

**EDUCATIONAL PERSPECTIVES OF BRITISH COLUMBIA DIETITIANS:  
UNCOVERING EDUCATIONAL BELIEFS**

by

TENNY LIZ KUSSAT

B.Sc. (Dietetics), The University of British Columbia, 1990

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES

(Department of Educational Studies; Adult Education)

We accept this thesis as conforming  
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

August 2000

© Tenny Liz Kussat, 2000

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Educational Studies (Adult Education)  
The University of British Columbia  
Vancouver, Canada

Date August 9, 2000

## Abstract

Most dietitians assume they know how to teach and educate because they are content experts. Most also assume that the process of teaching is equated with techniques, skills, and methods. Teaching techniques and skills are important; however, they do not represent the entire educational process. Educational beliefs are paramount and shape what dietitians say, do, and how they interact with their clients. Currently, only limited conceptual frameworks on teaching and education exist within dietetics.

In this study, the five Educational Perspectives and general model of teaching developed by Pratt (1998) were used as conceptual frameworks to examine the educational beliefs of dietitians. An equally important goal was to reveal professional interests, roles and responsibilities, educational backgrounds and experiences, teaching influences, and international education and work experience – topics which have not been investigated on a large scale but which provide information on the interests and characteristics of dietitians. The study was also designed to determine if relationships existed between personal, professional and social-cultural characteristics and the five Educational Perspectives.

To meet the research goals, a quantitative mail-out survey named the *Educational Perspectives of Registered Dietitians* was sent to 483 dietitians throughout British Columbia. Two hundred and forty or just over half of the total sample frame returned surveys and were analyzed using SPSS. Data from closed-ended questions were analyzed using frequency tabulations and other univariate statistical procedures to summarize demographic, work, and professional characteristics. Then correlational analyses tested for relationships between the educational perspectives and personal, professional and social-cultural characteristics. Open-ended questions were initially alphabetized using SPSS and were then thematically analyzed by the researcher.

Results of the survey revealed that the vast majority of respondents were female, most were in their early thirties to late forties, over half had children, and the large majority were native speakers of English. A relatively small number of respondents had obtained Bachelor degrees outside of dietetics. Less than one-quarter of respondents had obtained or were in the process of obtaining graduate degrees, but a slightly greater number of respondents had either obtained or were in the process of obtaining certificates or diplomas. Most degrees were science or nutrition oriented and most certificates reflected either management or clinical specialties. Less than one-quarter of these dietitians had received some schooling outside of Canada in coursework that was taught mainly in English; a relatively small number of respondents had worked as dietitians outside of Canada. A small number of respondents had previous careers prior to dietetics.

Respondents had practiced dietetics for an average of about fourteen years; and less than half worked full-time. Dietitians interact with many different types of people but the majority work in traditional health care settings. Over half of respondents are responsible for nutrition counseling and teaching. The majority of dietitians valued the relationship of nutrition to health, helping others and working with health care team. At the outset of their careers, most respondents were initially interested in nutrition counseling and behavior change, health promotion, nutritional sciences and teaching; but over time respondents became more interested in research, management and food production, cultural food habits and entrepreneurial activities. The number of their professional interests increased by about a third over time and the increase was statistically significant. Other people -- particularly colleagues, influenced the majority of dietitians' teaching practices.

In terms of their Educational Perspectives, dietitians were most dominant in Nurturing, followed closely by Apprenticeship, Transmission, then to a smaller degree Developmental and to a very small degree, Social Reform. Forty-eight dietitians were dominant in two Educational Perspectives; Nurturing and Apprenticeship or Apprenticeship and Transmission. When dietitians' Educational Perspective scores were compared to groups of 414 other professionals, dietitians were less Nurturing and Developmental oriented, were more Transmission oriented, and slightly less Social Reform. Except for Apprenticeship, the small differences in scores were statistically significant. Although the difference in

Apprenticeship Perspective scores between the two groups was not significant, they represented the highest scores for both groups.

There were thirty-five significant correlations between personal and professional variables and the five Educational Perspectives. Three significant correlations characterized dietitians high on Transmission: attending school in a country outside of Canada, valuing management opportunities within dietetics, and feeling that university coursework had influenced their teaching practices. Two significant correlations characterized dietitians high on Apprenticeship: possessing graduate degrees and feeling that university coursework had influenced their teaching practices. Eight significant correlations characterized dietitians high on Developmental: practicing dietetics over a longer period of time, expressing an initial interest in teaching within dietetics and in managing people and resources, interacting with community groups, marketing, being involved with public and media relations, and interacting with community groups and the public.

Another eight significant correlations characterized dietitians high on Nurturing: expressing an initial interest in teaching, interacting with community groups, being involved with public and media relations, and feeling that workshops and seminars, authors, colleagues, teachers of education, and authors on educational topics had influenced their teaching practices. Fourteen significant correlations characterized dietitians high on Social Reform: speaking languages other than English (initially fluent and currently speaking languages other than English, and currently speaking more than one language), practicing dietetics over a longer period of time, expressing an initial interest in cultural food habits, managing people and food production, expressing a current interest in managing people, interacting with the general public, community groups, being involved with public and media relations, feeling that activities or other people influenced teaching practices, and being less responsible for nutrition counseling and one-to-one interactions with patients.

Although they were offered the opportunity for feedback, less than one-half of respondents requested that an *Educational Perspectives Inventory Profile* sheet be mailed back to them. Respondents who requested a profile sheet were generally no different from the other respondents who did not request feedback. There were no significant correlations between respondents who requested an educational profile and the five Educational Perspectives. However, in terms of their work-related characteristics, people requesting feedback had been attracted by a wider range of potential features of the profession.

It was surprising to discover the degree of importance that dietitians attributed to measurable behavioral change. Generally, dietitians attributed lack of change as a result of deficiencies in clients (lack of compliance, interest, or motivation) rather than other factors such as dietitians' approaches or attitudes about learning and education or challenges associated with the learning contexts. Another surprise was the extent that dietetic colleagues influence each other's teaching practices.

There are several recommendations from this study: dietitians need to constantly re-examine undergraduate and internship educational competencies to encourage future dietitians to critically analyze their roles as educators; formation of an Adult Education Practice Group; member forums on educational and teaching issues; development of online education discussion groups; and continuing education activities on the roles of dietitians as educators and teachers.

The five Educational Perspectives and general model of teaching were used as theoretical tools to help reveal assumptions about dietitians and their learners, content, context, and beliefs about knowledge and learning. Additionally, information about personal and professional characteristics of dietitians was obtained which can be used to create a database and monitor trends and interests. Dietitians are health professionals who work in different settings, interact with different clientele, and who accumulate a unique body of knowledge based on their education, training, and experience. Although differences exist among individual dietitians, there is one unifying thread. Dietitians are teachers and educators.



## Table of Contents

Abstract . . . . .	ii
List of Tables . . . . .	vi
List of Figures . . . . .	viii
Acknowledgments . . . . .	ix
CHAPTER 1	FOOD, NUTRITION, AND DIETITIANS . . . . . 1
	Descriptions of Dietitians and the Profession. . . . . 1
	Promoting Critical Analysis: Beliefs and Roles of Dietitians. . . . . 5
	Guiding Framework: The Five Teaching Perspectives. . . . . 7
	Questionnaire: <i>Educational Perspectives of Registered Dietitians</i> . . . . . 8
CHAPTER 2	INFLUENCES, PARADIGMS, AND PERSPECTIVES . . . . . 11
	Influences on Professional Roles and Responsibilities. . . . . 11
	Paradigms . . . . . 17
	Historical Perspectives . . . . . 20
	Dietetic Education and Training . . . . . 22
	Frame Factor Theory . . . . . 25
	Teaching Dietetics . . . . . 28
	The Five Teaching Perspectives . . . . . 33
CHAPTER 3	METHODOLOGY . . . . . 48
	Sampling Strategy . . . . . 48
	Potential Survey Errors . . . . . 50
	Strategies to Reduce Non-Response Error. . . . . 51
	Minimizing Other Sources of Error . . . . . 53
	Development of the <i>Educational Perspectives Inventory</i> . . . . . 54
	Survey Development and Analysis . . . . . 55
CHAPTER 4	QUESTIONNAIRE RESULTS: <i>EDUCATIONAL PERSPECTIVES OF REGISTERED DIETITIANS</i> . . . . . 58
	Personal Characteristics . . . . . 58
	Professional Characteristics . . . . . 67
	Educational Perspectives . . . . . 76
	Dominant Perspectives . . . . . 79
	Relationships Among Personal and Professional Characteristics and the Five Educational Perspectives . . . . . 80
	Rewards and Challenges of Educating Others . . . . . 87
	Dietitians Reflect on Their Roles as Educators . . . . . 95

CHAPTER 5	DIETITIANS AS EDUCATORS . . . . .	101
	Prominent Educator Role . . . . .	101
	Dominant Influences: Behaviorism and Humanism . . . . .	103
	Dominant Paradigm: Functionalism. . . . .	105
	Professional Interests . . . . .	105
	Social-Cultural Factors . . . . .	106
	Frustrations and Barriers . . . . .	107
	Impact of Survey on Respondents . . . . .	110
	The Five Educational Perspectives . . . . .	110
	Relationships Among Personal and Professional Characteristics and the Five Educational Perspectives . . . . .	118
	Limitations of the Study . . . . .	125
	The <i>Educational Perspectives Inventory Profile Sheet</i> . . . . .	126
	Summary . . . . .	127
CHAPTER 6	FURTHER RESEARCH . . . . .	129
	Practical Significance and Recommendations . . . . .	129
	Recommendations for Further Research . . . . .	134
REFERENCES	. . . . .	136
APPENIDIX 1	Covering Letter	
APPENDIX 2	Educational Perspectives of Registered Dietitians Questionnaire	

## List of Tables

	<u>Pages</u>
Table 1 Teaching Perspective Summaries . . . . .	34
Table 2 Sample Size and Descriptions . . . . .	49
Table 3 Gender, Age and Family Structure of Respondents . . . . .	59
Table 4 Languages Spoken Fluently by Respondents . . . . .	60
Table 5 Types of Degrees, Certificates, or Diplomas In-pursuit of or Completed . . . . .	62
Table 6 Respondents Who Have Attended School Outside of Canada . . . . .	63
Table 7 International Work Experience in Dietetics . . . . .	65
Table 8 Careers Prior to Dietetics . . . . .	66
Table 9 Professional Employment Characteristics . . . . .	68
Table 10 Distribution of Work Responsibilities . . . . .	69
Table 11 Features of Dietetics that Respondents Were Attracted To . . . . .	70
Table 12 Initial Versus Current Professional Interests in Dietetics . . . . .	72
Table 13 Activities Which Influenced the Teaching Practices of Dietitians . . . . .	73
Table 14 People Who Have Influenced the Teaching Practice of Dietitians . . . . .	75
Table 15 Educational Perspective Scores for Dietitians and 414 "Other" Professional Educators . . . . .	77
Table 16 Dominant Educational Perspectives for Dietitians and 414 "Other" Professional Educators . . . . .	80
Table 17 Correlations Between Personal Characteristics and the Five Educational Perspectives . . . . .	81
Table 18 Correlations Between Features of Dietetics That Respondents Were Attracted To and the Five Educational Perspectives . . . . .	82
Table 19 Correlations Between Professional Characteristics and the Five Educational Perspectives . . . . .	83

Table 20	Correlations Between Initial and Current Professional Interests on Entering Dietetics and the Five Educational Perspectives . . . . .	85
Table 21	Correlations Between Influences On Respondents' Teaching Practices and the Five Educational Perspectives . . . . .	86
Table 22	Respondents' Views on the Most Rewarding Aspects of Teaching . . . . .	89
Table 23	Challenges Dietitians Encounter When Teaching . . . . .	93
Table 24	Dietitians Provide Feedback on Their Roles as Educators . . . . .	96
Table 25	Descriptive Words and Phrases Dietitians Use to Explain Their Roles as Educators . . . . .	97
Table 26	Dietitians Provide Feedback About the Questionnaire. . . . .	100
Table 27	Summary of Significant Correlations Between Personal and Professional Characteristics and the Five Educational Perspectives . . . . .	119

## List of Figures

	<u>Pages</u>
Figure 1      General Model of Teaching . . . . .	8
Figure 2      Map of Adult Education Territory . . . . .	17
Figure 3      The Transmission Perspective . . . . .	40
Figure 4      The Apprenticeship Perspective . . . . .	41
Figure 5      The Developmental Perspective . . . . .	43
Figure 6      The Nurturing Perspective . . . . .	44
Figure 7      The Social Reform Perspective . . . . .	46
Figure 8      Comparisons Between Mean Educational Perspectives Scores for Dietitians and 414 "Other" Professional Educators . . . . .	78
Figure 9      Sample of Dietetics Newsletter Article. . . . .	131
Figure 10     Sample Individual Educational Perspectives Profile: Comparisons Between Mean Educational Perspectives Scores for Dietitians in British Columbia and Educational Perspective Scores for Tenny Kussat . . . . .	132

## Acknowledgments

Several special individuals have helped and supported my educational endeavors within the Master of Arts in Adult Education program. I want to thank my committee members: Dan Pratt, John Collins, and Roger Boshier.

As my main advisor, Dan Pratt allowed me "to think out loud" and was very supportive and patient as I developed greater ways of understandings my research and myself. John Collins was extremely generous with his time, advice, kindness, and wisdom. Roger Boshier provided important feedback and informative points of view. My thesis committee members were tireless in their support but also challenged me to do my best work possible.

I would like to thank my colleagues who provided valuable feedback for this survey and who enabled the dietetic profession to better understand the important roles we have as educators.

I would also like to thank important family members: my mother (Grace Chandy) and father (Oommen Chandy) who were unwavering in their support and faith in me and my in-laws Rick and Carol Kussat who have always provided encouragement.

Finally, I would like to thank my husband and best friend, Neil Kussat, who has been incredible in his love and support and who always had confidence in me and my educational goals.

## **CHAPTER 1**

### **FOOD, NUTRITION, AND DIETITIANS**

Tonics, herbs, and foods have long been heralded as mystical or magical and have been used in ways to achieve optimal health and wellness. Using food to achieve and maintain a sense of well-being continues today. From birth to death, everyone consumes some kind of food everyday. People choose different kinds of foods over others based on taste, tolerance, esthetics, popular trends or advertising, religious or political beliefs, availability and price. In the broadest sense, everyone is a food expert.

Books, magazines, television, and the Internet are media in which the latest nutrition research or diet is conveyed to the public. One need only enter a bookstore to uncover a plethora of diet and nutrition books. Each author is firmly convinced her diet, list of allowed foods, and nutrition regimen make people feel better, lose weight, or achieve health. A sample of such diets include macrobiotic diets (cooked foods – mainly whole grains, vegetables, and fish), Paleolithic diets (“caveman diets”- mainly wild game, vegetables, raw foods, whole grains), high carbohydrate-low fat diets, anabolic diets (high protein, low carbohydrate), very low calorie diets, fruitarian diets (mainly fruit and fruit juice fasts), powdered supplement or liquid supplement diets, and food combining diets, just to name a few. In reality, hundreds of diet variations contradict each other.

It is difficult for consumers to decipher between helpful or harmful information and proven or unproven health claims due to the myriad of diets available today. It is also difficult to decide whether dissemination of nutrition information is solely for profit or if there is a legitimate concern for the health and safety of consumers. In some cases, the author’s nutrition education or academic background is suspect. Almost anyone can publish materials or distribute literature regarding nutrition. For example, anyone may call him or herself a nutrition consultant, therapist, coach, counselor, or nutritionist (with the exception of some provinces), as these titles are not legally protected. People are more likely to discuss diet and nutrition theories and recommendations because they are familiar with food. Conversely, subject matter that is more complicated or specialized than food and nutrition, for example, human genetics or mathematical theory, is less likely to be discussed and theorized among the public.

#### **Descriptions of Dietitians and the Profession**

To whom can the public turn to for information not based on popular trends and hunches but biological sciences such as human physiology, biochemistry, and nutritional science? Within the health care system, dietitians are professionals who specialize in nutrition. Dietitians have a university science degree from an accredited dietetics and nutrition program. They have also completed a 12-month hospital or community based pre-professional internship or in some cases, a graduate degree. Dietitians must also pass a national certification exam, become accepted to a provincial dietetic regulatory body, for example, the British Columbia Dietitians’ and Nutritionists’ Association (BCDNA), and must keep abreast in their area of work via mandatory continuing education. Dietitians are found not only in Canada, but also throughout the world. The term dietitian is a legally protected title in North America and only those who have met the above requirements can be called so.

Dietitians have been educated and trained in the area of nutrition and food for health. However, physicians, nurses, and fitness instructors are examples of other professionals who take continuing education or some formal education to incorporate nutrition into their practice. Although dietitians and other health professionals learn nutrition principles, dietetic education and training are factors that make dietitians unique. Dietitians also establish therapeutic alliances with patients, clients, and businesses in order to encourage healthy nutrition practices.

Dietetic education and training has been designed to instill confidence in the public that dietitians provide accurate and reliable information based on the most up to date research and national nutrition standards. For example, if an individual has been diagnosed with diabetes, high cholesterol, or food allergies, he or she trusts and expects nutrition management will be based on proven and sound nutritional science. People expect a certain level of knowledge, skill, and proficiency from people in almost all careers and professions ranging from pilots and accountants to mechanics and chefs. This is especially true in the case of health care professionals, as health is a fundamental necessity of life.

Dietetics is rooted within scientific inquiry and nutrition expertise. Undergraduate training is where "education in the biological sciences, food science, behavioral sciences, and the management systems is necessary to understand the relationship between food elements and the body's physical needs and why people choose the foods they habitually eat" (Burtis, 1988, p. 8). The national association, Dietitians of Canada, describes their role as "... the voice of food and nutrition professionals in Canada. Through the Association, dietitians work together for the health of our communities. Our voice is based on science and supported by research and is the best advice we can give at the time" (Dietitians of Canada, 2000).

Dietetics has been defined as a helping profession concerned with providing services beneficial to individuals and society in order to improve the nutritional status of people (Payne-Palacio, 1996; Holli & Calabrese, 1986). Dietitians communicate, interpret, problem-solve, and apply nutritional science to help people achieve optimal health (Lanz, 1983). Dietetics has also been viewed as the practical application of the science of nutrition (Gable, 1997). Although dietitians accumulate science-based knowledge, scientific knowledge is ultimately used to help people take action and incorporate healthy nutrition practices into daily life.

### Who are Dietitians?

Dietitians are health professionals who work in a plethora of settings. Work settings influence professional responsibilities and shape interactions with clients and patients. Dietitians work in hospitals, extended care facilities, government and community health agencies, non-profit organizations, business and industry, universities and colleges, media, private practice and provincial and national dietetic associations (Holli & Calabrese, 1986; Payne-Palacio, 1996; Dietitians of Canada, 2000).

Clinical dietitians in hospitals assess the nutritional status of patients, develop care plans, and monitor the effectiveness of dietary changes. Administrative dietitians in healthcare, schools, and industry ensure safe, sanitary and cost effective preparation and distribution of meals and snacks. Dietitians in extended care units are concerned with the nutritional status of elderly patients. Dietitians in government and community health agencies such as public health units identify community nutrition problems, and develop health promotion programs. Dietitians in



non-profit organizations such as heart and stroke foundations or cancer societies plan education programs for the public.

