peers in and outside of class. Two important aspects of this theme are peer support and the competitiveness among medical students. On one hand, being at the bottom of the power structure in medical school, medical students understand the struggles and difficulties their peers go through. Articles that draw on this theme reveal that the support group, as a particular pedagogy, can help medical students to critically reflect on their own experiences, gain emotional support when they lose patients or face value conflict, and make the role transformation and identification process easier. Medical students also share the implicit messages they get from their learning environments and social networks with peers, like which courses or community services to choose, and the strategies to impress certain professors to receive higher grades or better evaluations, and get along with certain residents or attendants. By spreading and sharing these expectations and strategies, medical students, as a group, figure out a way to fit in their medical institutions. On the other hand,

the competitiveness among medical students devalues the teamwork and collaboration that is an expected part of the medical professionalism. There is a common understanding that medical students need to get ahead of their peers, maximize their cultural and social capital to appear more competent and competitive to get better clerkship and residency opportunities and eventually get into better specialties.

5.1.3 Content Analysis Conclusions

The content analysis illustrates what hidden curriculum is used to teach in medical education, how hidden curriculum, as a concept, is used in medical education literature, and the ways in which the various components of hidden curriculum work to influence medical students' professional development. A similar trend is reached in the two medical education journals. Though it is a big progress for medical educators to realize the existence and effect of hidden curriculum, acknowledge the inconsistency between what teachers preach and what students learn, and make efforts to reveal the mystery of hidden curriculum in medical school, I argue that the distribution of the components of hidden curriculum represented by medical educators in research reports and other types of articles reflects the legitimate understanding of hidden curriculum in medical education. There exists a gap between how hidden curriculum is used in the sociological study of medical education in a more critical way and how it is used by medical educators in medical education literature in a more neutral way. In the sociological study of medical education, the interpretation of hidden curriculum concentrates on how authority and autonomy embedded within hidden curriculum exist to preserve the medicine's professional status; however, in these two medical education journals, power structure only ranks fourth in the seven themes of hidden curriculum. The

understanding and interpretation of hidden curriculum from medical educators' perspective fail to acknowledge the inherent institutional hierarchy that significantly set the baseline for institutional culture, how role models behave, and how students react. In sociological literature of medical education, sociologists try to find out why such hidden curriculum of cynicism, humiliation, authority, and hierarchy exist in the profession of medicine as a whole system and field, and how medical school as a significant social institution constantly reproduces the culture of medicine, and helps to maintain the autonomy and status enjoyed by the medical profession. In medical education literature, hidden curriculum is seen as a part of the curriculum, and is used as a tool to explain medical students' loss of idealism and professionalism, and a practical pedagogy to better individual medical students' performance.

5.2 Discourse Analysis Results and Discussion

Based on the themes discovered from the content analysis, the understanding of what the components of hidden curriculum are, and how these components work to influence medical students' professional development, a discourse analysis was conducted to further understand medical educators' interpretation of hidden curriculum, and why hidden curriculum is becoming a popular discourse and used in a distinct and ambiguous way in medical education literature. Several similar trends are revealed in the ways in which medical educators represent the expectations of medical education, interpret students' experiences in medical schools, and understand the relationships between formal, informal and hidden curriculum, with slight difference in the discourses that are utilized in the two medical education journals. The results of the discourse analysis are presented in the following pages with quotations as examples from the articles analyzed.

5.2.1 Expectations of Medical Education

Medical educators acknowledge that there exists particular habitus and dispositions within the field of medicine and medical education. These types of habitus and dispositions show medical students, as newcomers, what are valued and expected in exams, evaluations, and future practice. However, most of such habitus and dispositions cannot be found in the formal curriculum; students need to constantly keep an open mind and be sensitive to their learning environments. As illustrated by the following examples: "...understanding the rules and embodying the expected dispositions of a future surgeon..." (Hill, Bowman, Stalmeijer, & Hart, 2014, p. 890); "...by accumulating the achievements required, and by displaying the personal characteristics expected of surgeons..." (Hill et al., 2014, p. 890); "Uncovering the surgical hidden curriculum, then, relates to understanding the importance of the accrual of relevant capital and the embodiment of surgical dispositions, or to developing a feel for the game" (Hill et al., 2014, p. 892). This aspect of hidden curriculum conveys the habitus of medicine to students, although the capital needed to develop the dispositions to acquire the habitus is not evenly distributed among medical students, which contributes to the reproduction of the present power relationship in the medical profession, during which process the powerful groups maintain their positions through the privileging of certain habitus and the accumulation of different types of capital. An example from the surgical education is: "...students had differential access to the hidden curriculum, this time because some students were unwilling or felt unable to enact dispositions in the manner required. As a result, a further subset was excluded from surgical careers" (Hill et al., 2014, p. 889). Another example is: "(Students') understanding of 'the rules' leave (them) feeling they were

