

*Using Nursing Models along with Language Learning Theories to Motivate  
Japanese Nursing Students of English*

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**Abstract**

Language education and nursing may at first appear to be unrelated. However, upon closer inspection, a number of similarities between these two disciplines can be observed. For nursing students who mainly hope to focus on their core nursing course requirements, and who consider English classes as unnecessary and time-consuming distractions, an interdisciplinary teaching approach that incorporates elements of nursing models and theories might enable these students to establish a connection between their specialty and English language education. Because nursing students learn about nursing models and theories and the relationship between the nurse and the patient, they could be led to adopt a similar relationship between the instructor and the learner. In this paper three examples of nursing paradigms will be introduced, a nursing model (Roy's Adaptation Model); a nursing theory (Leininger's Culture Care Theory of Diversity and Universality); and a middle-range theory (Mishel's Uncertainty in Illness Theory) to demonstrate how an understanding of nursing models and theories can possibly aid nursing students to better understand language learning models and theories such as behaviorism, cognitivism, constructivism, and connectivism. The paper will then show how the introduction of general scientific theories such as complex systems theory (chaos theory), which has been incorporated in both language learning as well as nursing theories, can also serve as a bridge connecting the fields of nursing science and language education.

Keywords: Nursing theories, Language learning theories, Chaos Theory

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## Introduction

In Japan compulsory English classes currently begin in the fifth year of elementary school and continue through the three years of junior high and three years of high school. So by the time students enter college, they have had at least eight years of formal English education, in addition to any supplementary after-school or weekend lessons, with many of those students feeling that they have seen their last English class upon graduation from high school. Therefore, many new college students are disappointed at discovering that, regardless of the specialty that they choose to pursue, they are required to take at least one, or often two additional years of compulsory English courses.

It is natural for college students to wish to focus their time and energy on their core specialized courses to fulfill the requirements of their major. The challenge for English instructors is therefore to try to establish a relationship between English and the students' specialties. In the case of the author's own institution, a small nursing college in Kyushu, this entails not only how to make learning English relevant to nursing students, but also how to lead students to see the connection between the nurse who intervenes to help the patient either recover or adapt, and the language instructor who intervenes to help the learner succeed in their English studies. Below is an outline of this relationship.

<b>Client</b>	<b>Facilitator</b>	<b>Successful Outcome</b>
Patient	Nurse	Recovery or Adaptation
English learner	English Instructor	Knowledge&Acquisition

## Nursing Paradigms

In the past the nurse's role was mainly seen as the person responsible for implementing the physician's instructions in the care of patients. However, as nurses became better educated and better trained, they began viewing their own profession as a science in itself. In order to support this position and convince other nurses as well as personnel in other medical fields, leading nursing scholars and researchers began formulating models and theories for nursing that could lay the groundwork for this revolution in thinking. Marrs and Lowry (2006), in their expanded hierarchy of nursing knowledge, defined metaparadigms, the most abstract component, as global concepts that identify the phenomena of the discipline. In the case of nursing, this metaparadigm would include person, environment, health, and nursing. Less abstract components are the nursing philosophies, defined as ontological and epistemological claims about values and beliefs of the discipline. Next come the conceptual models, which are a set of abstract concepts and their propositional statements that address the metaparadigm concepts. Approaching the concrete level, grand theories are a set of fewer abstract concepts and propositional statements that are broad in scope and are derived from conceptual models. Middle-range theories have a limited number of concepts and propositions written on a more specific level. Even more concrete are the practice theories that focus on one or two variables and their propositional connection stated in prescriptive or predictive terms and are related to a specific situation. Finally, empirical indicators are the specific tools employed in real world proxy for middle-range or practice theory concepts. In this paper, examples of each of the three mid-level components of conceptual model, grand theory, and middle-range

theory will be further explained, along with related language learning parallels.