Dietitians in business and industry manage food service operations or occupy roles such as nutrition consultants and sales representatives. Dietitians in universities and colleges have advanced graduate degrees in many different areas of nutrition or food science and occupy roles as instructors and professors. Dietitians in the media such as television, radio, newspaper, or the Internet educate the public on newsworthy nutrition information. Dietitians in private practice consult with individuals, groups, or corporations on a variety of issues such as nutritional counseling, administration, food product development, and sales. Dietitians in provincial dietetic associations ensure that members are qualified to practice. Finally, dietitians in national dietetic associations educate the public, create a forum for professionals to network, and form partnerships with corporations and non-profit societies, often for research and educational purposes.

Dietetic work settings are vast and varied. A few examples of topics in nutrition include food allergies, cardiac health, diabetes, maternal nutrition and vegetarianism. Dietitians who share similar professional interests network through practice groups such as business and industry, cardiology, complementary and alternative therapies, and pediatric nutrition (Dietitians of Canada, 2000). Dietitians also keep up to date on professional knowledge and skills through continuing education opportunities such as seminars, at-home study courses, and journal clubs.

No particular diet is universally applicable to all people. Dietitians tailor nutritional advice to be practical and based on individuals' needs. For example, if a client seeks sports nutrition information, a dietitian would take a food history to ascertain regular eating habits, take an activity history to determine energy expenditure, determine the social-cultural environment such as living arrangements, food preparation duties, access to food, and cultural food patterns, determine client goals, and would recommend a nutritional meal plan based on feedback from the client. This meal plan would include suggestions on amount, frequency, list of foods, and places to purchase the items. In this way, nutrition education tends to be concrete and practical rather than theoretical and abstract.

### Normative Roles and Responsibilities

Professional roles and responsibilities are revealed in the words that dietitians use to describe themselves. These descriptions are inculcated throughout undergraduate education, dietetic internship training, and professional work experience. The following terms are some examples that have emerged in dietetic literature: nutrition expert, translator, change agent, counselor, provider of information, helper, and educator.

The term "nutrition expert" is often noted within peer-reviewed dietetic journals or general public nutrition literature. Dial-A-Dietitian is a free telephone nutrition information service in British Columbia that serves the public, media, and health professionals. Dial-A-Dietitian defines dietitian as "the expert on healthy eating, food, and nutrition" (Dial-A-Dietitian, 2000). When dietitians claim nutrition expertise, they claim ownership of a domain of knowledge on which foundations of practice rest. Dietitians continually market themselves to the public as the primary source for nutrition consultation, particularly when there are numerous individuals promoting nutrition advice and products - some legitimate and some relegated to nutrition quackery.

Nutritional science borrows from other disciplines such as biochemistry, physiology, microbiology, and chemistry. However, the public does not think of nutrition as molecular bonds, enzymatic activities, and chemical equations. People think of nutrition as food. As a result, dietitians have been defined as “translators” of scientific information into practical food choices for individuals and groups who are healthy or sick and at all stages of the life cycle - infant, child, adolescent, adult, and elderly (Galbraith, 1975).

In the 1970s dietitians were described as “change agents” who must be able to interact with others to promote measurable and quantifiable behavior change (Peck, 1976). Indeed, dietitians help people change some aspect of their eating habits and lifestyle. The notion of change is not a negative or an undesirable one. However, what seems to be most implied is the focus on change through behavior modification. Most dietitians today may not use “change agent” to describe their role but many dietitians help clients make positive changes.

Dietitians have been described as “counselors” who spend a significant amount of time in the counseling role, albeit not formally acknowledged (Holli & Calabrese, 1986). Dietetic preparation relies heavily on the sciences rather than psychology and counseling theories. As a result, most dietitians must make a conscious effort to develop and practice counseling skills (Hodges & Vickery, 1989). Traditionally, dietitians are trained to use methods in which they have the most degree of control (Gable, 1997). However, Holli & Calabrese (1986) suggest dietitians learn to integrate a humanistic person-centered approach into their practice and focus less on behavior change.

The primary role of dietitians on an interdisciplinary team has been described as the “provider” of optimal nutrition care compatible with medical treatment and patient well-being (American Dietetic Association, 1995). Similarly, The Code of Ethics (Dietitians of Canada, 2000) assumes dietitians will support the advancement and dissemination of nutrition and related knowledge and skills. Dietitians who view themselves as providers of information would strive to be transmitters and dispensers of accurate and reliable nutrition information.

“By its very nature, dietetics is a helping profession” particularly in its aim to improve the nutritional status of people (Lanz, 1983, p. 37). Most dietitians would agree that they help clients achieve health in some way. However, the word “help” may have different connotations for different dietitians. For some dietitians, helping someone means providing accurate information. For other dietitians, helping someone means increasing their understanding of food choices in their environment, while others view helping as increasing self-confidence and self-esteem in others even though no measurable behavior change occurs. Interestingly, even though many dietitians help their clients in some way, not all dietitians feel comfortable as a helper especially if it means having to abdicate therapeutic control and encourage clients to express emotions (Curry-Bartley, 1987).

Dietitians are described as “educators” in programs they plan, educational materials they develop, and in groups and individuals they instruct (Lanz, 1983, Payne-Palacio, 1996, American Dietetic Association Position Paper, 1996). Sometimes dietitians are explicitly described as educators. For example, in one study, dietitians elaborated on their roles on interdisciplinary teams and felt they were primarily educators who were experts on nutrition related issues (Dalke et al, 2000). Other times, there is an implicit notion dietitians educate whenever they share nutrition information and interact with clients. Dietitians primarily inform and educate others on

nutrition matters and help people to make choices concerning the food they eat (Gable, 1997). Dietitians work in multiple work settings, have a variety of job functions, interact with diverse segments of the population, focus on multiple topics in nutrition, and use different words to describe what they do. However, there are important unifying links. Dietitians interact with learners to form relationships in various learning contexts and provide nutrition related information with an intention to invoke some kind of change in learners' knowledge, attitudes, or skills. In other words, dietitians do not simply amass subject matter expertise for their own interest. They are health professionals who interact with the public to increase their state of health and well-being. In this way, dietitians are educators.

### Promoting Critical Analysis: Beliefs and Roles of Dietitians

Dietitians are busy practitioners who strive to maintain a balance between client health, time constraints, limited resources, and increased workloads. In addition, dietitians also teach healthy nutrition practices to help clients change their knowledge, attitude, or behaviors. If teaching is reduced to a set of activities and skills devoid of assumptions, ideologies, and values, dietitians become technicians of information delivery. Dietitians are more than just "warehouses" of subject matter and information. They are individuals who have their own set of beliefs about their place in the world, what constitutes "right" and "wrong", what is considered valid knowledge and learning, and how they interact with others.

### Teaching Techniques versus Teaching beliefs

Dietetic literature on teaching techniques, methods, and personality styles of teachers reveal the "visible" sphere of teaching. The "visible" sphere of teaching refers to what teachers say and do. For example, teaching materials such as written material and videotapes, methods of instruction such as lectures and seminars, verbal behavior such as tone of voice, use of questions, and non-verbal behavior such as facial expression and proxemics are important ways to understand the teaching process. However, the dangers of studying only the "what" and "how-tos" of teaching can lead to prescriptive lists of what teachers should and should not do. Sometimes these prescriptive lists prove difficult to follow when teachers are faced with complex learning relationships, unusual learning contexts, and multiple goals among different individuals in the learning process.

Discovering the "invisible" sphere of teaching often involves asking "why" questions as illustrated in the following. Why are certain techniques and methods valued over others? Why do teachers and educators relate to their learners in certain ways? Why do educators feel there is a preferable way for someone to learn? Answering these questions may reveal motives, intentions, and beliefs that drive the educational process. However, people don't usually explicitly state their beliefs and values in every day conversation. Instead, beliefs and values often manifest themselves as actions, personal judgments about issues or other individuals, voluntary association with some and not others, and perhaps even types of literature read.

When educational beliefs and values are articulated, especially for the first time, it can be a revealing moment where one discovers their actions have been purposeful. Alternatively, others may discover a dissonance if their actions have not been in line with their educational beliefs. An educational framework that looks beyond methods, techniques, and teaching styles and includes a discussion of ideals, beliefs, and values offers a more comprehensive and meaningful discussion of educators and the educational process. It starts a discussion via

personal reflection and discussion with others in which one can ask the following: Where do my teaching beliefs come from? Why have I adopted some beliefs over others? Are there other ideologies that can better help me make sense of the teaching process? Am I feeling a fit between what I do and what I want to do? And if not, why? Such frameworks assist professionals to become reflective practitioners.

### Improving Practice by Focusing On Reflection

The process of reflection can be thought of as making sense of one's experiences to help provide meaning and direction to learning. Reflection can help provide greater clarity of concepts, ideas, and theories and can enable people to compare their current thoughts, intentions, goals, and actions in order to assess whether congruence or dissonance exists (Barer-Stein & Draper, 1989). However, if one reflects on her role as a teacher only from an individualistic or purely psychological viewpoint, teaching is reduced to "an unproblematic and skill-based enterprise unencumbered by social, cultural, historical, ethical, or philosophical values or tensions" (Pratt & Nesbit, 2000, p. 6). All teachers, learners, and subject matter are functions of sociological processes just as they also contribute to society. In this way, reflection becomes a social phenomenon as individuals question their roles, actions, and thoughts in relation to the world around them.

Critical reflection helps teachers discover their authentic voice; "when we start to discover our beliefs and values – we also may become aware of what assumptions of practice are a result of experiences versus what we've uncritically adopted professionally. Discovering our authentic voice is at the heart of critical reflection" (Brookfield, 1995, p. 45). When teachers reflect they are better able to articulate their reasoning, their ideologies, and reformulate their thoughts and actions in situations which are often not neat and orderly but rather complex and uncertain and always situated within a social context.

If the process of teaching requires reflection and introspection, to what degree have dietitians systematically reflected on their beliefs and actions as educators? There are often opportunities for dietitians to reflect on what they do as clinicians, for example, reading journals and attending workshops, continuing education events, and meetings. However, opportunities for dietitians to reflect on their role as educators are much less common. Unless dietitians reflect on their role as educators, there are limited avenues for dietitians to critically ask themselves the following questions: What do I do as an educator? How important is the subject matter of nutrition and what do I want people to do with it and *why*? Who or what has influenced me to educate as I do? What are my intentions while I educate and how did they come to be? Are my actions congruent with what I believe about how people learn? What kinds of relationships do I want to form with learners? Teaching models and conceptual frameworks help to organize thoughts and allow for systematic analysis and inquiry. Pratt's general model of teaching and framework for the Teaching Perspectives were used to study dietitians' roles and responsibilities as well as teaching beliefs and values that ultimately permeate the educational process.

## Guiding Framework: The Five Teaching Perspectives

The five Teaching Perspectives and general model of teaching developed by Pratt (1998) are used as conceptual frameworks to study the educational beliefs of dietitians. The five Teaching Perspectives recognize the plurality that pervades the teaching process such as the diversity of learners, purposes, contexts, subject matter, and ideals or beliefs; “there is no basis for assuming a single, universal perspective on teaching adults. Both the philosophical and empirical evidence argues against it” (Pratt, 1998, p. 3). A framework that allows for multiple non-hierarchical perspectives also allows dietitians to discover other ways of thinking and doing as viable options. In other words, encouraging or mandating a single best way of thinking, teaching, or learning can create a punitive and defensive environment for anyone who may hold a different educational belief. This environment does not welcome stimulating professional discussion but instead encourages all to accept ideas, concepts, and notions uncritically and unreflectively.

When reflection is absent, health professionals such as dietitians can think and act in ways that become habitual. Professional education, training, and work experience plus past interactions with learners and colleagues create points of reference on how to think and act. These habits or assumptions about educational processes are not entirely negative as they save time by allowing dietitians to recognize something from the past and streamline options to provide the best-perceived intervention. However, there are dangers when dietetic professionals rely solely on habitual thought and action and use unchallenged assumptions or experiences to dictate their professional activities.

One danger is insensitivity to different learners and educational contexts that could create distance between educators and learners. For example, assuming all participants are voluntary learners may be an incorrect assumption especially if attendance in an educational session was a physician's and not a client's idea. Another danger may be an inability to understand how culture influences the learning situation which could lead to misunderstandings between educators and learners. For example, some clients believe their own cultural community healers have an important role to play in healing and may not rely on traditional medicine for a cure.

When dietitians do not take the time to reflect on their purposes and beliefs, it might be difficult for them to clearly articulate the rationale behind their actions and thoughts. Subsequently, dietitians are subjected to the whims of organizational powers and politics that may lead some to feel frustrated. Using a teaching perspectives framework can aid in a discussion of why certain educational beliefs and aims are deemed important, what learning atmosphere and relationships are fostered, and what commitments in education are held in importance.

A teaching framework that presents more than one perspective may help dietitians observe other approaches and reaffirm beliefs and actions (congruence) or may enable change if there is discrepancy between intentions, actions, and beliefs (dissonance). Research into these areas will help contribute to literature where dietitians can reflect on what they do as educators, the intentions behind education, and the beliefs that guide their actions and intentions. Knowing this information may prompt dietitians to challenge their own beliefs and actions and ultimately help them enrich relationships with their learners.

Figure 1 illustrates that Pratt's general model of teaching is made up of five elements - learner, teacher, content, context, and ideals (Pratt, 1998). Studying the relationships between these five elements and being aware which elements and relationships are held in higher regard can illuminate commitments of teaching, namely, actions, intentions, and beliefs. These commitments are the backbone of the five perspectives on teaching. Each Teaching Perspective is valid and none is superior to any other. More often, teachers have at least one dominant perspective with one or two background perspectives.

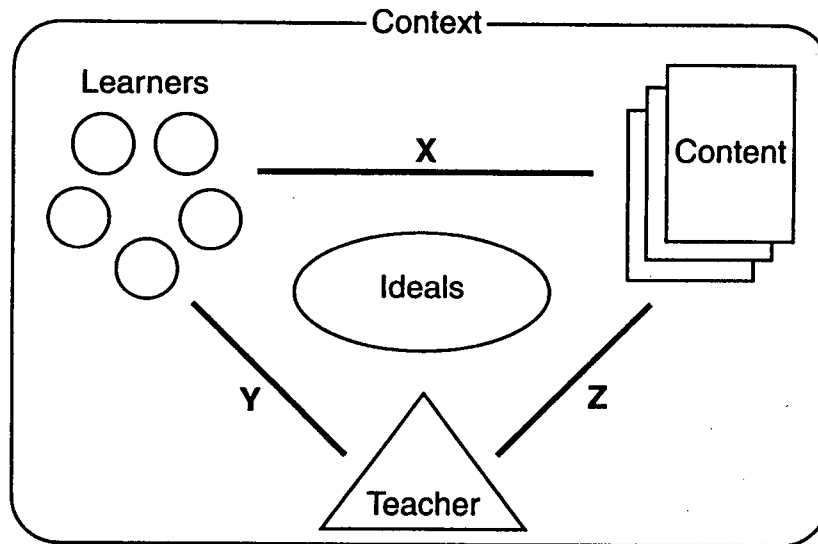


Figure 1. General Model of Teaching

From Five perspectives on teaching in adult and higher education (p.4), D.D. Pratt, 1998, Florida: Kreiger Publishing. Adapted with permission of the author.

### Questionnaire: *Educational Perspectives of Registered Dietitians*

To study dietitians' personal and professional characteristics together with their Teaching Perspectives, a survey questionnaire titled, *Educational Perspectives of Registered Dietitians* was sent to dietitians in British Columbia whose names appeared on the provincial mailing list. One section of the questionnaire included questions on demographics, professional, and social-cultural characteristics. For the purposes of this study, the *Teaching Perspectives Inventory* was re-named the *Educational Perspectives Inventory* and appeared as a separate section.

### Professional Demographics and Social-Cultural Information

Demographics, personal, and professional characteristics are useful in understanding what experiences, influences, and challenges shape the role of dietitians as educators. For example, information on professional interests, distribution of work responsibilities, and rewarding and challenging aspects of teaching are valuable information which can help professional dietetic organizations understand the feelings, frustrations, and needs of dietitians as

teachers and educators. These thoughts and viewpoints help to illuminate and compare current practices and against professional association goals.

Currently, social-cultural demographics are not asked on provincial or national dietetic membership registration forms. For example, basic membership information regarding sex, age, languages spoken, country of schooling, and international dietetic work experience is not widely known. Yet, knowing this information could provide a more in-depth description of the population of British Columbia dietitians, demographics, their interests and experiences.

### Educational Perspectives of British Columbia Dietitians

The aim of a provincial survey was not only to obtain a “broad brushstroke” of views but also to initiate a process where all dietitians throughout the province had an opportunity to provide input on their roles, responsibilities, and beliefs as dietitians – most all of whom share an educational role. The intent of the *Educational Perspectives of Registered Dietitians* survey was not to teach nor explain the five perspectives or Pratt’s conceptual framework to respondents but rather to create an opportunity for dietitians to articulate their beliefs and provide feedback as health professionals and educators. Respondents could request individual feedback about their perspectives. At respondents’ request, *Educational Perspectives Profile* sheets were mailed back to them. The profile sheet identified dietitians’ dominant Teaching Perspectives and helped them compare their individual scores with the group at large. The back page of the Educational Perspective Profile provided a brief summary of the five Educational Perspectives and a citation of Pratt’s book where further explanation could be sought.

From the 1998 British Columbia dietetic mailing list, questionnaires were mailed to 483 dietitians via Canada Post. Although the total number of dietitians in British Columbia in 1998 was 652, 169 members declined third party mail and were therefore absent from the mailing list. The *Educational Perspectives of Registered Dietitians* questionnaire was comprised of three components: current work activities such as professional characteristics, the *Educational Perspectives Inventory*, and background information such as age, gender, family responsibilities, education and social-cultural characteristics. The *Educational Perspectives Inventory* formed the conceptual template for the five perspectives while current work activities and the background section yielded additional information about members’ activities and interests within the profession of dietetics.

The research goals were:

1. To profile professional interests, roles and responsibilities, educational background, teaching experiences, teaching influences and international education, and work experience which provided additional information on the interests and characteristics of dietitians.
2. To determine educational roles, responsibilities, and beliefs among dietitians in British Columbia using Pratt’s teaching model and conceptual framework (*Educational Perspectives Inventory*).
3. To ascertain if relationships existed between professional and social-cultural characteristics and Pratt’s Teaching Perspectives.

In this study, questions regarding demographics, professional, as well as social-cultural variables were included in order to obtain more information on dietetic roles, responsibilities, interests, and teaching practices. Dietitians are primarily health professionals who work in several settings, interact with different learners, and educate others on some kind of subject matter. Current literature on teaching and education within dietetics focuses on what is to be disseminated, how it is to be delivered, and how to judge the effectiveness of nutrition intervention. However, what is lacking are discussions on exactly who dietitians are as educators and their assumptions, attitudes, and beliefs about themselves in their educational roles that influence how they teach. This study was conducted to assess personal and professional information about dietitians and to use Pratt's conceptual framework on Educational Perspectives to better understand the beliefs behind what dietitians do as teachers and educators.



## CHAPTER 2

### INFLUENCES, PARADIGMS, AND PERSPECTIVES

The distribution of dietetic literature reveals different kinds of knowledge and inquiry that are dominant within the profession. Most dietetic research pertains to nutritional sciences such as nutrient analysis, assessment, and biochemical measures. This focus is mainly due to dietetics' roots in food science and technology, medicine, public health, and the basic sciences (Kirby Moore, 1995). Large numbers of dietetic publications cover the technical knowledge, skills, and expertise required by dietitians (Holli & Calabrese, 1986). Other dietetic research includes studies on changes in behaviors, attitudes, and skills of consumers as a result of nutrition intervention (Hauchecorne, 1996). Research also exists on program planning, food service management, nutrition public policy such as position papers, and food labeling as well as development of professional standards and protocols.