unable to challenge existing ideals...(and) there was a strong sense that surgery as a practice was static and unlikely to change” (Hill et al., 2014, p. 890). The concepts of field, habitus, and dispositions used by medical educators reflect two processes of social reproduction: the reproduction of the professional status of medicine through the teaching of particular habitus and dispositions to medical students, and the reproduction of the power distribution within the field of medicine through the unequal accumulation of various types of capital.

The expectations of medical education fall into two categories in the two journals, knowledge and skills being the first one, and values, attitudes, and identity being the second. Biomedical knowledge and clinical skills are essential to how well physicians practice medicine, however their values and attitudes decide how they see illness, their roles and positions in the health care system, and their relationships with patients and colleagues. The two types of expectations can be seen in the following examples: “...(the) subtle and almost invisible messages...shape trainees’ identities in ways that are detrimental to patient wellbeing” (Phillips, 2013, p. 124); “Medical schools have values they explicitly choose to pass on to trainees along with knowledge and skills, and although these may not appear in curricular objectives, they pertain to the professional competencies expected of a graduate” (Phillips, 2013, p. 124). The development of appropriate values, attitudes and identity is expressed in various ways in the two journals, as a separate learning process from biomedical knowledge and clinical skills, such as professional enculturation, moral enculturation, student maturation, professional identity development, social development, and personal development with social perspectives, representing an essential component of the professionalization of future physicians.

The realization of this aspect of professionalization is significant, however, the attention medical educators distribute to this learning process is not enough and the importance of its position within the overall medical education model is not fully acknowledged. This can be reflected by the distinctions between medical training and medical education and the usage of incidental existence. Two examples from *Medical Education* are: "...depend on chance: which patients they met, how much time their tutor had for discussion, how interested the tutor was in discussion and the student's own interest in the subject" (Wachtler & Troein, 2003, p. 864); "...much behavioural and social science learning is incidental to the primary information being taught, cannot easily be identified and entered into a database and is difficult to document and categorise" (Adler, Hughes, & Scott, 2006, p. 463). Two examples from *Academic Medicine* that emphasize the importance of ethics teaching in medical education are as follows: "...medical training at root is a process of moral enculturation, and that in transmitting normative rules regarding behavior and emotions to its trainees, the medical school functions as a moral community" (Hafferty & Franks, 1994, p. 861); and "...the overall process of education is a form of socialization and that all socialization involves a moral dimension...within a framework that transmits notions of rightness and wrongness, appropriateness and inappropriateness" (Hafferty & Franks, 1994, p. 863), which emphasize that acquiring proper values and attitudes is an inherent part of medical students' professionalization and medical education is not simply a training process to learn biomedical knowledge and clinical skills. The usage of hidden curriculum in medical education in some medical schools to teach professionalism can be interpreted as a clinical tool for technical consideration, which still remains a marginalized part in curriculum arrangements and

contributes to the fragmentation of medical students' personal and social development.

The marginalization of social science and behavioural science in curriculum content and medical students' identity formation in the overall medical education model can be connected to another discourse of legitimate knowledge. Legitimate knowledge decides not only curriculum content by excluding certain types of knowledge, like social science, behavioural science, communication science and ethics, but also the career choice medical students make through the implicit messages that faculty members who teach courses on such subjects have little chance of advancement and some specialties are superior to others. The following three examples illustrate this aspect of hidden curriculum: "...doctors hurry to embrace technical change with scant benefit of evidence, while refusing to extend the same courtesy to almost every other sort of change" (Marinker, 1997, p. 297); "The suspension of hierarchical rules enables participants to explore the important question of whose knowledge matters, or should matter, in any particular conversation" (Browning, Meyer, Truog, & Solomon, 2007, p. 909); "Resistance to learning about some issues occurs because students value only curricular content that is supported by the institution's dominant tacit values, to which they must aspire in order to achieve" (Ewen, Mazel, & Knoche, 2012, p. 202).

