

# The Use of Narrative Medicine Literature for Interdisciplinary Communication through the Internet Learning System

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## ABSTRACT

The increased reliance on nonhuman technologies can lead to an impersonal and calculating medical care system in which medical care professionals and specialists do not care enough about patients' human experiences and the quality of medical care declines. Patients lose personal contact with their doctors and other medical care professionals. Moreover, failing to understand patients' perspectives can lead to communication problems among physicians, medical care professionals, patients, and patients' families. However, these communication problems may be bridged by narrative medicine literature through the internet learning system. In this paper, narrative medicine literature and interdisciplinary cooperative learning are promoted to establish more humanizing medical care.

**Keywords:** Narrative Medicine Literature, Interdisciplinary Cooperative Learning, Humanizing Medical Care

## INTRODUCTION

The advance of medical science and technology has caused the modern practice of medicine to focus too much on using nonhuman technologies to keep patients alive longer than expected [1]. Moreover, the workload and overload of paperwork have led medical professionals to interpret and judge patients' medical histories mainly based on their scientific content, ignoring the fact that "medicine is more restoring the peace of mind than curing the disease" [2]. The increased reliance on nonhuman technologies can lead to an impersonal and calculating medical care system in which groups of medical professionals and specialists do not care much about patients' human experiences of pain, suffering, desperation, or even death. The overemphasis on impersonality and calculability can also lead to a decline in the quality of medical care, as patients interact more with impersonal technologies. Patients lose personal contact with their doctors and other medical care professionals, becoming a number or a product on a medical assembly line [1].

Charon [3] argued that when medical care professionals pay too much attention to scientific elements instead of what patients go through, the medical care system is dehumanizing and accomplishes only half of the practice of medicine. In the context of medicine and medical care, the humanities will never develop unless medical care professionals begin to care about patients' inner and psychological worlds. Failing to understand patients' perspectives may lead to communication problems among physicians, medical care professionals, patients, and patients' families. However, such communication problems may be bridged by narrative knowledge as a vehicle to foster good interpersonal relationships among them [4].

## CONCEPTUAL FRAMEWORK

Given that the current practice of medical care is intensely stressful, impersonal, and lacking in empathetic connections, many medical schools and universities have begun medical humanities programs to incorporate narrative literature and art study into existing curricula or practice in order to balance the largely scientific content and take patients' body, mind, and soul into consideration [5, 6].

### **Narrative Medicine**

Narrative medicine was developed in the United States in 1980s. In the United States, narrative knowledge has been used in many medical schools and hospitals to encourage students and physicians to strengthen their reflection, self-awareness, and adoption of patients' perspective through the study of arts and literature.

Charon [3], professor of Clinical Medicine and Director of the Program in Narrative Medicine at the

Columbia University College of Physicians and Surgeons, defined narrative medicine as medicine "practiced with the narrative competence to recognize, absorb, interpret, and be moved by the stories of illness" (p. 3). She pointed out that the use of narratives in literature and medicine classes can help medical care students and professionals to develop sensitivity. Such sensitivity is useful for making medical choices for patients and further decreasing the distance between doctors' clinical knowledge (disease) and patient's subjective experiences of symptoms and suffering (illness) [7]. Literary narratives can help practitioners to better understand patients' lived experiences [8], for the concepts central to medical care, such as pain, death, suffering, illness, hope, redemption, aging, loss, death, and even love, are common in literature narratives [9, 10].

The techniques used to comprehend and criticize novels can also be applied to understanding patients' discourses [11]. Through closer and more sustained reading, medical care professionals and students can become aware of the "multiplicity of critical and interpretive approaches to understanding of the worlds of nursing, patients, clients, health, illness, disability, and the health care and sociopolitical systems within which they work" (p. 212). Literary narratives can also help medical care professionals and students to examine the ethical dilemmas inherent in medical science and the economics of medical care delivery, thereby developing empathy and respect for others [12, 13].

When appreciating the narrative medicine literature, the readers should focus on the mental processes of the narrators or storytellers (who may stand within or outside the story in time or space), instead of merely focusing on the chronological account of events,

experiences, or actions. They should use the plot, the central structure of the narrative, to tie different parts together and to organize them into a meaningful whole [14]. Moreover, the readers should also focus on how the narrators or storytellers use the triad of attention, representation, and affiliation in the practices of narrative medicine in order to learn how to articulate and reflect on the medical care process, further empathizing with human beings' suffering and developing healing affiliations with their patients and colleagues [3]. In doing so, narrative medicine becomes a functional instrument through which medical care professionals can share life stories with their patients, patients' families, colleagues, public, or even themselves [15].