A smaller pool of information regarding dietetic education includes nutrition education for the public, education for undergraduates and dietetic interns, and role delineation studies that investigate competencies for entry-level practice. Other dietetic education literature includes continuing education for professionals, counseling skills, nutrition outcome measures such as behavioral or biochemical changes, and development of education materials. A much smaller degree of information within the scope of dietetic literature exists on optimal dietetic teaching skills (Roach et al, 1992). An even smaller amount of dietetic literature provides dietitians with conceptual frameworks to reflect on their role as educators, to discover assumptions about learning, and to uncover their beliefs on the process of teaching (Hauchecorne, 1996; Anderson, 1998).

The distribution of dietetic literature also reveals a contradiction. Most dietetic articles or books that discuss professional roles and responsibilities explicitly state the important role dietitians have as educators. Even in literature that deals with clinical assessment, nutrient analysis, and appropriate dietary intervention there is an *implicit* notion that dietitians are teachers and educators of valuable information. Yet, what is perplexing is the limited discourse on influences on teaching roles and responsibilities and beliefs that shape dietitians as teachers.

Is there a reason research and discussions related to teaching beliefs and frameworks are not prevalent in dietetic literature? It would be difficult to answer this question and engage in a critical literature review of dietetic education without mention of four aspects that have influenced professional roles and responsibilities of dietitians as teachers: 1) dominant influences on dietetics 2) dominant paradigm within which dietetics has developed 3) historical development of dietetics 4) education and training of dietitians.

#### Influences on Professional Roles and Responsibilities

It is a challenge to discuss influences on teaching within dietetics for two reasons. First, there is limited dietetic literature on teaching compared to nutritional sciences; and second, there is little information on different teaching theories and philosophies that might provide some insight into the roles and responsibilities dietitians have as teachers today. The following section provides an overview of the major educational philosophies in adult education using Elias and Merriam's review of six philosophies of adult education, namely, behavioral, humanistic, progressive, radical, liberal, and analytical philosophy (Elias and Merriam, 1980). A brief

synopsis is provided on each followed by a discussion of philosophical influences or lack thereof in dietetics. The purpose of this discussion is not to present an exhaustive philosophical analysis of theories of adult education but rather to investigate what dietetics has borrowed from other movements, fields, or disciplines. This discussion may locate dietetics education and the educational role of dietitians within larger philosophical and educational traditions.

### Behaviorism

The historical origins of behaviorism lie in the scientific movements. Its origins start with John. B. Watson in the early 20<sup>th</sup> century and focus on observable behavior of organisms. It is believed all human behavior is the result of prior conditioning and is determined by external forces in the environment over which a person has little or no control. Philosophical roots of behaviorism come from materialism where laws of matter and motion explain reality, scientific realism and empiricism where reality is revealed via “hard” scientific data not “soft” data of the humanities, and positivism where discovery of knowledge and truth is made possible through measurable scientific observation.

Behaviorist educators feel teachers control the environment and students have learned something only if there are observable changes in behavior. The use of behavioral objectives shape the conditions in which students will learn, behaviors to be learned, and criteria by which behaviors will be judged. Behaviorism in adult education has produced concepts such as behavioral modification, learning via reinforcement, behavioral objectives, and competency-based education.

Behaviorism has had a strong and lasting history within dietetics training and preparation. In the 1960s and 1970s, most courses on nutrition taught in schools and colleges relied on strategies best described as information or delivery methods that were ultimately derived from behaviorist theories such as classical and operant conditioning. Whitehead (1973) conducted a comprehensive review of 269 nutrition education efforts with adults as well as children from 1900-1970 and found most educational efforts were behavioral focused and were directed towards the dissemination of information. Evidence of behaviorism can be found in objective-based learning, measurable and observable behavior change such as outcome-based education, and competency-based education.

Competency-based education is prevalent particularly within dietetic internships. Behavioral goals and objectives, specific learning experiences, outcomes and criterion-referenced evaluation are pre-determined within competency-based education (Grant, 1985). The dietetic internship is based on criterion-referenced evaluation and completion of competencies in areas such as clinical nutrition, administrative dietetics, and education.

In practice, dietitians often contrast learning objectives against observable behavior change to determine whether clients have learned something. Examples of learning objective statements include the following: the client will be able to identify and limit sources of saturated fats in the diet; the client will be able to use the diabetes meal plan in order to control blood sugar levels; and the client will be able to identify the offending food allergen to minimize the risk of an allergic response. The learning objectives are specific, finite, and measurable. Although dietitians acknowledge that clients have input in their nutrition management, the teaching process is usually under the guidance and direction of dietitians.

In relation to the process of teaching in dietetics, Wulf and Biltz (1978) stated that “the client needs to demonstrate the learning by saying or doing something” (p. 13). Indeed, dietitians rely heavily on measurable change to ascertain whether nutrition and teaching intervention has been successful and whether clients have complied with recommendations. Changes in laboratory values, increases or decreases in weight, and verbal repetition of dietitians’ recommendations are examples of measurable change. If predetermined outcomes are not met, dietitians may view this as client non-compliance, lack of motivation or disinterest, or dietitians may feel they possess inadequate teaching techniques necessary to elicit behavior change. In summary, behaviorism has significantly influenced roles and responsibilities of dietitians during educational training and in professional practice.

### Humanism

Humanistic adult educators value intuition, subjective experience, and internal emotions. They also feel that the uniqueness, freedom, potential, and creativity of individuals has not been fully recognized under the influence of behaviorism. Humanists emphasize the relationship between attitudes, feelings and beliefs, and personal perception which in turn explain a person’s overt behavior. The roles of humanist teachers include facilitator, helper, and partner in the learning process. In becoming facilitators, teachers also abdicate control over the educational process as students become more responsible for what and how they learn. Effects of humanism in adult education include self-initiated learning, student participation in planning and evaluating, group method learning, and the dominance of Andragogy in North America.

Some dietitians realize that behavior change is not the only measurement that signifies clients have learned something. Dietitians who have a humanistic point of view are both teachers and learners. Books and journal articles on dietetic counseling have introduced notions of humanistic psychology such as client-centered therapy. Dietitians form personal and therapeutic alliances with clients based on trust and disclosure. However, a major barrier in establishing therapeutic alliances with clients in hospital settings is the short length of hospital stays in the current health care system. Dietitians may see clients only once or twice and may be unable to follow up later due to time constraints, long waitlists, and limited department resources.

Another barrier is that many health professionals such as dietitians are viewed as directive or authoritative experts with power (Gable, 1997). Gable feels that dietitians should examine their perceptions of themselves and their clients using a humanistic client-centered approach that encourages clients to gain personal responsibility, confidence and self-esteem. Humanism in nutrition education is less represented than behaviorist education but it is growing in popularity and use. More dietetic researchers have begun to use humanist perspectives and significantly more qualitative research designs and data-collection methods (Hodges & Vickery, 1989; Holli & Calabrese, 1986; Tarasuk & Reynolds, 1999).

### Progressivism

The focus in progressive adult education has been the relationship between democratic education and society. Progressive education emphasized vocational and utilitarian training, learning by experience, scientific inquiry, community involvement, and education through social involvement. Progressivism came to the forefront during the period of industrialization and urbanization. Some of the basic principles in adult education come from the progressive movement, such as needs and interests, the scientific method, problem-solving techniques, the

centrality of experience which is the interaction between individual and environment, pragmatic and utilitarian goals, and the idea of social responsibility.

John Dewey was one of the most prominent progressive educators who emphasized the connection between learners and the real world as opposed to the practice of rote learning of an earlier era. Dewey influenced teaching practices and stressed the importance of thinking-in-experience and on education for a democracy. Dewey's progressivism had an influence in elementary and high school nutrition education from the early to mid 20<sup>th</sup> century. Learning by doing and problem solving rather than rote learning became the core practice of nutrition education. Examples of progressivism's influence in nutrition classrooms were evident in how the teaching of nutrition was combined with science lessons, mathematics, spelling, cooking lessons, and work in gardens (Contento, 1980).

Out of all the principles of progressive education, the idea of utilitarian education might be most applicable to dietetics. Dietitians have been trained to translate and provide immediate, practical and useable nutrition information applicable to daily life. Progressivism might have had a stronger influence during periods of World War I and II because dietitians worked specifically with the community at large to combat malnutrition and improper food sanitation (Lanz, 1983, Willick, 1981). Today, many dietitians work closely within communities via health councils and community groups in order to establish community nutrition programs and address societal-based nutrition problems.

### Radicalism

For radical adult educators, understanding the processes and goals of education are synonymous with understanding the interconnectedness between politics, culture, economics, and society. The ultimate goals are freedom, liberation, and higher consciousness in which the oppressed or disadvantaged change their situations through social action. Paulo Freire is one of the most well known educators of radical education and he believed that individuals could create and shape both culture and history (Freire, 1970). People are constantly in a process of becoming and are capable of transforming society via praxis, critical reflection, and action. Freire is critical of the notion of "banking education" where teachers transmit pre-determined knowledge to learners who then uncritically absorb, memorize, and regurgitate information. Opposite to banking education is libertarian, dialogic, and problem-solving education. Through this process, persons learn about the concrete situations in which they live as well as possible reasons and solutions. Problem-solving education includes the culture of learners such as beliefs, myths, arts, science, and political preferences.

Radical education is rarely mentioned within dietetic literature on education, training, and teaching. There are a few exceptions (Travers, 1997), however, dietetics does not have a strong history of radical social movements or movements that challenge the dominant medical or social hierarchy. Instead, dietitians have worked and trained to become part of the medical establishment (Eisenbraun, 1986). Although dietitians advocate on behalf of disenfranchised segments of the population, dietitians predominately work within social structures to affect change. In fact, dietetic education and training might be criticized for falling under Freire's notion of banking education (Freire, 1970). Training in dietetics relies heavily on the incorporation of large numbers of scientific facts, figures, and numbers. Dietetics education and teaching is not devoid of studying cultures of learners. However, dissemination of information to individuals predominates rather than radical change through social dialogue.

## Liberal Education and Analytical Philosophy

The historical roots of liberal education lie in the philosophies of the classical Greek philosophers such as Plato, Socrates, and Aristotle. Liberal education is based on study of the classics, religion, politics, art, history, sociology, and for some liberal educators, sciences. Advocates of liberal education have stressed the development of minds and intellect (abstract) over the demands of preparing people for jobs and careers (practical). The aim of liberal education is to produce people who are literate in the broadest sense – intellectually, morally, spiritually, and who appreciate beauty in nature and art. People schooled within the frames of liberal education become educated by learning the arts of investigation, discussion, criticism, and communication. Understanding via conceptual and theoretical synthesis and introspection is valued over mere transmission or rote regurgitation.

Analytical philosophy has its historical origins with such movements as logical and scientific positivism. This philosophy differs from other philosophies by favoring the analysis of language over abstract statements about the nature of the world, God, reality, and humans. Analytic philosophy tends to be divided into four parts in its historical development, namely, scientific realism, logical analysis, logical positivism and linguistic or conceptual analysis. Scientific realism is where truth exists when there is a correspondence between what is in the mind and what appears in reality. Logical analysis attempts to draw similarities with the exactness of science and math. Logical positivism is where a problem can only have meaning if it can be empirically or logically verified. Linguistic or conceptual analysis is where language is a social phenomenon and cognitive maps are drawn to study how terms are used for the basis of knowledge, beliefs, actions and activities that make up human life.

Liberal arts education and analytical philosophy are not prominent or even evident within most dietetic education, training, and literature. Due to dietetics' roots within science and medicine, the disciplines found within liberal arts education, such as classical literature, history, politics, and sociology, are not studied in depth during undergraduate training. As a result, the rigors of scientific investigation such as deductive critical inquiry, transmission or rote regurgitation are stressed rather than conceptual and theoretical synthesis and introspection. Although dietetics has been described as a "practice of the arts and sciences", it is evident that science based education, not the arts, plays a pivotal role in grooming future dietetic professionals.

Analytical philosophy and its deconstruction of meanings and definitions- particularly through conceptual analysis where language is viewed as a social phenomenon- are not generally practiced in dietetics' education and training. Perhaps if there were avenues or tools for dietitians to do so, commonly accepted terms such as education, teaching, health, knowledge, and learning would be analyzed and deconstructed. This might lend itself to critical inquiries into the origins and social meanings of language and how it is used in dietetic practice. Dietitians who are often focused on the practical application of nutrition knowledge would not likely spend a large portion of their time analyzing and deconstructing commonly held words and notions.

Elias and Merriam's (1980) review of the six philosophies of education was used to highlight disciplines and movements that have and have not influenced the development of teaching within dietetics. The greatest influence on dietetic practice and teaching was behaviorism and its focus on an objective reality, measurable and observable learning outcomes, and competency-based education. Humanistic philosophy had an impact on the development of dietetics particularly as dietitians became co-learners and facilitators during the process of nutrition counseling. Most books on nutrition counseling encourage dietitians to explore client-centered therapy as an additional approach to behavior modification. Progressivism's influence on dietetics was probably most prominent during World War I and II as dietitians provided practical and useful information for the social health and well-being for communities. Today, dietitians assert their roles as providers of practical and utilitarian nutrition education.

Radical education philosophy is not absent but is certainly not very common among many practicing dietitians. Radical philosophy might be more prevalent in areas such as community nutrition and with disadvantaged or disenfranchised members of society. Liberal arts philosophy and analytical philosophy have had minimal impact on dietetics training and education. However, one would wonder whether dietetic practice and teaching would look different today, would pursue different lines of research, and analyze different theoretical assumptions if liberal arts and analytical philosophy had a significant impact on dietetics.

## Paradigms

Each of the disciplines and philosophies mentioned above direct our attention toward the nature of reality (ontology) and forms of knowing, or claiming to know, aspects of that reality (epistemology). As a result, each view of the world says something about the power of society and the agency of the individual to affect change. Such views of the world might be called paradigms or ways of understanding one's self in relation to the world. Paradigms also direct our attention to different aspects of the world. Boshier's (1994) map of adult education territory, elaborated from Burrell and Morgan (1979), is used to provide insight into the paradigm most dominant within dietetics. Central to this discussion of paradigms within adult education are two notions; views of reality, namely, objectivity and subjectivity, positivist and post-positivist and existing power relationships, that is, conflict or status quo. The four paradigms are functionalism, interpretivism, radical humanism, and radical structuralism. A discussion of dominant paradigms within dietetics might be useful in understanding what the field of dietetics deems worthy to know as well as the purposes and aims of teaching and education within the profession.

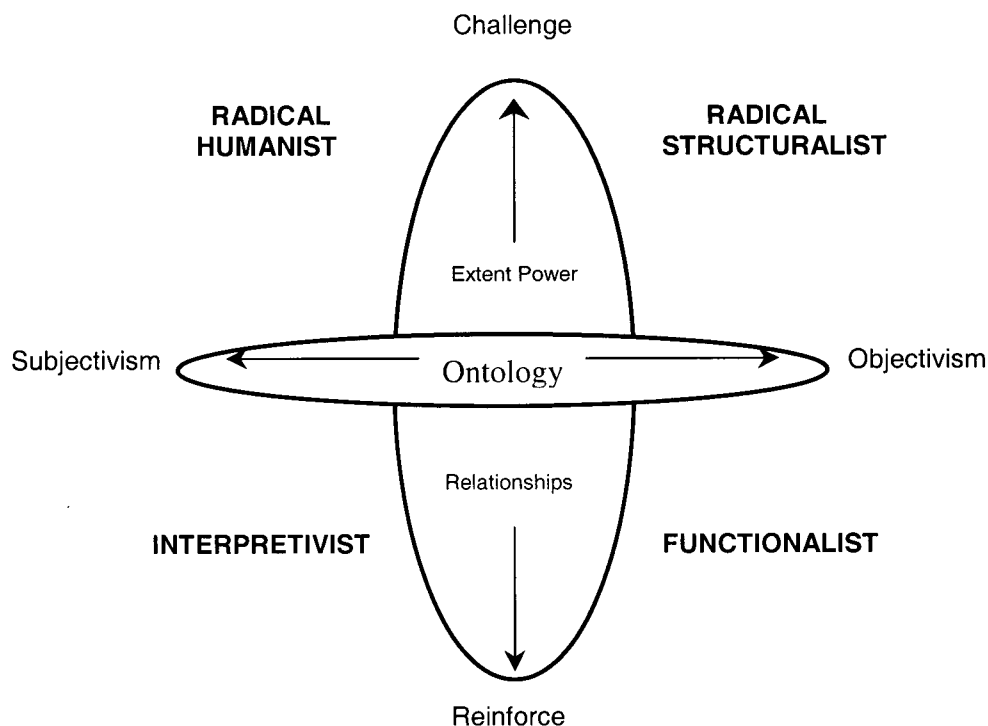


Figure 2. Map of Adult Education Territory

From Boshier, R.W. (1994). Initiating research. In D.R. Garrison (Ed.), Research perspectives in adult education (pp. 73-117). Florida: Krieger Publishing. Adapted with permission of the author

## Functionalism

Functionalism is the most dominant paradigm within society. What is most valued within this paradigm is maintaining social order and the status quo, focusing on the practical aspects of problems and solutions, and attaining objectivity through accurate descriptions of the world. Functionalists often prefer to borrow from the natural sciences and positivism in order to explain human behavior. The notion of professionalization has also been associated with functionalist tendencies. Dietetics has developed primarily within the functionalistic paradigm.

Beliefs about healthcare and health education are influenced by dominant ideologies of the time. Although nutrition education during World War I and II had a role in community and social welfare, translating scientific information into recommendations became dominant as the field of nutritional science matured (Travers 1997; Devault 1995). Historically, nutrition education was influenced by positivism and concerned primarily with technical and scientific knowledge (Travers 1997; Anderson 1998; Hauchecorne 1996). The advance of positivism was followed by a focus on technological advances in nutritional and behavioral sciences and the notion of dietitians as nutrition experts.

The ideology of positivism and technical rationality emerged as the dominant way of thinking for many professions such as medicine, business, law, and engineering. Technical rationality has its roots within positivism. Positivism has a three hundred year history and during the peak of positivism in the 19<sup>th</sup> century, science and technology were seen as social movements to better mankind while professions were seen as vehicles for the application of sciences for human progress (Elias & Merriam, 1980). From a positivist point of view, the world is made up of empirical observations because anything else is “emotive utterance, poetry or mere nonsense” (Schon, 1983, p.33). Schon defines technical rationality as problem solving and application of scientific theory and technique. Within technical rationality, knowledge is specialized, firmly bounded to an objective reality, scientific and standardized in which general principles are applied to concrete problems. Technical rationality within healthcare lends itself to notions such as “expertise”, “authoritarianism”, “the bottom line”, “specialization”, and “black and white”. Notions within healthcare such as “intuition”, “self-determinism” and “holism” are not prevalent and are deemed difficult to quantify, measure and evaluate (Hauchecorne, 1996).

Dietitians have promoted themselves as food and nutrition experts within the dominant ideology of technical rationality. To solidify a place in the dominant medical hierarchy dietitians have tried to create a domain of nutrition knowledge, treatment, and education limited to those that hold expert credentials (Anderson, 1998; Eisenbraun, 1986). For example, the notion of dietitian as “expert” versus “guide” implies different ways dietitians share knowledge and different ways they form relationships with learners. The term “expert” implies that dietitians are highly knowledgeable and are privileged to information not held by others. The term “guide” implies that dietitians are partners and help learners incorporate knowledge into their life in a meaningful way. Language used by professionals to describe what they do or how they do it can reveal what information is valued and how educational relationships are formed with learners.