While articles in *Academic Medicine* emphasize the legitimate knowledge, articles in *Medical Education* represent a discourse of integration. Statements are made to not only integrate basic science with clinical practice, but also integrate what students learn with their personal and previous experiences, keep the consistency of medical educators' behaviours, and integrate medical students' and patients' perspectives into conversations at both interpersonal and organizational levels. One example is: "...an...assessment of the

curriculum, specifically with regard to the social sciences and integrative medicine, was required” (Adler et al., 2006, p. 463). The following example shows that hidden curriculum could undermine the intention of curriculum arrangements: “Although the declared intentions of the curriculum are holistic and integrative, these intentions are subverted by the reductionist and trivializing consequences of much current educational theorizing” (Marinker, 1997, p. 293).

Though the articles in *Academic Medicine* claim the power of legitimate knowledge, they at the same time acknowledge the limitation of medicine. There exists “a potent reminder of the need to embrace uncertainty and complexity in the relational practice of clinical medicine” as “no two encounters are alike, and there is no single right answer in these situations”, and calls for students to develop the “ability to practice in contexts of uncertainty and complexity” (Browning et al., 2007, p. 909). This aspect of hidden curriculum is also revealed by students’ reflection: “How broadly are we supposed to define our role as healers; and how do I reconcile the ‘drop-in-the-bucket’ effect of my limited interventions” (Gaufberg, Batalden, Sands, & Bell, 2010, p. 1712). The acknowledgement of the limitation and uncertainty of medicine and the complexity in clinical practice can also be found in the following example: “Students frequently grappled with the uncertain role of the doctor in dealing with the nonmedical dimensions of patient wellbeing. They pondered the limits of medicine in addressing the human condition...of suffering and social deprivation. They lamented the inadequate focus on prevention” (Gaufberg et al., 2010, p. 1712).

5.2.2 Student Experience

Student experience is a popular discourse in both journals, together with the emphasis on

medical school as learning environment and context. The focus on student experience points out the mismatch between what students learn and what is taught, and between what medical educators preach and how they actually perform medicine. The reason for such mismatch is the complexity of the learning environment, which is dynamic, fluid, and has the potential to provide so many learning opportunities. The usage of student experience emphasizes medical students' journey through medical school by refusing the ideology that medical education is a top-down training process and acknowledging the construction and reconstruction of knowledge in certain learning environments and contexts, and the active engagement and participation from students.

The importance, complexity and potential of hidden curriculum and medical school as learning environment can be reflected in the following examples: "...hidden curriculum...is the one that is never talked about, the one from which the teachers teach, and from which the students learn" (Marinker, 1997, p. 297); "The hidden curriculum reaches far beyond the lecture theatre and, particularly in clinical education, encompasses numerous environments and contexts" (Mossop, Dennick, Hammond, & Robbé, 2013, p. 136); "Curricular content is always embedded in a context and learning environment shaped, primarily, by teacher role models and integral to the pathway from learner to doctor" (Phillips & Clarke, 2012, p. 888); "...the formal, planned social and behavioural science teaching is located within a larger medical context of values, role modelling and priorities communicated implicitly to students" (Adler et al., 2006, p. 463).

The significant force of learning environments and particular learning contexts can often be overseen by medical educators. Medical students' experiences and their reflection on their

daily experiences provide useful materials to uncover the mystery of hidden curriculum. The following example shows how medical students experience hidden curriculum in medical schools:

It is more expressed in the inflexions of our (medical educators') voices and the look in our eyes, than in anything you could take down and use in evidence. The hidden curriculum is captured, fixed and made manifest in how doctors actually set about the tasks of medicine. (Marinker, 1997, p. 297)

This following example urges medical schools to take advantage of medical students' experiences, especially in clinical years to promote their professional development: "...it is indeed possible, in the busiest of hospital environments, to fashion learning experiences that promote moral reflection and reconnection with one's humanness, and that participation in this kind of relational learning can be transformative, both personally and professionally" (Browning et al., 2007, p. 910).