### **Nursing conceptual models**

As noted above, nursing conceptual models employ concepts and their relationships that specify a perspective from which to view phenomena specific to the discipline of nursing. One example is the Roy Adaptation Model (RAM), developed by Sr. Callista Roy, which is widely used in nursing programs at colleges and universities through the United States as well as in other countries, including at the author's own institution in Japan. In the RAM, the focus is on the nurse's role in helping the patient to adapt to changes in their physical, mental, and spiritual conditions that lead to illness. Similarly, in language teaching the focus is on the instructor's role in helping learners adapt to changing situations in the intellectual, social, and environmental conditions that they continually face in their lives that either promote or discourage language knowledge, acquisition, and general language ability.

Another key aspect of the RAM is its emphasis on the influence of three kinds of stimuli, focal, contextual, and residual. Focal stimuli are those internal or external stimuli that immediately confront the patient and are determined, either through the nurse's observations or the patient's own words, to have a direct influence on a patient's ability to adapt to their changed condition. Contextual stimuli are all other internal or external stimuli evident in the situation and that have an indirect or secondary influence on them. Residual stimuli are those factors that may be affecting the patient's behavior but whose effects have not been validated. In language learning, these three types of stimuli, namely focal, contextual, and residual, also appear in relation to learners, where changing factors such as their physical condition, lesson time, interactions and general relationships with friends and families, and instructor's attitude can serve to either motivate or demotivate learners.

Another aspect of the RAM is the idea of the innate and acquired coping mechanisms expressed in the *regulator* and *cognator* subsystems, respectively. The regulator subsystem responds automatically to stimuli through neural, chemical, and endocrine coping processes, while the cognator subsystem responds through four cognitive-emotive channels: perceptual/information processing, learning, judgment, and emotion. In language learning these subsystems have analogies in the learner's natural and acquired abilities to assimilate the various aspects of language, including lexical, grammatical, and syntactic usage.

Finally, in the RAM there are two possible behavioral responses, either adaptive or ineffective. Adaptive responses are those that promote the integrity of the patient in terms of goals of adaptation: survival, growth, reproduction, and mastery; whereas ineffective responses are those that do not promote integrity or contribute to the goals of adaptation, and may ultimately threaten the patient's survival, growth, reproduction, or mastery. In language learning, the RAM's adaptive and ineffective responses can be equated to either learning success or failure.

### **Nursing grand theories**

Nursing grand theories describe, explain, or predict relationships among the concepts of nursing phenomena, and propose testable results. One example of such a grand

theory is Madeleine M. Leininger's Culture Care Theory of Diversity and Universality. This theory is unique in the nursing discipline due to the possibility of its being used in Western and non-Western cultures because of the inclusion of multiple holistic factors universally found in cultures.

Leininger's concept of culture care refers to the synthesized and culturally constituted supportive or facilitative caring acts toward oneself or others focusing either on the patients' health or disabilities as well as other human conditions that they face. In language learning, also, as is well known, culture plays a significant role in students' attitudes and behaviors in and outside the classroom. Culture here not only implies national culture (Japanese) but also regional, social, and economic subcultures that can manifest themselves in different ways.

Dimensions of cultural and social structure are also important in this theory, where they refer to dynamic, holistic, and interrelated patterns of structured features of a culture, including spirituality, social position, economy, education, philosophy, and history. In language education as well, individual and group differences among students are often expressed in the classroom, despite the fact that all of them may belong to an overriding nursing student subculture.

The environmental context, which refers to the totality of situations or events that give interpretive meanings to guide human expressions and decisions, is another aspect of this theory. In language education, the students' physical, social, and familial environments can exert an impact on their attitudes and motivation toward learning.

The final major theme of Leininger's theory involves culturally competent nursing care, which refers to the explicit use of culturally based care and health knowledge in creative and meaningful ways to fit the general needs of individuals and groups for beneficial health and well-being. In language education, culturally competent instruction is becoming increasingly seen as necessary in making sure that every student is able to reach his/her potential. This requires that instructors understand the backgrounds and environments of the students when carrying out classroom activities as well as in making assessments.