## Interpretivism

For interpretivist educators, the aim is not to accurately and correctly describe the world external to individuals but rather to focus on how individuals construct their reality using personal frames of reference. Instead of searching for universal and absolute truths, interpretivists search for shared assumptions and meanings. Educators and psychologists who emphasize individual self-concept, personal beliefs, values and attitudes, personal perspectives, and individual self-directedness are situated within this paradigm.

A segment of nutrition education research draws from psychological-focused learning theory as opposed to theories drawn from other fields of study, for example, social action theories, feminist theories, economic theories, political theories etc. (Achterberg & Clark, 1992). Dietitians operating within this paradigm believe learners must be met in their personal life before significant change can happen. One dietetic education researcher asked "what is more humanistic than helping the client develop skills he needs to actually make decisions about his food when he is at home and on his own?" (Wulf, 1978, p. 10). With the help of cognitive psychology, dietitians are encouraged to foster individual development of self-efficacy, self-control, and self-evaluation all of which are proposed to be useful for client-centered strategies and lifestyle change (Baldwin & Falciglia, 1995).

## Radical Humanism

Both radical humanists and interpretivist educators acknowledge a subjective reality. However, radical humanists differ in that they desire to question existent power distributions and upset oppressive social arrangements. Educators within this paradigm encourage individuals to become aware of their own limiting beliefs and cognitive maps that have been internalized over time. Through discussions, radical humanist educators help people to expose social and cultural beliefs, and ideologies, that prohibit people from achieving freedom and fulfillment.

Radical humanist literature is scarce within dietetics. Dietitians do not usually work with their clients to upset oppressive social arrangements. However, some dietitians help clients uncover limiting personal belief systems or help them understand larger social-economic forces that influence food choices. For example, dietitians may help clients who suffer from eating disorders such as anorexia or bulimia to question the societal acceptance of beauty and the social pressures to be thin. However, changes sought tend to be on an individual, not a social level. Community dietitians tend to be more involved with issues surrounding food security and food availability such as nutritional vulnerability of impoverished groups or social-environmental factors such as issues surrounding infant breastfeeding practices. Some nutrition education researchers are aware of larger social-economic forces affecting the nutrition status of communities and admit that current nutrition programs have not been designed to change social situations of groups of disadvantaged people. For example, one qualitative study showed that community kitchens provide valuable community support, but "the programs have limited potential to resolve food security issues rooted in severe and chronic poverty because they do not alter households' economic circumstance in any substantial way" (Tarasuk & Reynolds, 1999, p. 11).

Nutrition education literature that pertains to community change acknowledges that communities must be empowered so that they can identify needs, mobilize resources, and solve problems. Most nutrition education interventions use either social planning models that rely on

rational-empirical problem solving and external experts or use process-centered models that stress consensus, group identity, and a sense of community (Contento, 1985). However, social action research that exposes conflict between power holders and individuals and shifts power to the oppressed or disadvantage seems to be less evident in nutrition education research (Contento, 1985).

### Radical Structuralism

Educators who are radical structuralists view an objective rather than a subjective reality and desire to overthrow oppressive social structures. Radical structuralist educators situate problems within economic and political contexts so that repressive social structures and conflicts can be exposed and changed. They also argue that education is an institutional structure in which privileged social classes preserve inequities and use the educational system to further their own agendas.

If finding dietetic literature on radical humanism is scarce then locating research and thought on radical structuralism is almost impossible. Dietitians are predominately located within health care structures and work within the constraints of the system. The majority of dietitians do not overtly challenge those that are in power within institutions. However, to assume that dietitians are not aware of social, political, economic, and cultural inequities is presumptuous. For example, Monsen (1993) suggests dietitians should engage in research that addresses socioeconomic, political, cultural, and ethnic interests of the community. In this way, through education "one can more easily recognize the unexpected for what it is, extend what is known, foresee changing points of view and respond to the social, political and economic environment" (p. 982). Some dietitians may be aware of these inequities but most would not likely engage in activities that would openly question authority or challenge power distributions and structures of domination, let alone overthrow them.

In summary, dominant paradigms like technical rationality and positivism influence how dietitians perceive their roles, what types of knowledge are deemed important, and the kinds of relationships formed with learners. Similarly, as dietetics forms alliances with fields such as medicine, it adopts a similar paradigm such as positivism, similar scientific language and objective expertise. Dominant paradigms have the power to shape concepts of knowledge and develop over time within an historical context.

### Historical Perspective

Although the profession of dietetics is relatively young, the practice of using food to nourish and heal dates back to the dawn of medical history. A medical book published in Florence in 1478 referred to dietetics as the treatment of disease by diet and as a branch of medicine (Lanz, 1983). In other early writings including those of Hippocrates and Galen, the word diet appeared frequently. The word "dietetics" derives from the Greek word "diaita" meaning mode of life and was used in a broader sense to comprise the doctrine of health, hygiene, and diet (Barber, 1959 cited in Lanz, 1983). Until the eighteenth century, beliefs and writings about diet were based on insufficient scientific evidence but with advances in chemistry and physics dietetics developed into a profession (Payne-Palacio & Canter, 1996). In order to understand current dietetic education and teaching roles and responsibilities it is important to look at the historical development and evolution of dietetics.

## Brief History of Dietetics in British Columbia

The British Columbia Dietetic Association was officially formed in 1925 (Willick, 1981). The association's goals were to study various phases of dietetics, to build a closer cooperation with allied health professionals, to raise the standard of dietary work and to develop a social service aim that would help those in need of both dietetic and financial assistance (Willick, 1981). The original association meetings adopted similar professional standards and practices from the American, Washington, and Quebec dietetic associations. Dietitians present for the first meetings also recognized the need for professional continuing education.

World War I and II were pivotal points in which dietitians in British Columbia assumed important educator roles. Dietitians helped hospital clients and the community achieve optimal health. During World War II dietitians educated the public on issues such as cooking with rations, grocery shopping and budgeting, preserving foods, food safety, and victory gardens. The primary professional objective of dietitians was to improve the food habits of Canadians and subsequently improve the national standard of health for all. Dietitians today also voice the same objective. In the past, clinical dietitians visited hospital patients based on receipt of physician referrals and diet prescriptions. Today, dietitians work primarily within health care settings and continue to visit patients who have been referred by their physician for diet therapy.

## Perceived Roles and Responsibilities

Early records cast light on how other professionals perceived the roles and responsibilities of dietitians. An opening address to Vancouver General Hospital's dietetic intern graduates in 1957 was given by one of the first dietitians to work at the Vancouver General Hospital (1913-1922), Esther L. Kinney. Kinney explained the social hierarchy within the hospital during that period, "My first day was a greeting by old Kate, the cook, who stated she would not be bossed around by a 'chit of a girl'" (Willick, 1981, p. 13). Miss Kinney stated the status of the dietitian was indefinite - she was sometimes a little lower than the graduating nurses known as angles, sometimes a little above the more mundane student nurses and sometimes classified as a glorified cook.

In the handbook of "The History of Dietetics in British Columbia 1926-1980" (Willick, 1981), an article was reprinted which appeared in the Vancouver Sun newspaper titled *Professional People "Assuming Teacher Role"* (Frain, 1964). The following 35-year-old article confirms that dietitians like other health professionals study the subject matter of their profession in-depth but often ignore or underestimate their role as teachers and educators,

Some of the busiest, most worthwhile teachers of all never see the inside of a classroom, never pick up a piece of chalk or mark an exam paper. Because according to Dr. Margaret Nix (Ph.D. in Education) associate professor of Health and Social Medicine at McGill University, these teachers are doctors, nurses, dentists and dietitians. "These people, whether they're working in their offices or in clinics, are all professionally prepared in the science and art of medicine to heal. But the way I look at it, the science and art, especially the art of healing is related to the art of education. Therefore, these professionals are becoming increasingly more aware of their role as teachers. As teachers, they can bridge the gap between science and what people know about science." In Vancouver to speak to the British Columbia Dietetic Association's refresher course this weekend at the Vancouver General Hospital, Dr. Nix began her career as a classroom teacher before

branching out into public health as a director of public health education in Manitoba. It was here that she came to see the real teachers were those that had direct contact with their "pupils". "Group education is fine in its place, as a means of softening the public to an idea, but the face-to-face contact a doctor, nurse, dentist or dietitian can have is the most effective. So, part of my professional effort has been focused on helping these people to become true teachers", added Dr. Nix. Teaching is much more than telling. It is a skill that some are born with, but which can be learned. The important thing is the learning atmosphere. A teacher must evaluate his own technique- is he authoritarian or able to develop the learner's potential? "A teacher must learn about the learner in order to cultivate his ability to contribute and grow. And by contributing and growing we have happiness." Dr. Nix added that life in the 20th Century is wonderful because of the awareness today's citizens have of education. "This is the greatest evolution we've ever had...and it's nice to be part of it" (p. 35).

Dietitians have been interested in the basic development of the profession such as professional education and training preparation, standardized knowledge, continuing education, and relationships with other health professionals since the profession's inception. Dietitians have also striven to obtain professional respect and acknowledgement from others working within the medical system. Although many years have passed since Esther L. Kinney's time, British Columbia dietetic professionals continue to stake out their roles as nutrition experts and their domain of nutrition practice within the medical community. Dietetic education and training is designed so that dietitians become nutrition experts and competent health practitioners.

### Dietetic Education and Training

During the 1920s dietetic training in British Columbia included training in hospital food services and some clinical dietetics but there was no formal university education. Since 1945 the University of British Columbia has granted a four-year Bachelor's degree in Home Economics – Dietetics Major (Willick, 1981). Currently, in order to become a Canadian Registered Dietitian one needs to graduate with a Bachelor's degree in Dietetics or Foods and Nutrition from an accredited dietetics university program, complete a practice-based internship and pass a national exam. Dietitians can apply for registration in a provincial dietetic regulatory body after they complete academic and training requirements.

#### Undergraduate training

Today, the bulk of North American dietetic undergraduate training is in human nutrition and food courses, biological and physical sciences, for example, chemistry, biology, and microbiology, management and food service, and to a smaller extent, social sciences (Burtis, 1988, Payne-Palacio, 1996). At the University of British Columbia (UBC), approximately one-third of all courses in the dietetics Bachelor's program are elective courses (UBC Calendar, 1998). Elective courses often include psychology, anthropology, sociology, communications, adult education, and family science. Other course electives include human kinetics, agricultural science, and economics.

The University of British Columbia Bachelor of Science in dietetics program specializes in the physical and biological sciences and focuses on patient care, administration, and the role of diet in the prevention, etiology, and treatment of disease. Universities can offer dietetic degrees if curriculums meet the educational standards set out by the national dietetic association,

Dietitians of Canada. Graduates of the program can apply for a dietetic internship following graduation.

Dietetic undergraduate training introduces students to the methods of scientific inquiry and hence, technical rationality. Scientific inquiry is based on unbiased deductive approaches to learning. In the university setting, scholars and academicians impart their expertise and specialized knowledge to students usually through lectures (Roberts, 1995). Students in the sciences commit large amounts of information to memory and are subsequently tested and graded based on their accuracy of reproduction. Undergraduate dietetic students learn how to master nutrition information and learn about the authoritative and content expert role of professors during the teaching process. Dietetic undergraduate education forms the base of scientific knowledge that learners later apply in dietetic internships.

Undergraduates are expected to participate in group work projects and are encouraged to be involved in dietetic student councils, however, there is a sense of competitive individualism because grades play a very important role for entry into dietetic internships and ultimately the profession. The process of entry into most dietetic internships is competitive and not all university graduates are guaranteed internship placement (UBC, Course Outline, 1999). There are pressures for dietetic students to do well at the undergraduate level particularly in the science-based courses. One study asked 97 dietetic internship directors to rank admission selection criteria of internship programs (Carruth, 1990). The study revealed grade point average, and academic success in professional, physiological, and biological science courses were the highest ranked criteria. In this study, forty-one directors commented that "C" grades in upper level professional, chemistry, biological sciences, and mathematics courses would likely prevent admission.

### Dietetic Internship

Dietetic internships are supervised practical experience programs accredited by Dietitians of Canada. Internship programs are usually one year in duration and can be completed after undergraduate training, during undergraduate training or during graduate study training. Dietetic interns are expected to integrate practice and theory in institutional, community or private industry settings, and to develop self-confidence and expertise in the performance of professional responsibilities. Preceptors such as staff dietitians, dietetic technologists, and other professionals supervise interns on a daily basis. Initial exposures to client interaction and education often leave lasting impressions on dietetic interns (Vickery, Cotugna, and Hodges, 1995). Dietetic internships are therefore pivotal in influencing teacher and educator roles.

During the internship, there are three stages to fulfilling dietetic competencies; interns observe the preceptors, preceptors observe interns, and interns practice independently to become competent. Currently the competency categories include nutrition competency, food service and administrative competency, professional competency, and educational competency (Dietitians of Canada, 1996). Each competency category has numerous performance objectives with corresponding enabling activities to meet those objectives.

The focus within the educational competency category is on planning programs, determining educational needs, developing goals and objectives, developing teaching materials, delivering information, and evaluating the outcomes of nutrition intervention (Dietitians of Canada, 1996). Behaviorisms' influence is evident because dietetic interns learn to focus on

goals and objectives, translate and transmit scientific information to patients, and measure success of nutrition intervention in terms of measurable and observable outcomes. Knowledge in dietetic internships is to be accumulated, transmitted, judged for accuracy, and compared against an accepted norm. In this way, knowledge is based on a largely objective reality. Knowledge and dissemination of information in dietetic internships must also be practical in nature.

Dietetic internships' educational competencies mention little in regard to theoretical or conceptual frameworks. There does not appear to be consistent and widespread critical discussions of philosophies or ideologies that shape the teaching process or client relationship. Interns are encouraged to think about how clients' cultural, language, financial, family, social, and to some extent psychological variables influence the adoption of nutrition practices or behaviors. However, the extent to which these are investigated and reinforced are often related to the preceptor's awareness and personal interest in these factors.

Learning in internships is intimately connected with patients, patients' families, multiple dietitian preceptors, other dietetic interns and numerous other health professionals. Dietetic interns quickly become part of the practice, culture, and social network of dietetic practice. For example, over time interns observe and learn appropriate professional behavior and communication not only with other professionals but also between colleagues in informal settings such as lunch and coffee breaks. Many interns become aware of where dietitians fit within the overall hierarchy of the hospital system. For example, interns learn that dietitians follow medical orders from physicians and that dietitians give food requests and orders to dietetic technicians. Dietetic interns also become aware of what is considered appropriate interaction with patients and their families.

Interns closely observe their preceptors for verbal cues such as complexity of language and non-verbal cues such as appropriate and respective touch or gestures. Interns also learn different types of accepted therapeutic relationships. For example, information tends to be shared and negotiated if dietitians perceive themselves as facilitators; however, if dietitians perceive themselves as experts they usually disseminate information without much input from clients. When interns learn how dietitians interact with patients and co-workers within an institution, they also learn characteristics and practices that they are to adopt as future practitioners. Dietetic culture is reproduced and gradually changed when each class of interns enter and graduate from internship programs.

Internships are the first and often significant points of acculturation. Oddly enough, discussions regarding different educational ideologies and social, cultural, and environmental norms are rarely openly discussed during the course of study because "internships foster mostly technical learning and as a result skills in human interaction and conceptual areas are somewhat lacking" (Holli & Calabrese, 1986, p. 53). Teaching and education within internships focus primarily on dissemination of accurate technical information and teaching techniques associated with provision of information.

In summary, educational philosophies, dominant paradigms, historical influences, and education and training of dietitians have all shape the profession of dietetics today. Notions of technical rationality, ties to medical and scientific fields, training in the life and biological sciences, professional roles as nutrition experts and the focus on measurable and quantifiable change have all influenced how dietitians teach and educate others. However, teaching roles in dietetics are more than just products of subject matter and academic education and training.

There are larger social influences that shape the roles of dietitians. Both individual agency *and* social-structural factors influence how teachers such as dietitians interact in the environment with learners (Nesbit, 1997).

### Frame Factor Theory

Nesbit (1997) favors educational research that combines interpretive meaning, thoughts, and feelings of individuals with theories that explain how social structures influence individual meanings and perspectives. Therefore, there are both psychological and sociological factors that promote or inhibit teacher thought and action. Frame factor theory refers to anything that might limit the process of teaching and is external to teachers and outside their control. When the frame is strong, teachers have limited options and freedom; when the frame is weak, teachers have more flexibility and autonomy in the teaching process. In frame factor theory, social structures are not causative. Instead, social structures, processes, and activities intertwine to influence individual thought and action. Frame factor theory supports the notion that “because any society and its educational systems are inextricably linked, the cultural, political, economic, and social structures of society have an effect on education and can be regarded as frames” (Nesbit, 1997, p. 8).

Individual and structural agencies are not polar opposites of each other but instead dynamically interact with each other to explain different ontologies (views of reality) and epistemologies (ways of knowing). Though teachers have personal beliefs and values, they are also shaped and influenced by the world around them. Dietitians are no exception. Dietitians are individual agents in the teaching process who subjectively interpret their actions and meanings to actions in the teaching process. However, larger social processes and structures also influence dietetic roles. There are different “frames” outside the direct control of dietitians that limit or influence their roles and subsequently the teaching process; under-representation within social health care research, professional dominance, gender issues, a history of semi-professional status within medicine and self-perceptions of professional roles and abilities within institutions.

### Under-Representation, Gender Issues, and Semi-Professional Status

The profession of dietetics like other health professions has not developed in a vacuum but instead is interconnected with other professions within the general health care field. A provocative article written by an American sociologist provides an analytical summary of influential forces in the general health care field and their implications on dietetic roles and responsibilities (Devault, 1995). The aim of this discussion is not to present a comprehensive sociological analysis of the profession but rather to alert the reader to be aware that other forces in health care have influenced dietetics and ultimately conceptions of nutrition education. Although there are differences in health care structures between the United States and Canada, the similarities will be discussed here.

Dietitians have been an under-studied group within general health care literature. Devault (1995) offers some ideas as to why this may be the case. First, in relation to population of other health care professions in Canada such as medicine; 56,203 total physicians (Canadian Institute for Health Information, 1999) and nursing; 110,000 total nurses (Canadian Nurses Association, 1996), the dietetic profession is quite small; 5,116 dietitians in Canada (Dietitians of Canada, 1999). Second, Devault proposes theories of professional dominance,

...theories of professional dominance (Friedson, 1970) point analysts toward the most successful professions (physicians), or those with the clearest relations to dominant groups, either as subordinates (nurses) or competitors (chiropractors, midwives). Such theories implicitly accept the medical view of the work to be done in health care, and concern themselves primarily with how that work should be divided. Dietitians and nutritionists represent a group whose conception of health care work is less clearly related to the medical model –neither clearly competitive nor completely subordinate (p. 288).

Third, the gender composition of dietetics is predominately female and normally averages above 95%. Although Dietitians of Canada does not keep records on the gender distribution of dietitians, other estimates have been published by British Columbia Provincial Health Statistics (1995) which estimated that 99% of dietetics was female. The gender composition of dietetics may explain the neglect of the field since women's work in general has been less studied than men's work (Devault, 1995). Devault asserts that as more men have entered the academic field of nutritional science, dietetics has distanced itself from predominately female fields such as home economics and have aligned itself with more predominately male fields such as general sciences, agriculture, and medicine in order to establish greater legitimacy. (Devault, 1995; Eisenbraun, 1986). This move has also been under the influence of dietitians who have the authority to change policy and to strategically increase the status of dietetics within institutions.