One significant reason why the hidden curriculum has received more and more attention from medical educators is that it builds a bridge that connects institutional culture and learning environments to medical students' experiences, which is reflected by the interpersonal relationships they develop with other groups of participants within medical institutions. The reframing of medical education from this perspective provides medical educators a reason or an excuse to react to the critique that medical education has not been able to prepare medical students to be future qualified doctors as there is so much uncertainty and complexity in medical education that is out of medical educators' or medical schools' control and much of such learning process depends on medical students' self-learning and

self-reflection.

The discourse that is used to represent students' response, engagement, participation and negotiation in these two medical education journals is fit in. Students not only are aware of the need to become members of their medical institutions and develop their professional self-image as physicians, but also adopt various strategies to participate in lectures, labs, and ward rounds, and engage in interpersonal relationships with others to build their social networks. The following example shows some students' perceptions of the identity formation process: "...awareness of the need to first 'act' like a doctor and/or expressed variable degrees of confidence that the doctor role would eventually be internalized" (Gaufberg et al., 2010, p. 1713). It illustrates that medical students sometimes have to present their competence and confidence even though they are not fully prepared or qualified to perform medicine. The following example indicates that what medical students learn to fit in the environment often has conflict with the expected professional values: "There is the potential for conflict between the process of becoming a good professional and that of learning what is necessary to 'fit' into a new environment" (Mossop et al., 2013, p. 135). The following example even makes clear that to medical students, to fit into the group is more important than being themselves: "...students tend to question and transform themselves, realign their values and career plans and, generally, attempt to fit into the world of medicine as it is presented, even if it conflicts with their own world" (Phillips & Clarke, 2012, p. 893). However, the question that most articles fail to ask is: what leads to most students' responses as conformity, compliance, but not critical reflection or rejection. It is not what medical students feel willing to do, but what they sense they have to do being at the bottom of the

hierarchy of and outsiders to the medical profession.

5.2.3 Formal, Informal and Hidden Curriculum

Though it is the hidden curriculum that is generally used in medical education literature that concerns professionalism or the professionalization of medical students, informal curriculum is also a popular discourse in these two medical education journals. There is a trend to combine the definition and effect of informal curriculum and hidden curriculum in medical educators' interpretation, using hidden curriculum as one integrated concept in contrast to formal curriculum, which can also be reflected in the usage of explicit messages and implicit messages. Formal curriculum is used as explicit messages, while informal and hidden curriculum is used as implicit messages. The distinctions between these two types of information, and the suggestions to make hidden curriculum not hidden but explicit are commonly made in the two journals.

The following examples show the tension between explicit and implicit messages on future career choice, gender exclusion, and institutional expectations: "A perceived lack of explicit, formal careers information meant students relied heavily on word of mouth and suspected that 'who you know rather than what you know' was important, making a network crucial to 'getting ahead'" (Hill et al., 2014, p. 887); "If gender-related issues arise within the hidden curriculum, why would such topics not be formally integrated into the formal curriculum? Are these topics considered to be taboo or to represent unspoken truths that cannot be discussed explicitly" (Tekian, 2009, p. 822); "...expected behaviors in medicine are rarely made explicit, and accountability of superiors is not always defined" (Gaufberg et al., 2010, p. 1714); "Students' focused attention on decoding expectations, rules of conduct,

and rotation-specific behavioural nuances may come at the opportunity cost of time otherwise spent on learning medicine and patient care” (Gaufberg et al., 2010, p. 1714).

Suggestions are made by medical educators to identify and directly address specific aspects of hidden curriculum and keep the consistency of formal and hidden curriculum in order to maximize its positive impact on medical students’ values, attitudes, and behaviours. Such suggestions can be found in the following examples: “By creating a curriculum and learning environment that explicitly embraces the moral experience of learners, the program’s developers aim to exert a countercultural influence on the dehumanizing effects of the hidden curriculum” (Browning et al., 2007, p. 905); “In order to achieve significant changes in learning outcomes, there needs to be better alignment of the formal and hidden curriculum” (Ewen et al., 2012, p. 200).

In the following examples, informal curriculum and hidden curriculum are used together as two paralleled concepts: “...consider the influence of the informal and hidden curricula upon undergraduate medical palliative care education” (Fins et al., 2003, p. 307); “...students do connect their experiences in the hidden and informal curriculum directly and immediately to various dimensions of professionalism” (Karnieli-Miller et al., 2011, p. 374); “Ideally, both the formal and the informal or hidden curricula contribute to, rather than undermine (the goal to train caregivers to utilise their knowledge and skills with attitudes that maximize benefit for patients)” (Phillips, 2013, p. 125). The effects of informal curriculum and hidden curriculum are mixed in the following example: “...curricular reform needs to address the hidden influences of the informal curriculum” (Fins et al., 2003, p. 311).