#### **Cluster Grouping Methods for Interdisciplinary Communication**

In order to facilitate interdisciplinary communication among a range of medical care disciplines, interdisciplinary cooperative learning should be promoted. The benefit of interdisciplinary cooperative learning is that those from different personal or professional backgrounds or disciplines can acquire and share knowledge or experiences of medical care. Interdisciplinary cooperative learning clusters can be derived based on the variables regarded as important by the instructor or through various techniques.

Instructors may try to set up student profiles to collect students' personal information. This may include their gender, major, grade, or scores from the scales. In accordance with Ganschow and Spark's grouping model [16], students can be categorized and coded as low (coded "1"), moderate (coded "2"), or high (coded "3") based on the scores obtained from the scales. If students score one or more standard deviation above the overall mean, they are categorized

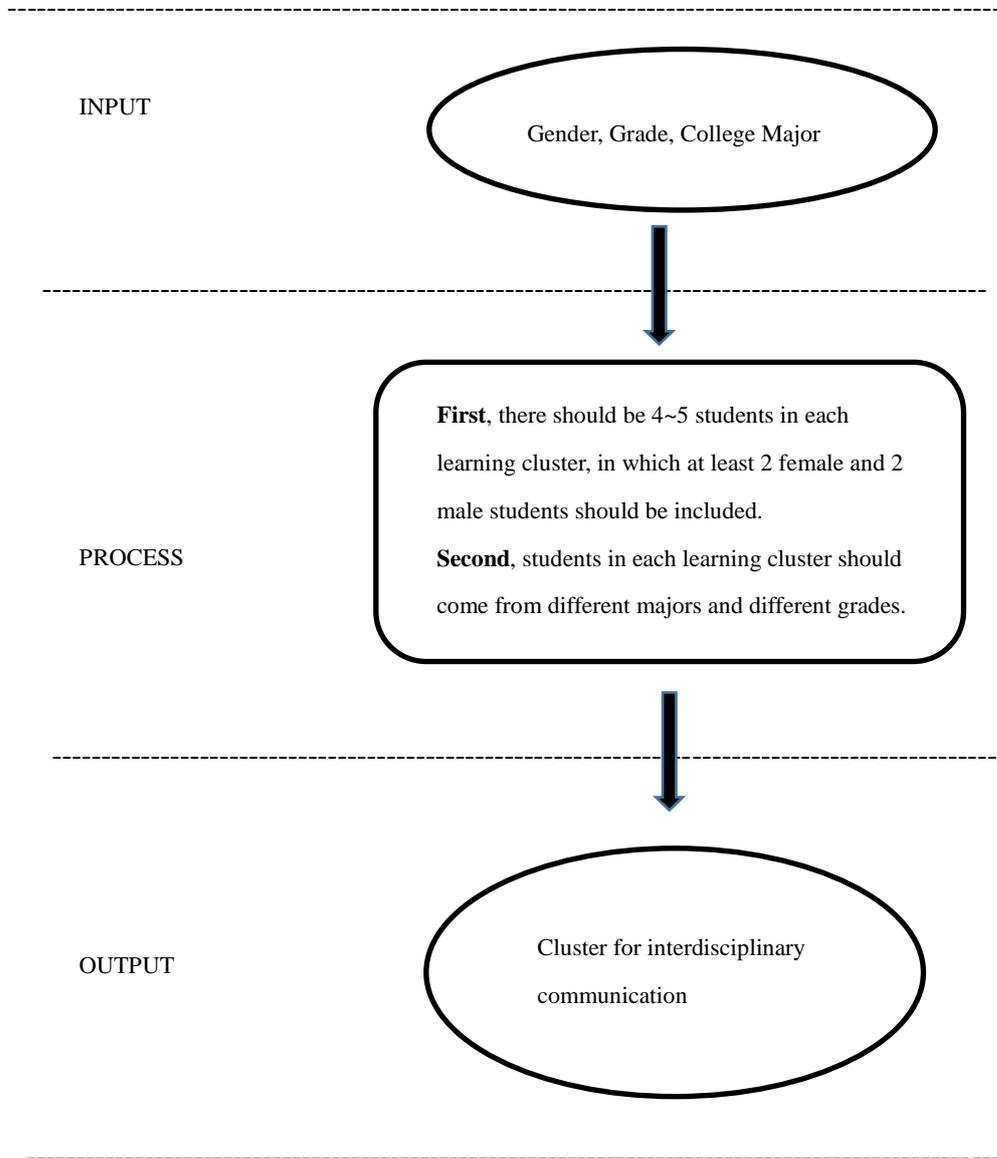
as "high" and coded as "3"; if they score one or more standard deviation below the overall mean, they are categorized as "low" and coded as "1." Others will be categorized as "moderate" and coded as "2." Therefore, each student will be assigned a numerical value (a code) from each scale. Using these codes and considering students' demographic personal information, the interdisciplinary cooperative learning clusters can be numerically computed and established.