Eisenbraun (1986) used a feminist perspective to conduct a critical analysis of the professionalization of dietetics and revealed that dietetics has developed within the functionalist paradigm that has pervaded the history of medicine. Her analysis focused on the development of British dietetics but many parallels can be drawn with North American dietetics. Eisenbraun questions if dietetics can ever attain true "professional" status even in light of recently acquired benefits of professionalization such as greater societal respect, increased independence, and remuneration. Dietitians have striven to obtain professional status and ownership of a specialized body of knowledge. Knowledge deemed more abstract, technical, and specialized appears to have a superior status within society. The public prefers to believe that professionals hold the most highly developed body of knowledge in a specific area. Exclusivity and control of knowledge is critical if professions seek autonomy, respect, credibility, and monetary compensation.

British, American, and Canadian dietetics initially serviced the medical profession mainly through physician referrals and diet prescriptions (Eisenbraun, 1986; Lanz, 1983; Willick, 1981). Dietetics also developed as the predominately-male medical profession recognized that food and nutrition played a pivotal role in health and treatment of disease. In North America and Britain, dietetics had been equated as a woman's job from the outset. First, dietitians primarily took orders from physicians and were not consulted regarding their opinions on the nutritional status or care of patients. Second, dietitians' work responsibilities of cooking and distributing meals were usually associated with menial labor. Many dietitians occupied subordinate roles in the medical establishment.

Although dietitians have long striven for professional status, Eisenbraun asserts that female dominated occupations like dietetics inevitably remain in the non-, semi-, or para-professional arena regardless of the professional trappings they adopt. Sexual divisions of labor have been based on a theory of naturalism instead of on theories of social construction. As a result, dietitians' roles were viewed as extensions of domestic, nurturing, and caring family roles.



An association with nurturance and domesticity created a further division against the more intellectual pursuits such as science. Eisenbraun queries if semi-professions like dietetics and other female dominated professions can ever seek full professional status. If dietetics had developed as a male dominated occupation, how might the profession look today? She postulates that if men had been involved from the outset, dietetics may have become a medical specialty instead of being a peripheral concern of contemporary training.

### Dietitians' Self-Perceptions

Dietitians have voiced frustrations regarding their peripheral and subordinate roles within institutions. Dietitians have excelled at technical tasks and have striven to accumulate scientific knowledge that has helped them attain professional expertise, credibility, and legitimacy within the health care system. However, dietitians have been criticized for being more focused on the knowledge they possess rather than collaborating with interdisciplinary teams to determine the best course of treatment (Dalke, 2000).

A study by Schiller (1993) used the Life Styles Inventory to look at self-perception as a way to measure leadership behavior among 892 American management dietitians. Schiller felt self-perception played a key role in leadership behavior as well as job-satisfaction, performance, and productivity. The study revealed two styles that were slightly pronounced in this group of dietitians; Dependent and Self-Actualize styles. Although the Self-Actualize style (strong positive self-concept) was deemed appropriate for leadership, the Dependent style (easily influenced, good follower) was not. The dominance of the self-perceived Dependent style suggests that dietitians tend to be submissive to people of greater power and that they depend largely on working relationships established with other professional groups for their security (Schiller, 1993). Many dietitians also feel more comfortable carrying out technical tasks of their job such as assessment and care planning and have abdicated leadership roles to other health professionals on the health care team. However, when social structures do not consistently grant dietitians positions of power, autonomy, and authority it is difficult to draw conclusions that dietitians voluntarily choose peripheral positions over leadership positions.

In another study, hospital dietitians perceived their roles as important but other health professionals considered job functions of dietitians less important (Wardley & Dalton, 1993). The professional image of dietitians was compromised especially if dietitians held food service duties. Low public and physician awareness regarding the profession of dietetics also compromised dietetic image. Professional expertise and image increased as dietitians became more specialized in their field (Wardley & Dalton, 1993). Dietitians who were content specialists and who were actively involved in research activities felt they had greater professional recognition from others.

Another study revealed that dietitians felt there was a lack of respect and recognition for their knowledge and education. (Dalke et al, 2000). Participants felt this was reflected in lower salaries and limited respect from other health care professionals. One participant noted, "I think some of the doctors still look at dietitians as they were years ago, with hairnets and trays" (Dalke et al, 2000, p. 456). Dietitians have also voiced their frustration over their lack of autonomy in clinical settings because few nutrition changes can be implemented without the order of the physician. One study conducted within a teaching hospital showed only 39% of diet recommendations made by dietitians were followed up and changed by physicians; physicians

prefer to write the diet order and have the dietitian make modifications with their approval (Hagan, 2000).

Self-perceptions can affect teaching roles and responsibilities of dietitians. Dietitians are competent skilled health professionals who want to be valued and respected by others. Professionals such as physicians and researchers who have high degrees of specialized knowledge often have higher professional status and occupy central positions within institutions. Most dietitians would favor central rather than peripheral professional status. In order to accomplish central professional status, dietitians must also strive to master technical and scientific knowledge. The teaching process then becomes a matter of efficient and accurate delivery of information from skilled practitioners to clients.

However, in the quest for greater professional status and expertise will dietitians value certain kinds of knowledge over others and will they forsake establishing other types of equally valid relationships with clients? Dietitians who strive for expert status might equate provision and dissemination of information with learning and may view learners as reservoirs who must be filled with important knowledge and facts. Technical rationality, positivism, and objectivism are perpetuated while notions such as intuition, perception, and holism are deemed unreliable and unquantifiable. As dietitians become less marginalized and greater content experts, will there be a proliferation of multiple beliefs about learning, knowledge and educational aims? In this case, discussions of multiple theoretical perspectives on learning and teaching would likely assume subordinate status as efforts are drawn towards accumulating and disseminating information instead.

### Teaching Dietetics

In the 1980s, a meta-analysis of 303 nutrition education studies revealed that most nutrition educational research lacked theoretical foundations (Contento, 1985). Many studies in this meta-analysis assumed that "providing information on the assumption that the person who is exposed to this new information will attend to it, and gain new knowledge leading to changes in attitude and behavior" (Contento, 1985, p. 287). In another study, Achterberg and Clarke (1992) reviewed 346 nutrition education research papers and abstracts and found that only 80 or 23.6% of them used educational theories or teaching models. Most dietetic literature on teaching and education focuses on the dissemination and translation of scientific nutrition information not on theoretical or philosophical underpinnings (Contento, 1985, Johnson and Johnson, 1985). Gillespie and Brun (1992) argue that theory is essential for improving dietetic practice and that "professionals can improve their practice by expanding and improving their theoretical knowledge, that is, their conception of how and why things work or don't work" (p. 224). The following sections discuss the teaching roles of dietitians, dietetic teaching viewed as promotion of technical skills, and dietetic teaching viewed as challenging or probing beliefs.

#### Teaching as Technical Skills

Most dietetic literature regarding teaching investigates an optimal set of skills or techniques that dietitians should possess in order to be effective educators. Some teaching literature in nutrition has borrowed and adapted communication models which focus on inputs, intervening processes, and outcomes of teaching (Gillespie & Yarbrough, 1984). In these types of input-output communication models, dietitians manipulate variables to encourage desirable

and measurable outcomes. One dietetic researcher (Wulf, 1978) viewed teaching as a controlled systematic process and analogous to baking a cake,

If one wants to be more sure of the results, one takes preliminary steps such as: measure ingredients, preheat the oven, prepare the pans. Then comes the mixing in a sequential order, and finally the baking of the cake. The instructional process can be thought through in the same sequential manner (p. 11).

In one study, researchers implemented a nutrition counseling and teaching course in a dietetic internship. The focus of the teaching course was on the acquisition of technical skills such as dietary assessments, interview and needs assessment skills, communication techniques, negotiating strategies, and presentation methods (Vickery, 1995). Another study looked at the influence of the "Effective Patient Teaching" course on the teaching skills of dietitians (Roach et al, 1992). The authors of this study felt most dietitians spend a substantial time educating, teaching or counseling individuals but the majority of dietitians do not have formal instruction in how to teach. Roach (1992) feels that in order for dietitians to become "superb teachers and promoters of adherence" they must identify weaknesses and compare their current teaching skills with a set of established criteria (p. 1473).

Teaching skills in the "Effective Patient Teaching" 30-hour course were based on four sub-groupings: interpersonal (respect for patient), essential teaching functions (assessment and evaluation), adherence counseling (behavioral treatment plan) skills, and presentation skills (clarity and variety). Most of this course was devoted to modeling and rehearsing an optimal list of skills. The "Effective Patient Teaching" course had both an experimental group and a control group. Results for the experimental group showed that statistical differences in mean total-teaching skills existed at 1 week and 1 month but no differences existed at baseline or at 3 months. Roach offered the following description of dietitians, who had not taken the Effective Patient Teaching course,

Many of their [control group] interactions with clients might best be described as nice conversations. That is, they were genuinely interested, sincere dietitians with a large fund of knowledge that they were attempting to impart to lay people. They "told" their patients what they knew, much as they might relate a bit of news to a friend, but in general they did not use teaching helps [skills] such as clarifying the intended purpose of the session...no control group dietitian negotiated learning objectives with a patient and rarely was there a summary of a session's main points or an evaluation of what a patient had learned...these findings suggest one reason patients may not benefit from routine nutrition instruction: dietitians without training in teaching and adherence promotion skills may not be using techniques that help patients learn and use the contents of dietary instruction. (p. 1469).

This teaching course focused on acquisition of an ideal set of skills but did not encourage dietitians to discuss their own set of beliefs and values of what they deem meaningful in an educational encounter. It is unclear whether a multiplicity of educational beliefs would have been encouraged. An argument against prescriptive teaching skills was the absence of these teaching skills at the three-month period. In other words, long-term changes were unattainable. However, the study has several strengths. First, the author acknowledges the critical role that dietitians play as educators yet admits these roles and responsibilities have been inadequately addressed and developed in dietetic literature. Second, she feels educational interactions are not

merely transmittal or translation of scientific nutrition information. Third, the author stresses that teaching is not a haphazard activity but requires systematic and comprehensive investigation.

Another study investigated the development of teaching skills during the dietetic internship process. Sullivan (1990) developed a survey instrument to study American dietetic internship directors' expectations of teaching skills of dietetic interns pre, during and post-internship training. This study takes an interesting approach by seeking the perspectives of internship directors who have the power to shape the educational training of interns who will become future entry-level dietitians. Internship directors were asked to score a list of knowledge and skill competencies based on national internship education competencies.

Most of the education related competencies involved technical aspects of nutrition education such as assessment skills, communication skills, and presentation skills. The findings of this study showed internship directors believe their program graduates are adequately prepared teachers and educators in nutrition education. Most felt interns did not need further educational training except in the area of behavioral modification techniques, teaching objectives, motivational techniques, and evaluation.

The study highlights that the educational focus during dietetic training is on assessment, behavioral, and motivational skills. Education and teaching skills were equated with delivery and transmission techniques. This group of internship directors did not feel the process of teaching was lifelong but rather that the majority of teaching skills could be achieved by the time interns graduated. This study also showed that national educational competencies focus on instructional skills and behavior modification as opposed to theoretical and conceptual teaching frameworks.

Chernoff (1994) equates teaching in dietetics with methods such as lectures, workshops, and roundtables where information is transferred to clients. Browne (1992) views presentations to the general public as speeches which,

Stimulate, inform, persuade, activate and entertain...planning a speech begins with a clear focus on the central idea you want to convey. A clear and specific objective delineates what you want to persuade the audience to believe, accept, do, or decide...successful speakers constantly work on perfecting presentation skills and are thoroughly professional presenters. Rehearse the presentation until you are a credible expert and efficient in delivering your material" (p. 12 cited in Chernoff, 1992).

Browne encourages dietitians to include the audience during the educational process whenever possible. However, the main emphasis is on what dietitians have prepared in advance because, "armed with the right skills and knowledge, [dietitians] can become highly effective speakers" (Brown, 1992 cited in Chernoff, 1994, p. 12). In summary, teaching literature is limited within the general dietetic education literature. The literature that exists suggests that dietitians adopt teaching skills that maintain their roles as competent and credible nutrition experts. Although teaching skills and techniques are important, they do not represent the entire process of teaching. Teaching beliefs and philosophies greatly influence the roles, responsibilities, and actions of dietitians.

## Teaching as Challenging Beliefs and Assumptions

The following dietitians have asserted their practice beliefs and philosophies and are passionate advocates for certain thoughts and actions. Their actions are buttressed by a deep purpose or ideological stance. They are not timid in stating what they believe, why it is so, and how it influences their interactions with learners. Anderson (1998) encourages dietitians to take a more critical perspective of their roles as health professionals. The author asserts that dietetic training and continuing education are currently located within an expert model. She challenges the current dominant perceptions and roles of dietitians as experts. Anderson uses Cervero's (1998) discussion on professional paradigms, namely, functional, conflict or critical paradigm, and places herself within a critical paradigm. Within the critical paradigm, Anderson asserts that dietitians are influenced by their individual practice assumptions, philosophies, and their personal views of professionals in society. She makes a distinction between dietitians as experts and dietitians with an expert body of knowledge.

Dietitians need to seek a balance between when to put forward knowledge and expertise and when to "hold back". In this process, dietitians give up a sense of professional control in order for clients to assume more responsibility and autonomy. Anderson makes her theoretical preferences explicit; she believes in a health promotion model rooted in a critical paradigm where dietitians are partners not experts. She also encourages dietitians to "challenge practice assumptions even if it means risking the destruction of the comfortable place we come to know when we know we are 'right'" (p. 141). Finally, she encourages dietitians to critically reflect on their roles as "professionals" and challenge beliefs that underlie practice. The process of challenging personal beliefs can be disorienting but she encourages all dietitians to engage in this activity.

Dietitians should be encouraged to question their professional roles as experts in society, examine their relationships with learners, and challenge previously held practice assumptions via critical reflection (Anderson, 1998). Other dietitians may hold different practice assumptions, operate within different paradigms, or establish different relationships with learners. There is room for competing ideologies in dietetics; however, dietitians must learn the importance of challenging practice assumptions and exploring beliefs that ultimately guide their practice.

Dietitians must articulate guiding principles that shape the future of dietetics (Hauchecorne, 1996). Guiding principles are defined as a set of ideas one can live by and check against to know if one is on the right path. So far, any guiding principles within dietetics have been influenced by technical rationality (Schon, 1983) which has also influenced health, business, law, and other institutions in the past century. Within this dominant perspective, the majority of dietitians find comfort and familiarity with technical information. Hauchecorne informally assessed dietetic research topics that were published in the Canadian Journal of Dietetics from 1994-1996. Most of the published research focused on nutrient composition while research on personal approaches and beliefs of dietitians was scarce.

When clients take more control of their learning, they are less helpless, obedient, and dependent on external "experts". Hauchecorne (1996) prefers that dietetics take a learner-centered approach and focus on client benefits based on input from clients. She encourages dietitians to ask questions and challenge practice assumptions. Hauchecorne makes her practice assumptions explicit and states "we [dietitians] have been taught to accept what we are taught, consequently we might experience discomfort asking questions about the information we have

based practice on. Talking to people about issues to get their insights, reading widely, reflecting on what we read, hear and experience, and stretching beyond our comfort zones are all actions we can take to feel comfortable entertaining new ideas" (p. S-10).

Although much less common, dietitians have been encouraged to explore nutrition problems from a social critical perspective where "nutritional literacy means more than knowing technical aspects of nutrition...the teaching of nutrition should include examination of the world which generates nutrition problems" (Travers, 1997, p. 194). Travers argues for greater social critical research in nutrition education rather than behavioral approaches which dominate nutrition education research. Social critical research begins with lived experiences and attempts to explain the interconnectedness between individuals and their social environment. She feels that technical expert knowledge has a place in dietetics but it is insufficient if it is the only knowledge that is used and generated. Travers' personal assumptions and beliefs about the world influenced her actions, intentions, and ultimately interactions with learners. In her research, Travers assumed the role of facilitator rather than expert teacher as she worked with social assistance recipients within a community. Her social action research objective was to help individuals explore the social roots of their problems through critical analysis and reflection. Both Travers and research participants uncovered root social causes of nutrition problems such as inadequate welfare allowances, price inequities between inner city and suburban supermarkets, as well as public and professional stereotypes of low-income people. Travers expressed her beliefs in the following way,

For nutrition educators trained in traditional approaches, developing an emancipatory practice requires radical reorientation. Throughout the research process [educational process], I seldom offered "expert" nutritional advice. This is not to say that there is no value in technical nutrition knowledge, but that, in this particular situation, the interview process revealed that the women were already well versed on what was necessary to provide their families with a nutritionally balanced diet. In another situation, some degree of information dissemination may have been appropriate. In this situation, my role as an educator was more a facilitative one. I helped them to analyze and reflect upon their experiences in ways that allowed them to explore the social roots of their problems. They learned a great deal about nutrition but more of nutritional politics than nutritional science (1997, p. 61).

In summary, there is an implicit and sometimes explicit notion that dietitians are teachers and educators. However, the majority of dietetic literature on teaching and education lacks theoretical or conceptual frameworks. Several dietetic researchers argue that dietitians must discuss and challenge practice assumptions and beliefs in order to give meaning to their roles and responsibilities as educators and teachers. What is required is a teaching model or conceptual framework that embraces a plurality of perspectives or points of view and which offers a systematic analysis of teaching beliefs and assumptions. The five Teaching Perspectives and the general model of teaching are the conceptual frameworks used to study teaching actions, intentions, and beliefs of dietitians (Pratt, 1998).

## The Five Teaching Perspectives

Much of the research on teaching of adults reveals that teaching is a highly variable, complex, and pluralistic endeavor. However, there are more similarities within teaching than there are differences. For example, Kember (1997) reviewed thirteen studies conducted between 1983 and 1996 and discovered there were only five significantly different views of teaching in higher education. That is, although there were many different approaches, there were comparatively few substantially different ways to conceptualize teaching. Four of out of the five Teaching Perspectives are closely related to Kember's review with the exception of the Social Reform Perspective. The Social Reform Perspective was included within the five Teaching Perspectives because it represents adult educators who are involved with social change.

The five perspectives refer to beliefs and values about knowledge, learning, and teaching. The evolution of the Teaching Perspectives was based on empirical research that included interviews of 253 teachers in five countries. Teachers were asked to define and describe the process of teaching, to explain the context in which they worked, the interaction and relationship with learners, the concept of learning, and the goals of education (Pratt, 1998). The responses revealed five qualitatively different perspectives or points of view on teaching. Table 1 provides a summary of the five Educational Perspectives which are Transmission, Apprenticeship, Developmental, Nurturing, and Social Reform.

Table 1  
Teaching Perspectives Summaries

---

<b>Transmission</b>	Effective teaching starts with a substantial commitment to the content or subject matter. It is essential therefore, for teachers to have mastery over their content. The instructional process should be shaped and guided by the structure of the content. It is the instructor's primary responsibility to present the content accurately and efficiently to learners. It is the learners' responsibility to learn that content in its authorized or legitimate forms.
<b>Apprenticeship</b>	Effective teaching must have learners working on authentic tasks in real settings of application or practice. This is very difficult to do in formal classrooms. Therefore, it is the instructor's primary responsibility to provide learners with readings, projects, and assignments that approximate the real world of application of their content. To accomplish this, the instructional process is often a combination of classroom, projects, and field work with learners gradually doing more and more of the work while instructors observe them in action.
<b>Developmental</b>	Effective teaching must be "from the learner's point of view." Effective teachers understand how their learners think and reason about the content. Their goal is to help learners develop increasingly complex and sophisticated cognitive structures related to thinking about content. The key to changing those structures lies in a combination of effective questioning that challenges learners to move from relatively simple to more complex forms of thinking, and offering "bridging knowledge" which provides examples that are meaningful to learners.
<b>Nurturing</b>	Effective teaching must be respectful of the learner's self-concept and self-esteem. Effective teachers care deeply about their learners and work with them in ways that support and reward effort as much as achievement. They are committed to the whole person and not just the intellect of the learner. Anything that threatens the self-concept interferes with learning. Effective teaching therefore, should always strive for a balance between challenging people to do their best while supporting and nurturing their efforts to be successful.
<b>Social Reform</b>	Effective teaching should be directed toward social change. Both content and learners are secondary to structural changes in society. It is the instructor's primary responsibility to be clear and articulate about what changes must take place. Their teaching should reflect this clarity of purpose. Effective teachers see their teaching as an instrument of social change and are known amongst their colleagues and students as advocates for the changes they wish to bring about in society.