5.2.4 Discourse Analysis Conclusions

The results of the discourse analysis reveal that there exist big gaps between the professional expectations of physicians and the outcome of medical education, and between the organization and arrangements of medical education and medical student experience. The knowledge regarded as legitimate in medical education and the inherent power structure within medical institutions still decide what and how medical students should learn to be future physicians. Medical students' professional identity formation still remains marginalized in the medical education system. Medical students' experiences through medical schools are influenced not only by their social backgrounds, qualifications and performance, but also by the institutional culture and power structure in their medical schools. The participation, engagement and negotiation from medical students concentrate mostly on individual transformation, the strategies to fit in their learning environments, and the presentation of confidence and competence.

Hidden curriculum is becoming a popular discourse in medical education as it reveals and explains a complex learning process of values, attitudes and identity, which cannot be simply acquired through the formal curriculum. The significance of hidden curriculum lies not in the definition, but the components of it and how these components work interrelated to build a complex learning environment for medical students to constantly make sense of what they learn from lectures, labs and clerkship. It is through this process that medical students build their self-image and are identified by others as physicians. Hidden curriculum has been interpreted to have a negative impact on medical students' cynicism and loss of professional idealism; however, an understanding of the effect of hidden curriculum and how hidden

curriculum works provides medical schools and medical educators opportunities to take advantage of hidden curriculum's potential as learning environment with carefully planned and appropriate pedagogical interventions to promote medical students' development of professionalism. The following chapter provides a summary of the major results in this study, combines the results from the two methods, and applies the findings to relevant practical issues and research areas.

CHAPTER 6. SUMMARY AND CONCLUSIONS

Chapter six is divided into three parts. This chapter first summarizes some major results of the content analysis and discourse analysis, and links the two parts of the results together. The chapter then provides some applications of the findings from the study by relating the results to medical education, the medical profession, and the sociology of medical education as a research area. A final conclusion is also included in this chapter.

6.1 Summary of Major Results

The two questions of how hidden curriculum is used and why hidden curriculum is becoming a popular discourse in medical education literature are closely related. Content analysis and discourse analysis work well to answer these two questions separately. The articles from *Academic Medicine* and *Medical Education* provide some resourceful data and lead to many interesting results and findings, which align with the gap pointed out in the literature review between the sociological study of hidden curriculum and research on hidden curriculum in medical education literature.

The content analysis first illustrates the relationship between hidden curriculum and professionalism. It supports the findings from previous research on hidden curriculum that hidden curriculum is generally linked to the learning of professionalism for medical students at individual level and the professionalization of medicine at collective level. Professionalism is generally not well defined in the analyzed articles, but is consisted of, or parallels with many types of qualities and characteristics in contrast to the acquisition of biomedical knowledge and clinical skills, among which, values, attitudes, and identity, as an integrated concept, is the most mentioned quality in these two medical education journals. The other

four most emphasized qualities that are closely linked to hidden curriculum in both journals are: professionalism; patient-doctor relationship; ethics; and reflection. These essential elements of being a physician indicate that a significant part of medical education is to transmit appropriate values and attitudes to medical students, and help them build a professional identity to be prepared and qualified for future practice and challenges.

The content analysis also answers the question of how hidden curriculum, as a concept, is used in medical education literature from the medical educators' perspective. The concept is used in both journals to refer to: 1) informal curriculum; 2) peer relationship; 3) role modeling; 4) institutional culture; 5) power structure; 6) socialization process; and 7) patient encounters. The percentage of each component reflects the legitimate understanding of hidden curriculum in medical education. In both journals, the three themes that are most emphasized by medical educators when they make inquiry into or interpret hidden curriculum are: institutional culture, role modeling, and socialization process. Different components of hidden curriculum work interrelated in medical school to make an impact on medical students' understanding of legitimate knowledge in medical education; their interactions with peers, medical educators, other health care providers, and patients; and ultimately their professional development on their ways to becoming future physicians.