Instructors may also consider using order-based genetic algorithms or fuzzy linguistics terms to derive the interdisciplinary cooperative learning clusters through the following steps (with "two parents" as the input and the "child" as the output)[17]:

1. Choose a substring at random from one parent string
2. Copy the substring into its corresponding position to produce the child string
3. Delete the nodes already in the substring from the other parent string
4. Order the nodes in the child string's unfixed positions from left to right to result in an offspring

The simplest way to derive the interdisciplinary learning clusters is to use the input-process-output method in which certain variables are regarded as important (see Figure 1). For example, gender difference, grade difference, and college major could be taken as the input variables. Then, two steps must be run to complete the process. First, in order to compose the learning clusters, there should be four or five students in each learning cluster. At least two female and two male students should be included in each cluster. Second, students in each cluster should come from different majors and have different grades. After going through this process, the cooperative

clusters for interdisciplinary communication are established.



**Figure 1. The input-process-output method for deriving interdisciplinary cooperative learning clusters**

## **APPLICATION THROUGH THE INTERNET LEARNING SYSTEM**

Internet learning systems have been widely used for flexible learning, since internet learning is subject to fewer time and space constraints [18]. Web-based learning systems support interactive teaching-and-learning communication, either synchronously or asynchronously [19]. In the context of internet learning, online discussion forums have been promoted for interactive communication. Using the online bulletin board, students can interact with other students from different backgrounds and disciplines by posting and responding to messages [20]. Moreover, online discussion forums provide students with more time to seek, collect, organize, synthesize, and reflect upon information, allowing them to think over the critical issues and find solutions. Students also have a chance to hear multiple and contradictory arguments and viewpoints and be active in knowledge construction [21]. In order to facilitate interdisciplinary communication for the study of narrative medicine literature, online discussion forums should be utilized.

As mentioned, when appreciating narrative medicine literature, students should concentrate on how the narrators or storytellers use the triad of attention, representation, and affiliation to share life stories, in order to reflect upon the medical care process and to develop empathy and affiliation with their patients.

Teaching and learning activities include class instruction, independent study, cluster group