---

© 2000 Dan Pratt & John Collins

The five perspectives represent five conceptually different viewpoints on the teaching process. The perspectives are not hierarchically represented; no one Teaching Perspective is superior or more developed than another. The very notion of five multiple and valid perspectives implies that a "best" way of teaching does not exist. Teaching Perspectives are judged on the quality of the teaching process not the values and beliefs of the teacher. The conceptual framework behind the five unique Teaching Perspectives is comprised of a general model of



teaching that includes five elements and three relationships that subsequently reveal actions, intentions, and beliefs.

### Elements of Teaching

The five elements of Pratt's general teaching model are teacher, learners, content, context, and ideals (see Figure 1). Most teachers have some opinion regarding these teaching elements except that some might not be familiar with ideals because ideologies are often implicit and not generally articulated. Teachers are often committed to one or two elements over others which then influences how teachers plan, conduct, evaluate, and reflect.

Teachers committed to the element of "teacher" are clear in their roles and responsibilities and confident in their actions and professional expectations as teachers. Teachers who are committed to the element of "learners", center their success of teaching on the success of their learners. Examples of success for learners are greater autonomy, highly developed analytical skills, or high self-confidence. Teachers committed to the element of "content" or subject matter have clear ideas regarding what is to be taught and how it is to be learned. These teachers are inspired and driven by their subject matter and expect their learners to have the same excitement. Teachers committed to the element of "context" consider the physical and social environment to be paramount in the learning process. For example, most learners in contexts such as preceptorships and internships are expected to work, study, and learn under more experienced professionals in real work place settings. Teachers committed to the element of "ideals" are most likely to be passionate about a set of beliefs, such as equal power distributions, gender equality, or commitment to justice (Pratt, 1998).

### Relationships Among Elements

A discussion of the elements and the relationships between elements is required to clarify the teaching process. For example, a university nutrition professor prefers to create an environment where learners accumulate and accurately reproduce nutrition information. In this case, there is a connection between the elements of learner and content. This professor might provide weekly quizzes or focus on overhead transparencies so that learners commit nutrition facts and information to memory. Another nutrition professor values personal relationships with her students, in which there is a connection between the elements of teacher and learners. This professor provides extended office hours or develops friendships with students. Another nutrition professor feels teachers should be credible content expert first and foremost. In this way, there is a connection between the elements of teacher and content. This professor provides accurate, comprehensive and up-to-date information and seeks other resources if she is unsure about some aspect of the subject matter.

Most individuals who teach likely acknowledge the importance of all elements and relationships between these elements. However, most teachers have a stronger commitment or conviction to some elements over others and to some relationships over others. Teaching commitment or conviction is revealed through what a person does (actions), what a person wants to do (intentions) and how a person justifies their actions and intentions (beliefs). Commitment is key in understanding the Teaching Perspectives.

## Action, Intentions and Beliefs

Actions are probably the most readily recognized aspect of the Teaching Perspectives. It is what we see teachers do such as lecture, use overheads, engage in question and answer periods, or encourage small group activities. These are all examples of techniques that help learners engage and make meaning of the subject matter. However, no one teaching technique is indicative of any one perspective. For example, a teacher whose dominant perspective is Developmental (cultivating ways of thinking) and another teacher whose dominant perspective is Social Reform (seeking a better society) may both use lecture techniques to reach different goals. The differences between teachers' perspectives are the intentions behind their actions.

Teachers' intentions are statements about their sense of purpose. However, intentions are not the same as objectives. Objectives are often expressed as desired behavioral outcomes for the learner whereas intentions serve as indicators of the teacher's commitments. For example, teaching objectives of a dietitian who instructs a patient with a food allergy might include identification of foods containing the food allergen and an ability to read and decipher a food label. Alternatively, the dietitian's intention is to increase learner self-confidence and autonomy regarding food purchase and preparation. Objectives are described in finite, measurable terms whereas intentions are convictions that are more passionate. Intentions are windows through which values and beliefs are understood and which ultimately reveal perspectives.

Words such as "values" and "beliefs" may be considered foreign dialogue in work place settings for many educators and professionals. Some educators feel that values and belief systems have little place in the teaching process. However, discussions of teaching that include techniques but exclude values and beliefs are incomplete. A list of the following questions might help to illustrate this point. Do educators see the world and their place in it, in a certain way? Do educators inherently feel there are right ways and wrong ways to do something? Do educators feel there are some kinds of knowledge that are more legitimate or important than others? Do educators have a *raison d'être*, purpose or conviction that drives what they think and do? These questions about educational beliefs must be openly debated, discussed, and reflected because educators interact with and affect many people through the course of their professional lives. Values and beliefs about knowledge and learning should not be relegated to the "ivory towers of academia" where scholars discuss abstract theoretical notions. An understanding of beliefs is fundamental for educators of all disciplines and settings who interact with others.

Some individuals have no difficulty articulating their beliefs while others offer their views hesitantly. Some beliefs are central and influence action and thought while other beliefs play a peripheral role. Pratt (1998) states, "The measure of centrality of a belief is not necessarily a matter of logic or rationality but, more often, the extent to which the belief itself is not in question" (p. 21). The more certain the belief, the less they may be willing to compromise their core belief.

## Epistemic, Normative, and Procedural Beliefs

The five Teaching Perspectives are unique and distinct but no one action, intention, or belief belongs solely to any one perspective. For example, similar actions such as role simulation may be used within the Apprenticeship, the Nurturing Perspective or indeed in any perspective. Teachers in both the Developmental and Social Reform Perspectives want students to think critically about their environment. The ability to reproduce expert knowledge might be valued by

both Apprenticeship and Transmission teachers. Because of this overlap, many teachers will have at least one dominant perspective and one or two backup perspectives.

Misconceptions arise when Teaching Perspectives are equated with teaching techniques and actions. Some educators feel that their Teaching Perspectives change depending on the situation. For example, a teacher may feel she is more Developmental when teaching a university college class while another time she feels she is more Nurturing when acting as an academic adviser. How does one get around this confusion? Actions will likely change and will depend on different situations. For example, a professor may ask deep and critical questions in a class setting but as an advisor in an office setting, she encourages students to express their feelings. In this example, the professor's dominant perspective is Developmental but her backup perspective is Nurturing. However, regardless of the situation, her beliefs on knowledge and learning reveal that she believes that her role as a teacher is to help students develop and integrate complex concepts. Regardless of the situation, beliefs about knowledge and learning are relatively consistent.

Beliefs influence what teachers think, say, and do. The question is not whether people have beliefs but how well those beliefs have been articulated, discussed, challenged, or reaffirmed. To better understand the layers of beliefs, Pratt elaborates on three kinds of beliefs that affect all aspects of the teaching process: epistemic, normative, and procedural.

#### Epistemic beliefs: knowledge, learning and evaluation

The word epistemic is the root word of epistemology. Epistemology refers to a person's philosophy of knowledge. Each person relies on external and internal indicators to indicate when something is important, worthy to know, and held to some kind of truth. Some examples of external indicators might be teachers, mentors, or literature. Generally, external indicators are tangible and can be empirically measured. Some examples of internal indicators are life experiences, personal journeys, spirituality, and interpretations of experiences. Most people develop ways of knowing through both external and internal indicators.

It is also important to discover what knowledge is deemed truthful and important to know. An example might help illustrate this point. A nutrition professor feels it is important for her students to discuss advantages and disadvantages of research purpose, design, and outcome. She asks them to review two research articles per week and submit abstracts for marks. This professor wants her students to have confidence when they critically examine scientific literature and interpret it for the public. In this example, the professor values objective and scientific knowledge, pre-determined objective criteria, and assessments of learning such as tests and examinations. In summary, Pratt (1998) states, "In teaching, you are constantly making decisions on your personal epistemology, decisions about what to teach, how to teach it, and how to assess people's learning. In essence you are judging whether or not people have learned...no other aspect of teaching is more indicative of someone's perspective than his or her chosen (not forced) means of evaluating learning" (p.208).

### Normative beliefs: roles, responsibilities, and relationships

Normative beliefs refer to how teachers define their roles, responsibilities, and relationships with learners. Roles are influenced by their social and cultural environment and are framed within some type of historical context. There is a close connection between epistemic and normative beliefs. For example, a teacher who views her role as an expert values scientific knowledge, content mastery, accurate reproduction of learning, and relies on tests and examinations to evaluate learning. A teacher who views her role as friend and coach values personal experience, trust and rapport, expressions of feeling, and encourages learners to self-reflect during the evaluation procedure.

### Procedural beliefs: tactical knowledge and strategic beliefs

Many teachers have what is called tactical knowledge: knowledge of techniques, and procedures done on a routine basis and based on years of experience. However many of these techniques and procedures that are viewed as “automatic” are actually driven by beliefs. The ways in which teachers start an educational session or encourage or discourage group discussions indicate what knowledge they deem important to know. For example, a teacher who relies heavily on learning objectives likely has a specific agenda as to the content that will be covered and how learning will be evaluated. Tactical knowledge and action are rooted in strategic beliefs.

Strategic beliefs are categorized as either causal or legitimating and provide insight into why teachers engage with different types of tactical knowledge, namely actions and intentions. Causal belief is based on experiences where teachers know that a specific action will have a specific result. For example, a teacher may believe that learners who ask too many questions during class interrupt the flow of teaching and delivery of content. As a result, this teacher does not encourage questions and instead, focuses on a one-way dissemination of information. However, another teacher feels that asking questions is the “right thing to do” and that teaching sessions without questions would not be considered teaching. This is an example of a legitimating belief where a teacher has a strong conviction of what should be done.

In summary, behind all actions lie intentions and behind all intentions lie beliefs. Beliefs are mixtures of epistemic beliefs, normative beliefs, and procedural beliefs. Epistemic beliefs represent the kinds of knowledge that are deemed truthful and important to know, normative beliefs represent roles and responsibilities based on epistemology, and procedural beliefs represent tactical knowledge and daily routines ultimately influenced by either causal or legitimating beliefs. From this discussion, two critical notions become apparent. First, actions, intentions, and beliefs are inextricably related and second, beliefs are fundamental and influence all aspects of teaching and learning.

### Issues of Power

Issues of power occur within educational contexts, between educators and learners, and between learners and between educators. Like beliefs, issues of power infuse the teaching process and hence the Teaching Perspectives. Sometimes issues of power are explicit and discussed openly and other times they silently permeate the teaching process.

Some educators allow their role and official title to dictate their relationship with learners. These educators are likely influenced by their normative beliefs regarding roles and

responsibilities. For example, educators whose professional title is associated with authority, expertise, experience, an ability to change policy or the opportunity to liaise with other influential people in their field, might not see themselves on par with their learners. Instead, these educators prefer to be held in high esteem. Power imbalances would occur when learners are not perceived as equals.

Other educators use their expertise and complex jargon to create dependencies between their students and themselves. When teachers use complex language, they reaffirm their expertise and authority and they keep learners at a distance. For example, a patient has been told to follow special instructions for medications, activity, and diet following heart surgery. However, the health professionals involved such as physicians, nurses, and dietitians use complex language to instruct the client. Because the patient has difficulty understanding the advice and feels intimidated to ask for further clarification, he returns home confused and unsure of how to change lifestyle behaviors. When clients become confused or unsure of what to do, they feel powerless to change their circumstances.

Teachers have the power to control students' entry into practice. Students are often aware of teachers who are revered and recognized experts in their field. These teachers have the power to support students through letters of recommendation. Alternatively, it can be a formidable challenge if teachers choose not to support students' career endeavors. For example, in dietetics, many students are dependent on strong letters of academic recommendation from nutrition professors. When students lack such endorsement, students are unable to secure an internship spot and hence, are unable to practice as dietitians.

### The Five Perspectives

The Teaching Perspectives is a conceptual framework to help teachers and educators critically analyze belief structures that shape learning and teaching. The following quote further elaborates on the nature of perspectives, "they [perspectives] are a lens through which we view the world of teaching and learning, we may not be aware of a perspective because it is something we look through, rather than look at, when teaching" (Pratt, 1998, p. 31). The five Teaching Perspectives were based on empirical studies and involved 253 teachers over several years and in five countries (Pratt, 1998). An empirical study does not by itself guarantee validity to theoretical notions but it does provide evidence that more than a hunch is involved -- particularly when the framework is grounded in the lives and experiences of hundreds of people. In this case, five unique Teaching Perspectives or themes emerged from the data.

The Teaching Perspectives are one way of organizing thought within the vast expanse of teaching. In other words, the conceptual framework behind the five Teaching Perspectives helps people to make sense of the process of teaching -- particularly the beliefs and values that lie behind what they do. One reason why beliefs, ideals, and values are not often addressed within the context of everyday teaching is simply because of their complexity and "messiness". The following analogy might shed some insight.

One is asked to conduct research on vitamins. One library has 10,000 pages of information on the subject of vitamins but these pages are strewn about a room in no apparent order. The average person would not likely enter this room because the process of learning appears very daunting. In another room, these 10,000 pages are organized into 20 books; each 500-page book pertains to information on one vitamin. In the latter room, the topic of vitamins

appears to be much more manageable. Other people could enter this room, read the books, and engage in group discussions.

Similar to the analogy of 10,000 pages organized into distinct books, conceptual frameworks are tools to help digest and analyze large and complex phenomenon into smaller units. When conceptual frameworks are absent, the process of reflection and analysis is overwhelming and similar to the analogy of walking into a room with 10,000 pages strewn about. The conceptual framework for the Teaching Perspectives provides the means for a systematic inquiry into the process of teaching and helps teachers and professionals reflect on their roles, responsibilities, goals, and educational beliefs.

#### Transmission - teacher as content expert

The relationship between the elements of teacher and content is emphasized in the Transmission Perspective, hence these elements are boldface in Figure 2. This is the dominant perspective of teaching in most formal levels of schooling. Teachers of this perspective often measure success as their ability to amass content expertise, transfer information to learners, and have learners accurately reproduce this information via tests and examinations. Most people have been schooled and educated by teachers of this perspective. Many people have had negative experiences with teachers of this perspective. For example, some Transmission teachers have been boring and monotonous or authoritative with little flexibility and creativity. However, the Transmission Perspective is not entirely negative. For example, a medical scientist with a Transmission Perspective might strive for content mastery but may also be excited and fascinated by his subject matter. When teaching students, he may perceive himself as a skilled performer and may use different teaching methods and techniques to challenge and engage learners, for example, via lectures and videos. However, he never loses sight of his main intent which is to transmit comprehensive, organized, and accurate information so that students will become competent and knowledgeable professionals.

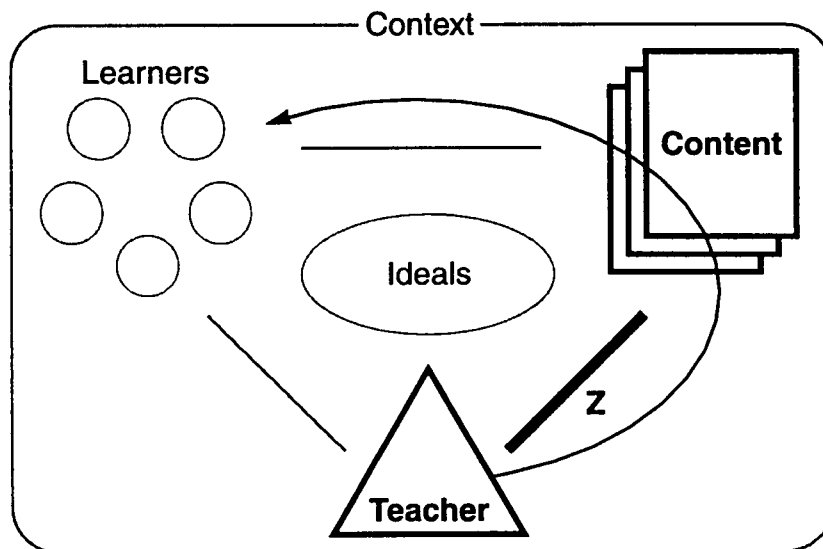


Figure 3. The Transmission Perspective

Teachers of the Transmission Perspective are content experts. In this perspective, the teacher is the central element and provides information usually in a technical, step-by step manner. Transmission teachers opt for measurable indicators of learning such as behavioral objectives or achievement of minimum based competencies. When learners fail to grasp knowledge, teachers of this perspective might assume they need to re-organize their content or they may assume learners are not motivated and have not thoroughly applied themselves.

Technical jargon is used within many fields of study; however, some Transmission teachers maintain power over learners through their use of complex language. Transmission teachers also gain power in the educational process if they evaluate students for promotion to the next level of study, entry into professional school, or the workforce. Issues of power pervade the daily interactions between Transmission teachers and learners. Ironically, these teachers are least likely to acknowledge and discuss issues surrounding power.

#### Apprenticeship - teacher as role model

The relationship between the elements of teacher, content, and context is emphasized in the Apprenticeship Perspective as indicated by the boldface elements in Figure 3. Apprenticeship teachers feel their role, subject matter, and work context are inseparable. Examples of Apprenticeship teachers are master woodworkers, executive chefs, senior machinists, or staff physicians, nurses and dietitians. Apprenticeship teachers have gained experience and expertise by working within specific contexts or communities. For example, a master woodworker would expect students to intensely observe, listen, ask questions, assist with supervision, practice with supervision, practice independently, and become professional woodworkers after many years of training. For the master woodworker, authentic training would occur in a wood making shop. Training in a lecture hall, on the Internet, or via distance education would not suffice.

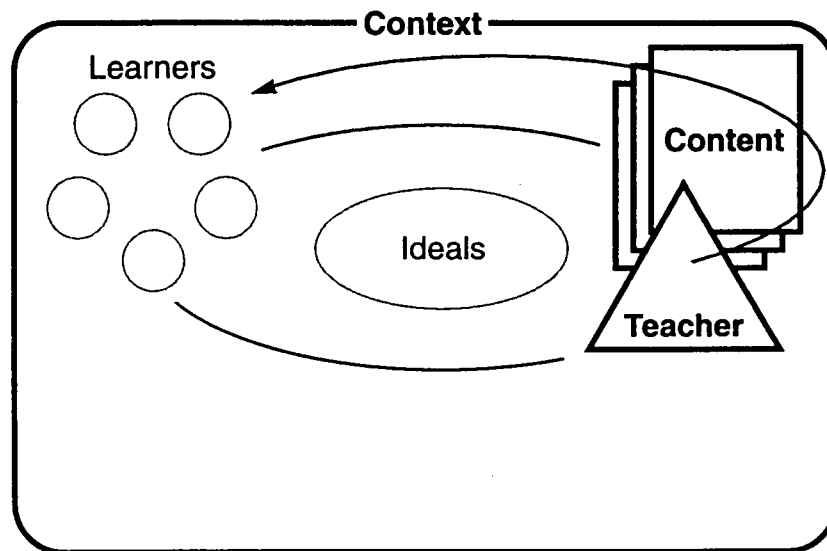


Figure 4. The Apprenticeship Perspective

Apprenticeship and Transmission teachers likely perceive themselves as content experts where students accurately reproduce knowledge. One difference between these two perspectives is that Apprenticeship teachers assume that students interact and respond to the community in which they are studying while Transmission teachers do not rely heavily on contextualized or practical experiences. Another difference is that Apprenticeship teachers tend to be models and coaches as well as content experts.