### **Nursing middle-range theories**

Nursing middle-range theories are specific to practice outcomes and nursing situations. One example of this type of theory is Merle H. Mishel's Uncertainty in Illness Theory, in which Mishel applied elements of chaos theory (discussed below) to try to understand patients' changes in thinking about their illness and inability to predict outcomes accurately. In language education also, there is uncertainty in students' understanding concerning what they know or think they know about aspects of the English language, as well as their inability to predict the outcome of their ability to acquire it.

Mishel also wrote about cognitive schema, which is a patient's subjective interpretation of his/her illness, treatment, and hospitalization. In addition, she introduced the concept of stimuli frames, which can be divided into symptom pattern, event familiarity, and event congruency, in which patients establish a relationship between past and current conditions and situations. In language learning students also

establish patterns and learning strategies to obtain desired outcomes. However, in both cases, when an outcome different from the one expected occurs, likely due to unforeseen or undetected factors, uncertainty, disappointment, or anger may result.

Two other components of Mishel's theory are structure providers and cognitive capacities. For patients, structure providers are the credible authority of the healthcare staff and the social supports that come from their families and friends. In language education the providers are the credible authority of the language instructor in addition to the learners' social supports.

Finally, Mishel's theory incorporates the patient's formulation of a new sense of order resulting from the integration of continual uncertainty into their self-structure, in which uncertainty is accepted as the natural rhythm of life. This can be applied to students' formulation of a new set of learning strategies to cope with and adapt to changes within themselves and their surroundings.

### **Learning theories**

Although not specific to languages, the learning theories of behaviorism, cognitivism, constructivism, and connectivism have also been applied to language learning.

### **Behaviorism**

The thinking behind behaviorism is that learning actually occurs when new behaviors or changes in behaviors are acquired through associations between stimuli and responses. Thus, association leads to a change in behavior. Elements of this theory are evident in Roy's adaptive and ineffective responses in her Roy Adaptation Model of nursing. Behaviorism can be employed as a type of intervention on both the part of nurses in providing care and promoting self-care in patients, as well as on the part of language teacher in providing instruction and promoting learner autonomy in students. Some examples and applications of the latter intervention are drilling and rote work, repetitive practice, encouragement of participation through bonus points, verbal reinforcement of successful outcomes, and the establishment rules for behavior. Although this approach has its advantages, it is not effective for problem-solving or creative thinking.

### **Cognitivism**

Cognitivism is based on the thought process behind the behavior. Humans process the information they receive, rather than merely responding to stimuli. Learning involves the reorganization of experiences, either by attaining new insights or changing old ones. This approach is also, like behaviorism, a top-down approach, but it involves the stimulation of a patients' or students' neural processes. They are encouraged to take in information and think about it before acting upon it. In language learning, ways to foster this can be through activities such as classifying/chunking words and phrases, discussing and problem-solving, linking concepts together, analogizing, providing structure to information, imagining and/or creating pictures, and using real world examples.

## **Constructivism**

In the constructivist approach, patients and students construct their own perspective of the world based on individual experiences and internal knowledge. Learning is based on how the individual interprets and creates the meaning of his/her experiences. It is unique and unpredictable. In this sense it involves chaos or complex systems theory, as was exemplified in Mishel's Uncertainty in Illness Theory mentioned above. In the language classroom, instructors can encourage this approach through activities such as collaborative learning and group work, research projects, discovery and problem-based learning, simulations, and brainstorming. As is evident, this approach is patient or student-centered, in which autonomy is actively encouraged.

## **Connectivism**

Connectivism is a fairly new learning theory that explains how Internet technologies have created new opportunities for people to learn and share information across the World Wide Web and among themselves. This approach also promotes autonomy in patients and students, encouraging the former to take an active role in learning about their illness and possible treatments, and assisting the latter in finding ways to acquire the English language more efficiently through connections with other people or informational websites such as web browsers, social networks, e-mail, YouTube, Wikis, MOOCs, and online discussion forums.