Institutional culture regulates not only medical students but also faculty members by establishing what is and is not valued by the medical institution and influences how they distribute their time and efforts to everyday activities. Role modeling stands for the professional or unprofessional values and behaviours that medical students observe, particularly during their clerkship, which lead to their perceptions of what is or is not

acceptable in the real professional world of medicine, despite what they learn from the formal curriculum. Socialization process refers to medical students' participation and negotiation in their learning environments. Medical students are not passive receivers of the requirements set for them; they develop different types of strategies based on their own or peer's experiences to navigate their ways of learning and practicing. The presentation of competency, confidence, and dedication to the medical profession is a significant part of medical students' impression management. The theme power structure is seldom reflected from the medical educators' standpoint, yet remains a powerful factor in both faculty and students' professional development and daily experiences. For medical students, the inferior status they hold in both pre-clerkship and clerkship learning, and their positions as outsiders to the medical profession create a gap between their ambition and the anxiety, stress, and depression they struggle with. Medical students constantly feel powerless dealing with the bureaucracy of their medical schools and the health care system, and the uncertainty and failure of science and technology with the intention of providing the best care for patients.

The content analysis helps to explain the failure of many curriculum reforms and innovations in medical education that intend to help medical students to realize the ethical and cultural issues embedded within the processes of diagnosing and curing, build their self-image as future physicians, and develop a patient- and family-centered approach to their future practice. Professionalism, attitudes, ethics, and social perspectives cannot be fully understood or acquired through lectures, and needs to be integrated into students' overall learning process and daily experiences, which requires efforts at both organizational and individual levels.

Discourse analysis reveals some of the socially constructed understanding of medical education from medical educators' points of view, especially in the expectations of medical education and student experience in medical institution. The ambiguous and mixed usage of curriculum, formal curriculum, informal curriculum and hidden curriculum reflects the complexity of medical school as learning environment. Discourse analysis further explains how medical school, as an essential component of the society's arrangements of health and illness, reacts to the critique of physicians not being qualified and the low quality of health care from the public, and the pressure of the medical profession losing autonomy.

It is a significant progress for medical educators to realize the inconsistency between what they teach and what students learn, and to pay attention to medical students' daily experiences in medical institution. Such realization acknowledges not only the influence of medical school as learning environment and context providing various situated learning opportunities, but also medical students' participation as active learners and members of the reproduction process of the habitus and dispositions of medical education and the medical profession as two significant fields. However, the dominant status of biomedical knowledge and clinical skills, and the incidental existence of behavioural science and social science in the curriculum and examination content clearly communicate the legitimate knowledge and expectations of medical education. Besides the biomedical knowledge and clinical skills to acquire, medical students also have to deal with medical educators, other health care providers, and patients at interpersonal level, which adds stress, depression, and confusion to their learning experiences.

Professionalism remains a popular discourse in official statements from both medical

schools and professional associations that regulate medical education. The discourse of hidden curriculum suggests a learning process of professional identity that seems to be individual medical students' responsibility and out of medical schools' or medical educators' control, however, is largely influenced by institutional culture and the embedded power relations within medical schools. The institutional culture is transmitted through role models, who are driven by the motivations to get more research funding, accept more patients, and provide time-efficiency health care. The power imbalance among different departments and specialties in medical institution, and between medical educators and medical students influence medical students' learning experiences and future career choice. The strategies developed by medical students to survive the medical education is not motivated by the desire to become future qualified and professional physicians, but the desire to impress the medical educators they encounter to get ahead of their peers, to fit in their learning environments, and get better clerkship, residency and career opportunities.

Results from both the content analysis and discourse analysis reveal the usage of hidden curriculum as a pedagogical concept in medical education and the promotion of professionalism as an ideology socially constructed in the medical profession. The social reproduction of the habitus and dispositions in the real professional world of medicine is completed through the influence of hidden curriculum, which is composed mainly of two significant processes: role modelling and the socialization process of medical students. The next section will provide some applications of the above findings to the advancement of medical education, the maintenance of the professional status of physicians and the medical profession, and the development of the sociology of medical education as a research area.

6.2 Applications of the Findings

This study reviewed some of the significant reforms and innovations in medical education in the twentieth century, with particular emphasis on curriculum reforms after World War II and the appearance of hidden curriculum in medical education literature since the 1990s, together with the movement towards promoting professionalism among medical practitioners and medical students as future physicians. The findings indicate the influence of hidden curriculum on medical students' professional development, however, most of which is categorized as negative influence and reported to lead to students' cynicism and loss of professional idealism as their years of experiences in medical training and practice increase. At the same time, hidden curriculum proves to have huge potential to provide many situated learning opportunities for medical students to realize the importance of building professional identity, and make sense of the cultural and ethical issues in their clinical practice. To fully utilize the potential of hidden curriculum demands the commitment at organization level, efforts at individual level and the collaboration between them.