A dominant role of Apprenticeship teachers is that of expert role model. Apprenticeship teachers are more revered if they have many years of experience, important accomplishments, vast knowledge base, and demonstrated expertise. Apprenticeship teachers and students become enculturated where they are "expected to embody the knowledge and values of their community of practice [community as family, trade, vocation, profession or cultural group]" (Pratt 1998, p. 43). Not only do students learn what to do but they also learn what to be. For example, a dietetic student under supervision by a hospital staff dietitian learns about nutritional assessments and vitamin requirements in the sick as well appropriate professional behavior and language, acceptable lines of communication, and dietitians' positions within the medical hierarchy.

In the Apprenticeship Perspective, the accumulation of knowledge is linked with the development of vocational, trade, or professional roles. The greater the knowledge and experience within the context the more developed the role. For example, two dietetic interns work within the same dietetic internship. One intern has just started the program while another intern graduates in three months. The intern about to graduate has spent more time in an authentic context such as a hospital, has amassed more nutrition knowledge, has spent more time under supervision, has been involved with staff relief, and is therefore closer to assuming the role of dietitian. In contrast, the new intern has not acquired knowledge within the specific context, has not had the experience, and is therefore farther away from assuming the role of dietitian. Dietetic roles will continue to evolve and develop long after both interns graduate.

Over time and under a watchful eye of supervisors, learners move from peripheral roles to more central roles. For example, a dietetic intern who is under the supervision of a trauma-burn unit staff dietitian would simply observe at first. With time, the intern acquires confidence as she extracts pertinent information from the medical chart, visits with patients, conducts nutritional assessments, implements nutrition care plans, and evaluates patient care under the supervision of a dietitian. As the intern continues to make correct observations and assessments, she will have more responsibility and she will move from less peripheral positions to positions that are more central.

Apprenticeship teachers have the power to judge whether information has been learned correctly and whether tasks have been completed with adequate proficiency. If students have completed the tasks well, teachers will allow students to continue in their program and hence in their goal to be part of a practicing community. Alternatively, if teachers feel students' abilities are lacking, they will not allow them to advance to the next step in training, thus contributing to students' anxiety. Apprenticeship teachers are content experts who can share or withhold specialized knowledge. Specialized and expert knowledge is associated with more power. Apprenticeship teachers "hold the key" to students' futures which is a responsibility not to be taken lightly. Teaching from an Apprenticeship Perspective is not always an easy task because it is challenging to create authentic environments, know when to give more responsibility particularly within real, high-paced and complex settings, and know when to recede and allow learners to do more on their own.



### Developmental - teacher as guide

The relationship between the elements of learners and content is emphasized in the Developmental Perspective and are in boldface in Figure 4. Content is important but it is more of a means than an end. The kind of relationship learners form with the content is of critical importance. The focus is not on regurgitation of subject matter but rather how the learner develops complex ways of thinking about the subject matter. Developmental teachers want to find out why learners think the way they do, the processes involved with analysis, and cognitive thinking skills involved with problem solving.

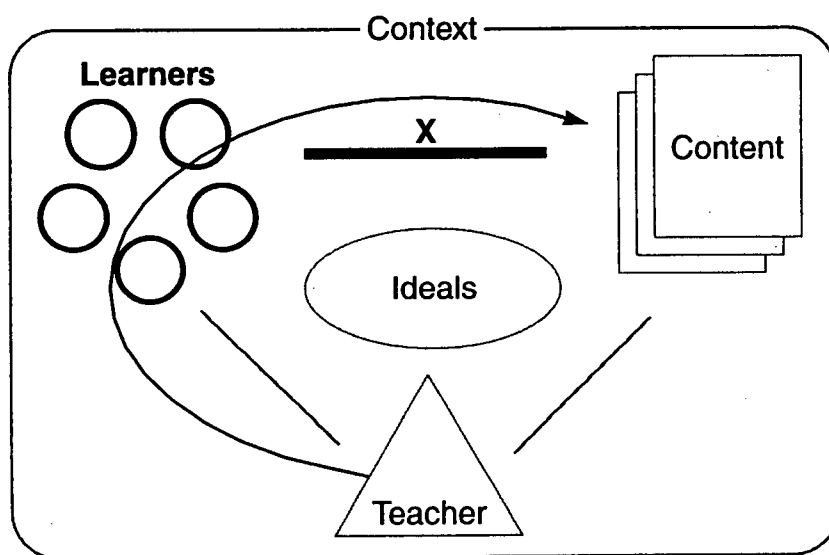


Figure 5. The Developmental Perspective

Developmental teachers acknowledge that learners' prior knowledge is critical for further learning. Family and friends, educational institutions, religion, work, literature, and the media influence the knowledge base of individuals. When learners enter new learning environments and are confronted with new knowledge, they try and find out how this new information fits into what they already know. At times, there is a fit (congruence) between past and new information, and at other times, there is conflict (dissonance). While congruence creates comfort and familiarity, dissonance can be distressing. The following example illustrates this point.

One adult learner has always believed that anyone could succeed and attain the "North American Dream" through entrepreneurship, initiative, and diligence. He knows that many books and at-home study courses advertise total financial freedom through entrepreneurship. He decides to attend a free public university seminar on global economics. The speaker was a respected university professor who operated from a Development Perspective and asked him several thought-provoking questions about power, economics, social forces, and encouraged him to integrate previous knowledge and newly acquired knowledge. After the seminar, the adult learner became aware of social, political, economic, institutional, and cultural factors that threatened beliefs he has held for so long. Even though this new knowledge created discomfort and did not fit with his previous knowledge, this adult learner was now equipped with critical

questions which would help expand his personal understanding and meaning of the world around him.

Teachers of a Developmental Perspective, like all other perspectives, have an interest and respect for their subject matter and want learners to change in some way as a result of being exposed to the content. Developmental teachers are knowledgeable and usually experts within their fields and have gained knowledge over many years of experience. The aim of Developmental teachers is to alter cognitive structures of learners so that they learn how to abstract meaning and make connections and links within the world. Developmental teachers do not want their learners to simply memorize information. They want their students to interpret how new knowledge fits in with their existing knowledge and cognitive structures. Instead of having students concentrate solely on *what* to learn, Developmental teachers are concerned with *how* students learn. Developmental teachers are not authoritarians with all the answers but are guides who help learners develop complex ways of understanding.

When teachers lay claim to all answers they are perceived to have a significant amount of power. However, in the Developmental Perspective, teachers do not possess all the power because learners' previous knowledge is also considered valid knowledge. The process of learning is not at the mercy of teachers' agendas but is based on how learners feel the teaching is progressing. When learners share their new knowledge in an open forum such as a classroom, they can feel vulnerable as well. Developmental teachers need to fully support and guide their learners as they form and share new knowledge.

#### Nurturing - teacher as facilitator and friend

The relationship between learners and teacher is emphasized in the Nurturing Perspective and are the boldface elements in Figure 5. Nurturing teachers value emotional growth and development of self-concept as well as intellectual and cognitive development. The most fundamental aspect of the Nurturing Perspective is the preservation of self-esteem and respect of learners. Unlike the Transmission and Apprenticeship Perspectives, verbal expressions of emotions, uncertainty, fears, and happiness are welcomed and encouraged.

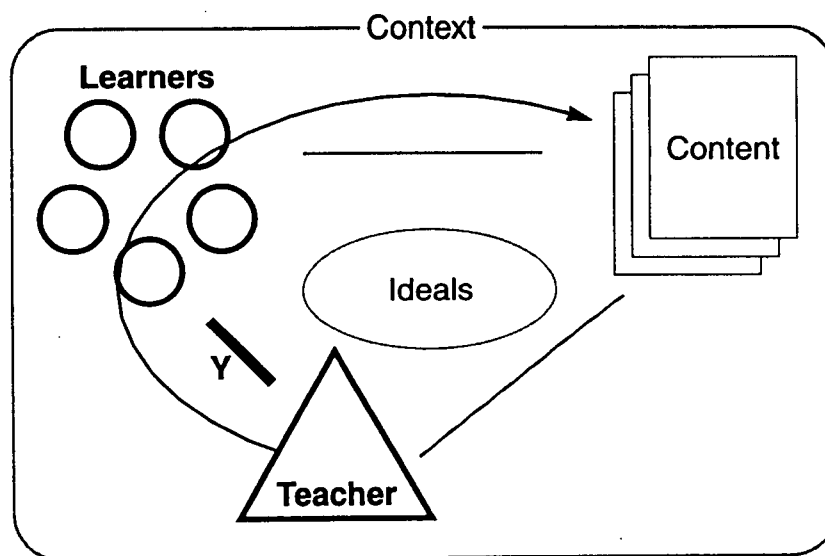


Figure 6. The Nurturing Perspective

Nurturing teachers are both facilitators and friends. Learners feel comfortable and share their knowledge in trusting environments without fear of retribution due to “incorrect” or “wrong” answers. Some adult students have been embarrassed, intimidated, and ridiculed in previous learning situations. Nurturing teachers are aware of this and work hard not to repeat these experiences. Nurturing teachers are facilitators and want learners to feel proud of personal accomplishments through their own determination, integrity, and hard work. Teachers of this perspective also want to create friendships which both support and challenge learners.

Nurturing teachers have a deep commitment to the well-being and self-esteem of their learners. Most teachers of other perspectives might feel uncomfortable with developing this kind of relationship with learners and may prefer a more distant student-teacher relationship to avoid potential conflicts of interest. Many teachers fear being accused of favoritism or abusing power that could threaten their position and job. Nurturing teachers are careful to respect learners and relationships based on trust and dignity.

Power is usually shared between Nurturing teachers and learners. Nurturing teachers do not take advantage of their expertise or the inexperience of learners. However, in reality, because Nurturing teachers have to evaluate students, it is impossible for teachers to completely abdicate their power. One myth of the Nurturing Perspective is that to care for learners is to make it easy for them by lowering evaluation standards or reducing content load. Nurturing educators are not “pushovers” and should not allow their learners to aspire to anything less than their personal best. Nurturing teachers challenge learners to work hard, design realistic learning goals, and participate in their own growth. The following hypothetical example illustrates that Nurturing teachers can both care for and challenge their learners.

An adult learner in his late 30s returned to school after being away for over 12 years. He was leery of school settings because of his past experiences. In high school, he had a poor academic record and did not get along with many of his teachers. He was suspicious of all teachers. He felt that even though teachers espoused equality in the classroom, they tended to favor students with high grades who were able to regurgitate large amounts of information. In high school, he was categorized as unmotivated and lazy because he did not perform as well as other students. A friend suggested that he enroll in a continuing education course in adult education at a local community college. For the first time, he was able to relate new knowledge with personal examples in his life and he met a teacher who did not use academic jargon or formal titles to distance from students. The teacher was supportive but also challenged him to work hard and integrate the knowledge meaningfully. Through hard work and support, this adult learner developed self-confidence, motivation, and the initiative to succeed.

### Social Reform - teacher as advocate for social change

The Social Reform educator has an explicitly held ideology and is committed to social change rather than individual learning and Pratt further states that, "From the feminist movement to fundamentalist movements, this perspective is distinctive for the presence of an explicitly stated idea or set of principles which are linked to a vision of a better society" (Pratt, 1998, p.50). Within the general model of teaching, ideals supercede all other elements within the Social Reform Perspective is the boldface element in Figure 6. Social Reform educators do not want learners to take their institutional, vocational, or professional roles and responsibilities for granted. These teachers want learners to realize that all education and construction of knowledge is subject to language as well as political, historical, economic, cultural, and social contexts.

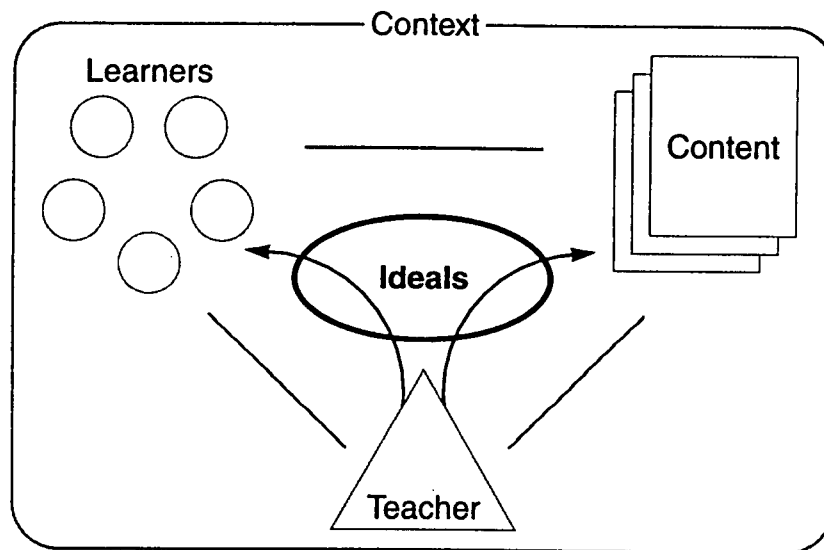


Figure 7. The Social Reform Perspective

There is no one single ideal that pervades the Social Reform Perspective. Ideals are varied and may be based on religious doctrine, may be ethical in nature such as human rights, or may be political in nature such as redistribution of power. Just as there is no single ideal, neither is there a single view of knowledge, set of techniques, or learning relationships that pervade the Social Reform Perspective. Pratt mentions that the end goals of other perspectives such as mastering content and efficient delivery in the Transmission Perspective, guiding learners from peripheral to central roles in a community of practice in the Apprenticeship Perspective, developing more complex and sophisticated ways to think about subject matter in the Developmental Perspective, and enabling learners to increase their self-confidence and self-efficacy in the Nurturing Perspective are often means by which Social Reform teachers seek their ideological goals.

Power issues occur between learners and Social Reform teachers just like issues of power occur in society. Educators are often aware of their expertise but underestimate the power accorded to them by students. Social Reform teachers need to redistribute power in the educational setting so that students can collectively change their circumstances. Social Reform

teachers view power issues as a natural result of bringing groups of people together and encourage issues of power to be addressed openly in the classrooms in order to rectify inequities.

Difficulties are encountered within this perspective. Conflict will likely arise if learners vehemently oppose a teacher's espoused ideal. For example, an adult learner attends a community course on pertinent environmental issues; however, she strongly disagrees with the political and environmental positions of the teacher. The learner feels intimidated to approach the teacher because of his extreme and radical views on environmental protectionism. Another difficulty in this perspective is that it is a challenge to measure social change within the time frame of an educational encounter. Lastly, Social Reform educators are held to the very beliefs they espouse. Students often lose trust in educators who do not live up to their beliefs both in and outside of the classroom.

In summary, all five perspectives differ in commitments to teaching, learning, roles, responsibilities, relationships, and goals of the educational encounter. In the Transmission Perspective, teachers are content specialists and often have a deep respect for the content matter that shapes the teaching process and evaluation. In the Apprenticeship Perspective, teachers want learners to learn authentic tasks in real settings as much as possible; in this perspective, content and context are often inseparable. In the Developmental Perspective, teachers value learners' prior knowledge as valid knowledge and work with students to help them develop different and complex ways of thinking about the subject matter. In the Nurturing Perspective, teachers care deeply for learners' self-concept and self-esteem and want to challenge students to do their best while offering them support and encouragement. In the Social Reform Perspective, teachers have a clear and explicit ideology for social change.

Yet, one unifying thread between all the perspectives is the notion that beliefs and values fuel every aspect of the teaching process. Teachers' actions and intentions are influenced by their roles and responsibilities, convictions, commitments and ultimately, beliefs about knowledge, learning, learning relationships, and their goals of the teaching process.

## CHAPTER 3

### METHODOLOGY

A quantitative mail-out survey design was used to investigate British Columbia dietitians' points of view regarding their roles as teachers and educators. The questionnaire also asked dietitians about their professional activities and interests that had not been previously addressed at a provincial level. The questionnaire was comprised primarily of closed-ended questions except for two open-ended questions and a section for final comments. National geographical differences were also not an issue because dietetic education and training are standardized and accredited across the country. Respondents were asked to fill out the questionnaire on their own and mail in their surveys in a pre-stamped envelope. Questionnaires were mailed out through Canada Post and in accordance with the University of British Columbia Behavioral Research Ethics Board. No personal contact was made with respondents. After respondents returned surveys, both closed and open-ended questions were analyzed using SPSS PC+, Version 5.0.

There were several advantages of using a mail survey. First, respondents could answer the questionnaires in the privacy and convenience of their home or workplace. Second, a provincial mail survey included dietitians from all work contexts throughout the province as opposed to urban hospitals and health units. Another advantage is that participants who conduct confidential mail surveys are not influenced by the expectations or biases of an interviewer or researcher.

Despite these advantages, there were certain drawbacks of using a mail survey; however, pitfalls were minimized as much as possible. First, the mail survey incurred costs related to typesetting, printing, survey development, data technician, and most of all postage. Under constraints of a budget, efforts were made to compare prices from several sources without compromising quality. Second, researchers and interviewers were not present to clarify ambiguities or misinterpretations stemming from the mail-out questionnaires. To avoid ambiguity, significant efforts were taken to produce professional questionnaires that were clear, concise, and easily understood. Such efforts included production of numerous revisions and drafts based on feedback from two sets of pilot groups such as friends, family, and colleagues as well as from advisors. Third, mail surveys can result in low response rates. To minimize low response, a general e-mail outlining the purposes and importance of respondents' feedback was sent to British Columbia dietitians before the survey was distributed. A covering letter mailed with the survey also explained the goals of the survey and the benefits of investigating the roles of dietitians as teachers. An incentive for respondents to participate in the study included individualized feedback on their own Educational Perspectives using the *Educational Perspectives Profile Sheet*.

#### Sampling strategy

The British Columbia dietetic member mailing list is updated and organized annually by the national association, Dietitians of Canada, located in Toronto. British Columbia members included registered dietitians, dietitians who are not registered, retired dietitians, and student members who were either university undergraduate students or dietetic interns. In October 1998, the researcher requested mailing list labels from Dietitians of Canada. Dietitians of Canada requested that a draft copy of the survey and covering letter be mailed to them first for review

before they released the mailing list. Dietitians of Canada provided the mailing list labels after the survey and covering letter had been approved.

All members on the British Columbia mailing list were sent a questionnaire. In this way, every member on the mailing list had an equal probability of selection into the study. The total number of members in British Columbia during 1998 was 652 (Table 2). However, 169 members declined third party mail from marketers, advertisers, survey organizations, or any other types of solicitors and were subsequently omitted from the mailing list. Members have the option to add or delete their names from the mailing list and can indicate this preference on the Dietitians of Canada membership renewal form. As a result, surveys were sent to all 483 members whose names appeared on the mailing list. Out of the 483 surveys distributed, 17 unusable surveys were returned; eleven members indicated they were retired and declined to participate, five surveys were undeliverable and returned to sender and one respondent declined to participate. As a result, the available sample was 466.