## **Complex systems theory in Nursing and language learning education**

Chaos theory, or complex systems theory, is a field of study in applied mathematics that has been applied in various natural sciences to attempt to explain the apparent randomness that is often found in nature. The theory asserts that sensitivity to initial conditions often leads to dramatically differing outcomes in the long-term. If all the initial factors are known and accounted for, the outcomes are theoretically deterministic. However, the infinite number of initial factors, coupled with the infinite variety of interconnections and evolving relationships between those factors, serve to make long-term prediction generally impossible.

One important aspect of chaos theory is sensitivity to initial conditions. Although two events can begin under seemingly identical circumstances, the presence of hidden factors can lead to greatly divergent outcomes. This is shown in the figure below, in which the meteorologist Edward Lorenz mapped out two nearly identical weather patterns, but with slightly formulas entered into his computer at the beginning.

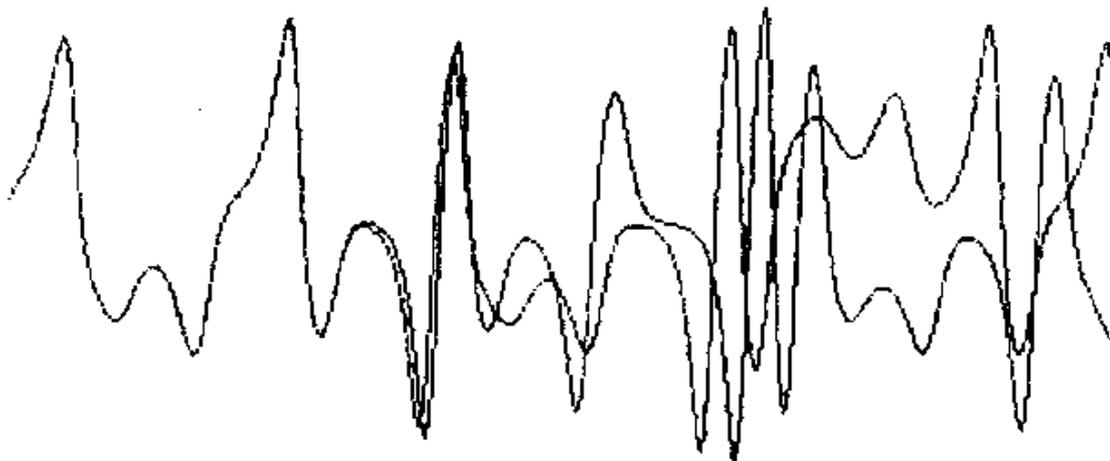


Figure 1

As is evident, although the left third of the figure shows an identical pattern, the two events then bifurcate, with the final result being the dramatic difference in weather patterns, all due to the existence or lack thereof of a single factor. This is popularly known as the “butterfly effect,” whereby the flap of a single butterfly’s wings in Brazil could influence the formation or lack thereof of a hurricane in Florida. The implication is that in order to accurately predict future weather, one would need to take into account all of the potential weather factors, including not only atmospheric pressure, temperature, and wind direction and speed, but also all movements of all butterflies, birds, icebergs, solar flares, and so on, which would be an unfathomable if not impossible task.

The recognition that events are influenced by initial sensitive conditions lies at the heart of the importance of trying to understand, within the time constraints and other limitations that both nurses and language instructors face, to view the individual as a unique member of progressively larger groups and cultures. It also demonstrates the dangers of overgeneralizing or stereotyping groups or larger populations. However, chaos theory also offers a path to nurse and instructors by which they are able to understand as far as is possible the reasons why identical treatment plans or teaching methods may require adjusting when applied to other seemingly identical, but in actuality slightly different, situations.

## **Conclusion**

Although nursing students are often disappointed at discovering that they need to take English in addition to their nursing courses, an interdisciplinary approach that introduces and compares nursing and language learning models and theories might provide the relevance required to motivate them to make the effort needed to be a successful language learner. This approach could also help nursing students understand the relationship between the nurse and language instructor on the one hand, and the patient and language learner on the other.

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