First of all, medical schools need to fully acknowledge the existence and influence of hidden curriculum, which has an impact on both faculty and students' professional development. In this sense, the advancement of medical education should not be restricted to curriculum reforms on the already over-loaded curriculum content. Medical education cannot be viewed as a one-way process of the transmission of knowledge and skills from medical educators to students, but a two-way process of not only knowledge construction and reconstruction, but also constant modification of values, attitudes, and identity. The institutional commitment also requires the curriculum arrangements and the design of

learning models and programs to include various perspectives and promote communication among different perspectives to decrease the discrepancy among learning objectives in official documents, medical educators' intentions and teaching experiences, and students' learning experiences. The essential goal is to make hidden curriculum or hidden assessment of medical students not hidden and provide them easier ways to make sense of the expectations of medical education to distribute their time and efforts.

Second, many innovative learning models and programs are implemented or suggested in the two medical education journals to create more opportunities for medical students to have access to the real professional world and real clinical practice through their medical training, for example: problem-based model, student-centered education, experiential learning, relational learning, and learning based on community service, all of which have the intention of integrating pre-clerkship learning and clerkship practice, and re-establishing the education of future practitioners as the first priority of medical school. Medical schools and medical educators also need to modify the evaluation standards, making professionalism and ethical awareness an explicit part of the examination or assessment. Interdisciplinary collaboration among different colleges and medical departments should also be encouraged to honor multiple perspectives and include more courses in behavioural science, social science, humanity, and ethics. It would also be important for both medical educators and medical students to sit back and assess the teaching and learning processes. Reflection has been proven to be beneficial to medical students' development of professionalism. Medical educators should use guided reflection, like reflective essay, narrative reflection, critical event analysis or group discussion to help medical students to identify positive and negative

behaviours and attitudes in both their observation and practice.

Last of all, though the articles that focus on faculty development are excluded from this study to put emphasis on medical students' development of professionalism, faculty development is an essential part to deliver the kind of medical education that centered on students. Faculty development programs should be initiated in medical schools not only because faculty members, as role models, have a huge impact on students' attitudes and behaviours, but also because they as well face inconsistency in institutional culture, and the confusing messages about their roles and responsibilities in medical institutions as they are socialized into the faculty life. It is necessary for faculty members, who used to be seen as pure deliverers of the hidden curriculum, to recognize the components of hidden curriculum and understand how they operate in their teaching and working environments. Such faculty development programs should target not only skills in particular educational activities, such as teaching skills and curriculum development, but also the process of occupational enculturation, and the awareness of the influence of their practice on and the implicit values and attitudes they transmit to medical students.

Some of the findings from this study are also relevant to the understanding of medicine as a profession. The paradigm shift from professional dominance to managed care and the reconceptualization of authority and autonomy suggests the changing status of the medical profession as a social division in the society. The previous status of enjoying and maintaining control over countervailing forces has been replaced by the struggle to fight against the interventions from the outside world of the medical profession. Both the medical profession and its professional members are undergoing a change from unchallenged autonomy to being

asked to prove accountability. The development in both intellectual and social worlds requires the medical profession to reconstruct its organization and practice to face the existing and future challenges and expectations. At the frontline of such reconstruction is the reconfiguration of medical education, which is the mechanism to train future practitioners. The appearance of the ideology of both professionalism and hidden curriculum in medical education should be connected to the overall development of the medical profession and seen as a reaction from the medical education system to the ongoing critique and changing expectations from the public for the health care the profession provides. It is crucial to find a balance between the autonomy enjoyed by the medical profession brought by the control over the required knowledge and the entry of future professional members and the social responsibility and accountability expected from the public for the medical profession as a significant social institution in society.