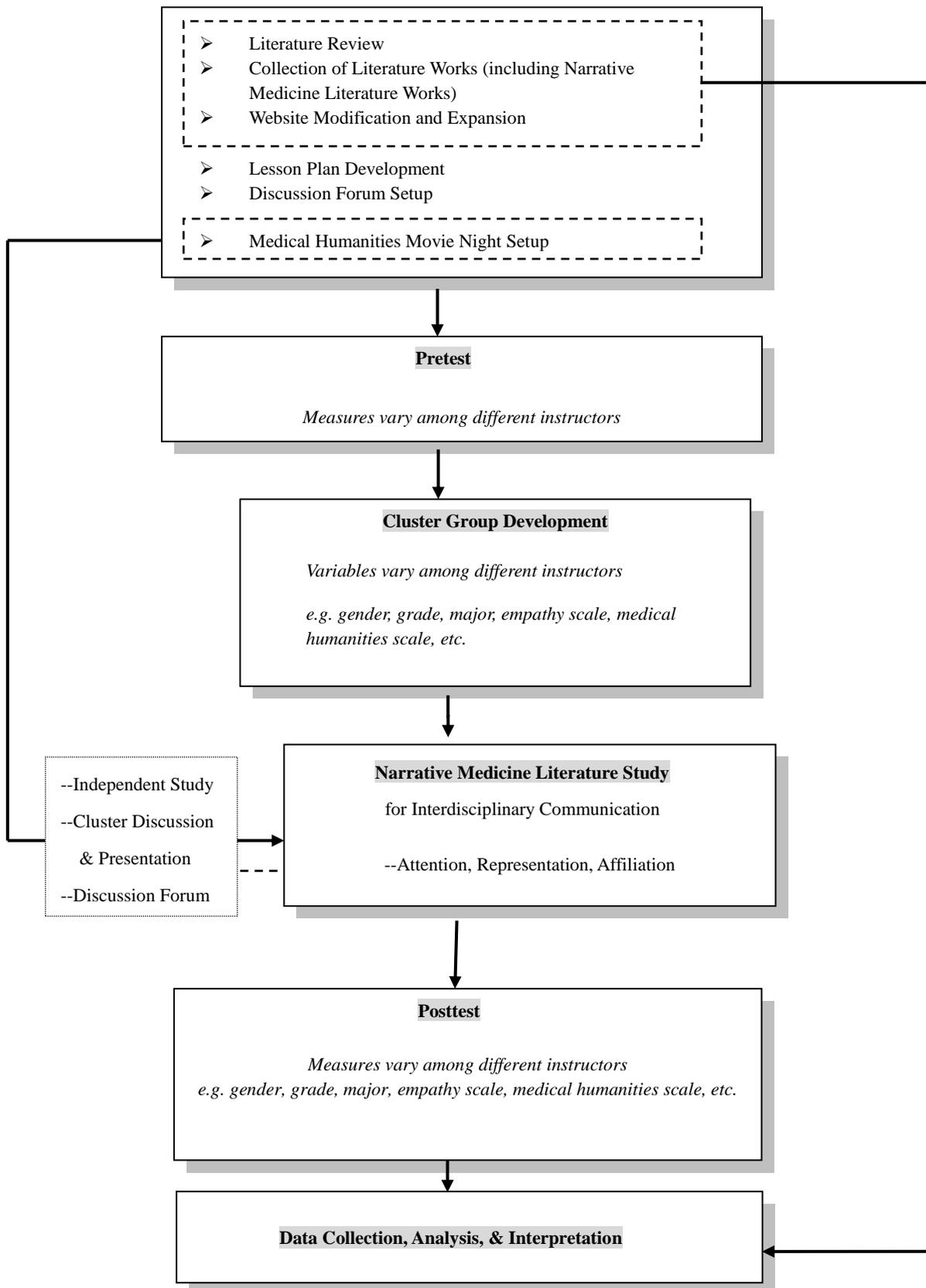
discussion and presentation, and discussion forums. The conceptual framework of narrative medicine literature study for interdisciplinary communication is shown in Figure 2.

### **Independent Study**

In independent study, students have to read or view the assigned short stories, novels, or films related to narrative medicine/medical humanities, according to the scheduled syllabus. In addition, based on the scheduled topics, such as suffering, dying, life meaning, doctor-patient relationship, body subjectivity, death with dignity, etc., they can select the films they would prefer to study from a pool of medical humanities films selected by the instructor. Although students study independently, the instructor may provide help when requested. By studying patients' stories independently prior to any group discussion, students come to discussions prepared with thoughts on the topic being explored.

### **Cluster Group Discussions & Presentations**

As mentioned, once the cluster grouping process has been carried out, students are arranged into interdisciplinary cooperative learning clusters. After independent and self study, cluster mates are encouraged to bring passages from life stories or a case study to share with the group. For class presentations, representatives in each learning cluster are randomly selected to give a ten-minute oral report on works of narrative medicine/medical humanities literature they have shared with their cluster mates in discussions. Hence, students have the chance to listen to diverse opinions from different perspectives.



**Figure 2. The Framework of Narrative Medicine Literature Study for Interdisciplinary Communication**

## Discussion Forum

The discussion forum in the Medical Humanities and English Learning website (140.128.137.41/moodle, under 140.128.137.41/medical\_humanities; see Figure 3) is used to allow students from different disciplines to interact with each other on medical humanities literature works or narrative medicine literature study.

Students can post, modify, discuss, and give feedback on medical issues raised in the literature works. Also, being an asynchronous online discussion, students are

not required to give their feedback instantly. Consequently, they have more time to think and comment on the issues. Without face-to-face contact, the discussion forum allows for a less-threatening environment in which students can explore and learn together [22]. In addition, they can share their summaries, reports, and descriptions of the lecture topics or reading material. They can share passages from life stories or case studies with their cluster mates in order to better understand patients' suffering and further empathize in their dilemmatic situations.