There are three main contributions of this study. The first one is the chosen perspective and the materials to collect the data. The study manages to understand the usage of hidden curriculum in medical education from a particular group of people, the medical educators, who enjoy a high status in the overall medical education system and the medical profession, which can be reflected in their interpretation of hidden curriculum and understanding of medical education, and cannot be recovered from most of the research that concentrates on the socialization process of medical students. Through medical educators' understanding and interpretation, the student socialization is connected to medical school's institutional culture and learning environments, the overall medical education system, and the health care system in society. Through the power imbalance found within and outside the medical institution,

explanations for students' certain reactions to the expectations of medical education are provided. This study also reveals how hidden curriculum, as a concept, is used in medical education literature, and ultimately how hidden curriculum is utilized in the delivery and advancement of medical education by categorizing and counting certain themes that appeared in research reports and other types of articles in two significant medical education journals. A discrepancy between the sociological usage of hidden curriculum as an interpretive tool in a more critical way and the usage of hidden curriculum in medical education as a practical and pedagogical approach to improving medical students' performance is uncovered. The discourse analysis reveals some popular discourses in medical education used to understand students' daily experiences, better prepare medical students as future physicians, and improve the outcome of medical education. The final contribution of this study is the application of a sociological framework to understand medical educators' interpretation of hidden curriculum. The combination of Bourdieu's theory of thinking relationally about social practice and Goffman's work on impression management works well to understand the components of hidden curriculum and explain how each component works in medical school.

Based on the contributions of this study, some interesting directions for future research on the sociology of medical education, especially the understanding of hidden curriculum, can be suggested. The first one is to further explore the working mechanism of the discovered components of hidden curriculum. The simple realization of the effect of hidden curriculum is not enough to make actual change in medical educators' and medical students' teaching and learning experiences. Further research should concentrate on how power structure influences both medical educators' and medical students' perceptions of the medical

profession, and how they arrange their daily activities according to the requirements and expectations in their medical institutions. Besides the inquiry into the socialization process of medical students, research should be conducted to study how this socialization process is impacted by medical school's institutional culture and role models. The second one is to further utilize sociological perspectives to understand the phenomenon of the appearance of hidden curriculum in medical education. Critical approaches should be applied to reveal the reproduction processes of certain habitus and dispositions in medical education, and the professional status of the medical profession. The perspective of political economy can be utilized to draw a broader and clearer picture, by connecting medical education to the medical profession, the appearance of hidden curriculum in medical education to the movement towards promoting professionalism. As for suggestions for future research methods, interviews and participant observation still remain powerful approaches to understanding the meanings constructed in and the significance of the interactions between different groups of participants in the fields of medical education and the medical profession. Medical students' reflection essays are becoming new data resources to reveal some of the taken-for-granted institutional culture, and values and attitudes of medical educators, and explain the impact of such factors on students' professional development.

6.3 Conclusions

Hidden curriculum is a relatively recent concept in medical education but is becoming a popular discourse in both medical education literature and the official documents that regulate and advance medical education. The usage of hidden curriculum acknowledges the idea of viewing medical school as learning environment and medical students as active

participants in their learning process, and emphasizes the importance of developing professional values, attitudes, and identity for medical students, besides the acquisition of biomedical knowledge and clinical skills, as essential requirements of future qualified physicians that can meet the public's expectations for the health care services. Both the medical profession and medical education system are undergoing a lot of changes. There are several components of hidden curriculum, existing in medical school and influencing medical students' development of professionalism, that are worth further exploration. A critical reflection of the inherent power structure in both fields is significant to the outcome of the ongoing and future reforms and innovations. Hidden curriculum proves to be a promising educational concept in medical education, can be utilized as a theoretical framework in sociological study of medical education to connect the socialization process of medical students to arrangements at organizational level, and deserves further attention from both medical educators and sociologists who are interested in the teaching and learning processes in medical school.

The exact day I finished the first draft of this thesis, I watched the first episode of *Grey's Anatomy*. The ending of this episode built a perfect image of medical education in my head and I would like to use some lines from that as the ending of this thesis:

I'd know you anywhere. You are the spitting image of your mother. Welcome to the game.

Okay, everybody. It is a beautiful night to save lives. Let us have some fun.

I cannot think of any one reason why I want to be a surgeon...But I can think of a thousand reasons why I should quit. They make it hard on purpose. There are lives in our

hands. There comes a moment when it is more than just a game. And you either take that step forward or turn around and walk away. I could quit, but here is the thing...I love the playing field.

So...I made it through my first shift. We all did. The other interns are all good people.

You'd like them...I think so. I don't know...maybe. I like them. (Rhimes, 2005)

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