Figure 3. Medical Humanities and English learning website

## **EXPECTED CONTRIBUTIONS OF USING NARRATIVE MEDICINE FOR INTERDISCIPLINARY COMMUNICATION**

Narrative medicine literature helps to shed light on patients' human experiences and lives. Therefore, it serves to bridge the communication gap between patients and medical care professionals, between patients' families and medical care professionals, between medical care professionals and their colleagues, and so on, leading to a more harmonious medical care climate. Moreover, with the assistance of online discussion forums, students can participate in interdisciplinary communication through which they can not only share their ideas with others, but also listen to diverse voices. Therefore, there are several expected outcomes of using narrative medicine for interdisciplinary communication.

### **Synthesis of Narrative Medicine Literature and Skills**

The use of narrative medicine for interdisciplinary communication can help medical care students and professionals understand the importance of listening to and hearing their patients' stories, and further developing clinical communication. Also, when appreciating narrative medicine literature, students can reflect upon the moral and ethical dilemmas of medical care situations. They can develop human and humane understanding through the development of observation skills, diagnosis, insight, intuition, empathy, and self-reflection. In addition, students can utilize these skills—attention, representation, and affiliation—in practice. They can develop the capacity for attention and the competency of representation in order to improve clinical affiliation with patients and colleagues. In doing so, they will become more

sensitive to the context of the illness experience from a patient-centered perspective.

### **Meaning Making**

Illness narratives are revealed using fictional techniques; narrators or storytellers vividly represent the illness through forms, genres, and narrative skills. Because illness refers to a disruption, or threat, to the integrity of a patient's identity, illness narratives, usually written by patients, patients' families, doctors, or other medical care professionals, offer patients a way to reveal their suffering, to make sense of their suffering, and to re-integrate their identity [23]. By experiencing the scenarios in illness narratives involving aging, dying, illness, and the limitations of medical technology, medical care students and professionals can strive to give meaning to existence in order to cope with the fragility and uncertainty of human life [24]. With strengthened awareness of the meaning in life, they can be much more empathetic with patients' predicaments and suffering, and thus more willing to collaborate with other professionals in order to offer more comfortable patient care [25].

### **Catharsis**

Catharsis—a metaphor originally proposed by Aristotle in the *Poetics* [26]—is the process of purging or cleansing oneself of negative feelings in the human spirit, such as pity and fear. Through art and literature, such catharsis leads to renewal and restoration. When reading illness narratives, readers may personally identify with or become emotionally involved with the characters or circumstances, provoking an emotional response. For instance, they may personally identify with the dying cancer patient or the powerless physicians dealing with the limitations of medical technology. When appreciating narrative medicine literature, students' and

professionals' pity and fear toward those medical dilemmas and predicaments are aroused, yet purified and purged through catharsis (emotional cleansing). Hence, narrative medicine can serve to purify pity and fear, resulting in healing and catharsis for the readers as they experience emotions in response to the uncertainties of medical technology and the suffering of others [27].

### **Reflection**

Reflection refers to a cycle of deliberate, systematic, and structured intellectual inquiry activities that aim to make sense of a troubling situation or dilemma [28]. Through the triad of attention, representation, and affiliation in the study of narrative medicine literature, medical care students and professionals learn to reflect upon the troubling medical care process or dilemma. They feel sympathy toward other human beings' misfortunes, which leads to healing affiliations with patients and collegial affiliations with their coworkers. In addition, through the reflection process in narrative medicine, they can pull back the lens to see crucial incidents, human interactions, or suffering from different perspectives, and be more conscious of the controversial issues in narrative medicine literature. As a result, they develop the skills of analytical and synthetic thinking from a variety of perspectives so as not to repeat the mistakes of the past [29].

### **Interdisciplinary Teamwork Collaboration**

Research has shown that heterogeneous or interdisciplinary groupings can enhance students' collaborative experiences and interactive professional relationships. Compared to students in homogeneous learning groups, students with different backgrounds have more productive engagements in activities and interactions with each other [30, 31]. To facilitate

interdisciplinary communication and interaction, interdisciplinary cluster grouping should be applied in the study of narrative medicine literature in order to promote interdisciplinary teamwork and collaboration, taking students' diverse disciplines and backgrounds into consideration. In this way, students with heterogeneous backgrounds have a chance to listen to different voices and learn to respect the opinions of others. Becoming more objective, they may subsequently be able to use these skills to foster intersubjective relationships with their colleagues, patients, and patients' families, thus providing more humanizing medical care.

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