Table 2  
Sample Size and Descriptions

Sample Size	Description	Number	% of Total Frame	% of Available Respondents
<b>Frame</b>	All dietitians in British Columbia in 1998	652	100	--
<b>Not Available</b>	Dietitians who declined third-party mail	169	26	--
<b>Sample</b>	Members who received a survey	483	74	100
<b>Available Respondents</b>	Accessible sample	466	72	96
<b>Survey Respondents</b>	Members who returned a completed survey	240	37	52

Out of 466 available dietitians, 151 surveys were mailed back within three weeks. To increase response rates, 315 reminder postcards were sent 22 days after the initial surveys were sent. After the reminder postcards were sent, 89 surveys were returned within the next three weeks which represented an additional 28.3% increase in return rate (89/315). In the end, 240 or 51.5% of the total sample frame returned surveys.

However, British Columbia member mailing lists were not 100% accurate because members may have moved throughout the year, members may have failed to notify the organization of their new addresses or members may have sent in their membership renewal forms after the renewal deadline in March. Annual membership mailing lists are updated after the renewal deadline. Therefore, any membership forms that arrive late will result in less accurate mailing lists. In this study, the mailing list was requested in October 1998. As a result, the mailing list was approximately six months old at the time of the request and subject to inaccuracies.

Originally, the intention was to survey only registered dietitians. However, it was later learned that Dietitians of Canada considers registered dietitians, unregistered dietitians, students, or retired dietitians to be “members” and therefore these groups would be represented on the mailing list. As a result, a few participants of the study were students and retired members. Three students and several retired members who participated in the study were retained and were treated as “members” during data analysis.

After the surveys had been distributed, the registrar of the British Columbia Dietitians’ and Nutritionists’ Association (BCDNA) informed the researcher that the term “Registered” did not accurately reflect those on the mailing list; dietitians who lived in British Columbia but did not belong to Dietitians of Canada, students, or retired members. Therefore, it was suggested that the term “Dietitians” not “Registered Dietitians” be used when discussing or publishing results from the survey.

### Method of Data Collection

Respondents were instructed to mail their questionnaires back in a stamped addressed envelope that were in the packages. Completed questionnaires were mailed to the University of British Columbia Educational Studies Department. Questionnaires were picked up on a weekly basis for approximately six weeks until it appeared no more questionnaires had arrived. A handwritten number was placed on the back of all questionnaires to keep track of respondents who had returned the survey. Respondents were assured that these numbers were used only for statistical purposes and that their identity would be kept confidential. As surveys were returned, they were carefully tracked by comparing numerical codes on the back of questionnaires with those on the master mailing list. Those who had not responded after three weeks were sent reminder postcards.

### Potential Survey Errors

*Sampling errors* are derived from mistakes in sampling procedures where the more error introduced into the survey, the less likely it is that survey respondents are representative of the intended sample frame. *Non-response error* is an example of systematic error which includes all forms of error not directly attributable to the sampling process such as coding error and miswording or ambiguities of survey questions. Steps taken to minimize survey errors are also discussed in the following section.

### Sampling Error

Sampling error was introduced when approximately one quarter of the population of dietitians in British Columbia was automatically excluded from the mailing list. One hundred and sixty nine members withdrew their names from the membership mailing list because they chose not to receive third-party mail. As a result, these members were automatically excluded from the survey. It was not possible to determine if dietitians who voluntarily withdrew their names from the membership mailing list were different in some way from other respondents in terms of work experience, professional interests, or teaching beliefs. Dietitians of Canada would not release information regarding this group of dietitians.



## Non-Response Error

Non-response is potentially one of the most important sources of systematic error and it is likely to be one of the most problematic concerns regarding the accuracy of sample estimates (Mangione, 1995; Fowler, 1993). In this study, two categories of respondents did not provide data. First, respondents who did not receive a survey never had a chance to answer the questionnaire such as those members who opted not to receive third party mail and any members who had moved and had not updated their address; five unopened surveys were returned to the sender. Second, there were respondents asked to provide data but who refused to do so. One practicing dietitian stated that she was interested in the survey but she did not have time to complete it due to family obligations. Although 11 retired members declined to participate, most provided supportive feedback regarding research goals. Also, those dietitians who did not return a completed survey defacto rendered themselves non-respondents. Some respondents may have been under time-constraints that prevented participation, some dietitians may have forgotten about the survey, or other dietitians may not have been sufficiently interested in the topic of the study in order to complete a survey. Inevitably sources of non-response error occurred, however, steps were taken to minimize this kind of error in order to attain the greatest number of respondents.

### Strategies to Reduce Non-Response Error

Several steps were taken in order to maximize the number of individuals that completed and returned the survey. Strategies included providing a detailed covering letter which explained the goals of the research and its applicability to the profession; allowing respondents to get individual feedback via the *Educational Perspectives Inventory* Profile sheet; providing return postage; assuring confidentiality; and sending reminder cards to remind non-respondents that their feedback is valuable.

## Biased Nature of Responding Sample

Response rates may be affected by how interested the sample or group is in the survey topic. In this study, it was thought that British Columbia dietitians would have a higher interest level in issues regarding professional practice and teaching than the general population and therefore should be more likely to return the survey. There was a total response rate of 51.5% - 240 respondents returned surveys out of 466 accessible dietitians. It is difficult to determine whether these 240 respondents were different in any significant way from non-respondents.

There is a possibility that respondents are more interested in issues regarding teaching. However, there were efforts to encourage all dietitians to participate. For example, with the help of a Dietitians of Canada representative, e-mails were transmitted to all British Columbia dietitians who are members of the Dietitians of Canada electronic list-serve. Both the e-mail and the covering letter that accompanied the questionnaire stressed the importance for all dietitians to participate in the study on teaching practices regardless of where they worked or whether they were directly or indirectly involved with education. In this way, dietitians with different responsibilities in different work settings were encouraged to participate in the study because of its relevance to their own practice.

### Detailed Covering Letter

The one-page covering letter accompanying the questionnaire was professionally typeset and contained the University of British Columbia Department of Educational Studies letterhead. In order to give greater credibility to the research, it was important that respondents view the study under the direction of faculty within the Adult Education program. Each covering letter included the researcher's personal signature. Respondents might appreciate a personal signature because it shows that the researcher has an interest in each respondent and their feedback. When respondents feel their feedback is valuable, they may be more likely to return the survey. Respondents were also assured of their confidentiality of responses.

The covering letter conveyed important information about the research and the importance of feedback from respondents regardless of practice setting; dietitians were either directly or indirectly involved with education. The letter stated that information on teaching roles, beliefs, and educational assumptions of dietitians would ultimately help to enhance relationships with clients. The letter also stated that information from the study would further benefit dietitians because of the study's contribution of knowledge on teaching within dietetics. In other words, input from dietitians would ultimately help the profession of dietetics to grow and learn.

### Educational Perspectives Inventory Profile Sheet

The promise of a personalized *Educational Perspectives Inventory* Profile sheet was used as an incentive for respondents to complete and return their questionnaires. The Educational Perspectives profiles were based on their *Educational Perspective Inventory* scores. Respondents could opt to receive this information. A section at the end of the questionnaire stated "If you are interested in receiving a summary profile of your educational perspectives, please write your name and your mailing address on the enclosed mailing label and place in the return envelope along with your completed questionnaire." A white mailing label was included with each survey package. Of the 240 survey respondents who returned the completed questionnaire, 97 (40.4%) requested that an *Educational Perspective Inventory* profile sheet be mailed back to them.

### Return Postage

There is a greater possibility that response rates will be lower if respondents are expected to supply their own postage. In this study, each respondent was provided with a hand-stamped, addressed return envelope. Regular stamps were placed on each return envelope to encourage respondents to mail the survey back and to make respondents less likely to throw out and waste a pre-stamped envelope.

### Confidentiality

Respondents were reassured of their confidentiality in several places. The covering letter stated that no names or addresses were placed on the questionnaire and that respondents were not to place their names on the questionnaire. Instead, code numbers were placed on the back of the questionnaire and it was explained these numbers were used for statistical purposes only. The questionnaire also stated that all personal responses are kept confidential.

## Reminders

It was important to contact respondents more than once in order to increase response rates. Reminder postcards were sent to dietitians who had not yet sent in their survey after three weeks. The 5x6" double-sided white reminder cards with black printing were designed and printed by the same professional typesetter and printer services used for the initial survey package. Reminder postcards were sent approximately three weeks after the surveys were initially mailed out. Out of 466 available dietitians, 151 surveys were mailed back within three weeks. To increase response rate, 315 reminder postcards were sent 22 days after the initial surveys were sent. After the reminder postcards were sent, 89 further surveys were returned within the next three weeks which represents an additional 28.3% return rate (89/315). A second reminder card was not sent out to the remaining 226 dietitians primarily because of budgetary constraints such as postage costs and uncertainty of whether additional reminders would produce significant response rate improvements.

### Minimizing Other Sources of Error

The following section describes other sources of error such as processing error, recall bias, and measurement instrument bias (for example, misunderstood questions or misinterpretation of the meaning of questions). Sources of these errors and ways in which these errors were minimized are discussed below.

#### Processing - Coding Error

It was possible that either the computer data technician or the researcher, either through omission of data or incorrect keypunching, could have incorrectly entered information. The computer data technician entered 230 questionnaires and the researcher entered 10 questionnaires. However, the computer data technician had considerable previous experience in entering data into dBase. The researcher entered a small number of questionnaires so that even if a few mistakes had been made it would not have significantly affected the results. Informal audits revealed that there were minimal errors between data in questionnaires and data in the computer program.

#### Recall Bias

Some respondents may have been subject to recall bias where respondents' current memories are not correct representations of past actual events. However, the majority of survey questions were related to current issues and practices such as professional responsibilities, current work status, and teaching practices thereby minimizing recall bias. Respondents were encouraged to think about specific teaching situations while they filled out the *Educational Perspectives Inventory* so that they could answer the questions with greater accuracy. Some questions did require respondents to think about events in the past, for example, years of professional practice, first careers, international work experience and formal education. However, most respondents would not likely find these questions difficult to answer because these experiences are quite distinct.

### Measurement Instrument Error

A small number of respondents left questions blank, accidentally skipped over them, did not follow instructions, or wrote comments in the margins that could not be coded. Pilot groups helped provide valuable feedback regarding flow of questions, clarity of questions, instructions, and esthetic properties of the questionnaire. As a result, the questionnaire was clear and easy to follow. Thus, the vast majority of respondents answered most questions.

It may be difficult to determine if all respondents understood the survey questions in the same way that the researcher intended. How respondents understand the meanings of questions affects how they interpret and answer the questions. The pilot group of dietitians who completed the questionnaire during the survey development stage were instrumental in helping to decrease ambiguity and confusion related to words or phrases in the questionnaire. It was important to have consensus regarding the meanings attributed to words and phrases. Without consensus of meaning, the researcher may not be accurately measuring the constructs, thereby, invalidating the results.

### *Development of The Educational Perspectives Inventory*

The Teaching Perspectives Inventory which was renamed the Educational Perspectives Inventory for this study has evolved over time from an initial one hundred items to a 75-item, 6-point scale questionnaire to the current 45-item, 5-point scale version. In 1993, an original pool of nearly 100 items was judged for reliability and refined by a panel of trained adult educators who also tested them against Pratt's conceptual framework. These 100 items were reduced to 75 items and drafted into 6-point Likert-scale formats for response by 471 teachers of adult night school learners (Chan, 1994). In 1997, a new group of eighteen adult educators reviewed a reduced and refined set of 45 items and classified them into the appropriate perspectives with over 95% accuracy. Their review indicated that the instrument could be further shortened without loss of precision. This current streamlined version was used to assess the Educational Perspectives of dietitians in British Columbia.

The decision to use Pratt's 45-item questionnaire as opposed to Chan's 75-item questionnaire was two-fold. First, using the most recently revised inventory scale that is briefer but which still accurately measures the conceptual perspectives was advantageous because respondents may have found the length of the inventory less overwhelming or tedious. Second, it was advantageous for the researcher of this study to work closely (in-person) and seek counsel from those that had produced the most up-to-date inventory scale.

A sample of the questionnaire and covering letter were submitted to the University of British Columbia's Behavioral and Research Ethics Board to ensure that this study was in accordance with social research ethical standards. The confidentiality of respondents and their responses were maintained throughout the research study. As explained in the covering letter to respondents, completion of the questionnaire implied informed voluntary consent.

## Survey Development and Analysis

There were several stages involved with the process of survey development. Survey questions regarding work-related issues and personal, demographics and educational information were chosen and presented to a group of twelve friends and relatives who completed the survey and critiqued questions regarding ambiguity and grammatical error. The individuals were from other work backgrounds and were not dietetic professionals. These twelve individuals returned the survey within two weeks of distribution at which time the questions were then re-drafted.

After the first group critiqued the survey, it was then presented to a pilot group of five dietitians who completed the full questionnaire and provided further constructive criticism. The researcher knew all five dietitians personally and professionally. These dietitians were encouraged to provide feedback regarding clarity, logical flow, accuracy of statements related to professional duties and practices, and interpretation of concepts and ideas. In most survey literature, it is recommended that pilot groups not be part of the final survey group (Fowler, 1993). However, it would have been less convenient to use a pilot group of dietitians outside of British Columbia because of the longer amount of time it would have taken for dietitians to receive, complete, and return the questionnaire. Because the researcher was in daily contact with the pilot group, it was easier to access and receive feedback in a timely manner. Dietitians provided both positive and critical feedback through written evaluations as well as telephone contact. Feedback occurred over a period of two weeks and was assessed for how the dietitians understood questions and how they formed the answers to questions. Questions were revised where the pilot group of dietitians consistently interpreted questions differently from the researcher. There were moderate revisions made and most pertained to clarity and esthetics of the questionnaire. Over a period of a month, feedback was elicited from 12 friends and family and five colleagues for a total of 17 pilot individuals.

Ultimately, the purpose of testing the survey questions was to make sure that the terms and phrases that the researcher used had the same meaning for most respondents. If ambiguities in questions were not caught in the survey development phase, then research results could have lead to unreliability and inconsistency. Palys (1997) best sums up why it is important to do a pilot study, "There are *always* things you [survey researcher] take for granted without recognizing, and there are *always* surprises you never even considered when constructing the questionnaire. The time to catch these difficulties is *before* you commit major resources to duplicating the questionnaire" (p. 177).

Final draft copies of the questionnaire and covering letter were sent to a professional typesetter for final revisions and graphic design. Once final copies were made, the revised questionnaire and letter were sent to a professional printer where 550 copies were made of both each the questionnaire and covering letter. In total, there were three drafts of the covering letter and eleven drafts of the survey instrument before final printing. The entire survey development stage took approximately four-and-a-half months from initial draft to final draft and printing.

### Questionnaire Layout

Each questionnaire was made up of two double-sided 11" x 17" saddle-stitched sheets yielding an eight-page booklet. A covering letter accompanied the survey package but was not attached to the questionnaire. White paper (8 1/2" x 11") was used for the covering letter and black ink; font-Garamond 10 was used for printing. The questionnaire was divided into three

sections and was made up of mainly closed-ended questions with two open-ended questions and a final comments page. For close-ended questions, respondents were encouraged to check the boxes for their best answer(s). For open-ended questions, respondents were encouraged to express their thoughts and opinions in free-flow form.

For clarity and consistency, the words "education" and "educator" rather than "teaching" and "teacher" were used most often throughout the survey. The words "teaching" and "teacher" were not used as often because dietitians might have equated those words with formal classrooms and traditional academic teachers which are not representative of their practice settings. The words "educator" or "education" were thought to be better words of choice for this professional group due to their multiple work settings, varied roles, and range of different clients.

The first section contained 18 questions about work-related activities and professional characteristics. Most of the questions in this section were close-ended with the exception of two narrative type open-ended questions that asked respondents to elaborate on the most rewarding and challenging aspects of educating others. Some questions were a combination of closed and open-ended questions where respondents were asked to check a "yes" or "no" response and then asked to elaborate in a word or two. The second section contained the *Educational Perspectives Inventory*. Respondents were asked to circle their best response to 45 questions. The third section asked eight questions regarding the social-cultural background of the respondents. On the last page of the questionnaire, respondents were asked to share their final thoughts regarding their roles as educators and were asked how the questionnaire had provoked their thinking of their educational functions as dietitians. A blank copy of the questionnaire appears in Appendix 1.

#### Survey package

The survey package included an eight-page double-sided questionnaire, a one page covering letter, one 9 1/2"x4" white envelope with a postage stamp and a stamped return UBC address plus one standard white mailing label. The survey contents were placed unfolded into an 9"x12" yellow envelope which had a University of British Columbia return stamped address and a printed mailing label. The covering letter and the back page of the questionnaire provided instructions on how to return the questionnaire. Respondents were instructed to fold their completed questionnaire and insert it into a 9 1/2"x4" pre-stamped envelope along with a mailing label on which respondents printed their return address if they requested that a summary *Educational Perspectives Profile* sheet be mailed to them.

#### Data Analysis

Data were entered from the questionnaires into dBase III+. Subsequently, SPSS/PC Version 5.0 read the dBase files directly and made them available for statistical analysis. Data from closed-ended questions were analyzed using frequency tabulations and other univariate statistical procedures to summarize demographic, work, and professional characteristics. Scaled scores for the five Educational Perspectives of the *Educational Perspective Inventory* were calculated by summing the relevant question numbers for each scale. Respondents who left more than five blanks among the *Educational Perspective Inventory* responses were eliminated from analysis employing perspective scores but were retained for their work history and demographic information. Open-ended questions were initially alphabetized using SPSS and were then thematically analyzed by the researcher.

In summary, a quantitative mail survey was used to investigate the teaching beliefs and personal and professional characteristics of dietitians within British Columbia. Steps were taken to minimize total survey error and increase response rate. First, a pilot group was used to refine survey questions and thus minimize questionnaire ambiguity and confusion. Second, a covering letter accompanied each questionnaire and assured respondents of their confidentiality and explained that feedback on educational roles benefited the profession. Third, return postage was provided to encourage dietitians to complete and mail back responses. Fourth, respondents could opt to receive individual feedback regarding their Educational Perspectives. The questionnaires were distributed to 483 dietitians and yielded a response rate of 51.5% (240 dietitians). Chapter 4 discusses the results from the Educational Perspectives of Registered Dietitians Questionnaire and reveals the personal and professional characteristics as well as the Educational Perspectives and teaching beliefs of respondents.

## CHAPTER 4

### QUESTIONNAIRE RESULTS: *EDUCATIONAL PERSPECTIVES OF REGISTERED DIETITIANS*

Findings from the *Educational Perspectives of Registered Dietitians* (EPRD) questionnaire yielded results about the personal background and professional interests of dietitians and their teaching beliefs and practices. Each of the 240 respondents who returned the survey is a unique individual with different experiences, responsibilities, and beliefs. However, trends and similarities emerged from the data to show that respondents share many of the same thoughts, rewards, and challenges in their roles of dietitians and educators. The following chapter summarizes results from the EPRD. Results in Tables 3 to 14 and Tables 17 to 27 are based on feedback from 240 respondents. Educational Perspective scores were tabulated for only 230 respondents because ten respondents left more than five responses blank on the *Educational Perspectives Inventory*; these results are listed in Tables 14 and 15.

More than half of the potential and available respondents (51.5% or 240/466), returned usable survey materials; this represented 36.8% (240/652) of all dietitians in British Columbia in 1998. A response rate of over 50% is quite acceptable considering that "mail-out questionnaires more commonly result in response rates between ten to forty percent" (Palys, 1995, p. 146). However, Fowler (1993) felt there are no universal standards for a minimum acceptable survey response. Because the survey represents 36.8% of dietitians in British Columbia, no attempts will be made to claim that results represent all dietitians in British Columbia but they are illustrative of a large fraction.

#### Personal Characteristics

Respondents were asked questions that pertained to gender, age, family structure, language capabilities, formal education, international schooling, international work experiences, and previous careers. Currently, dietetic associations do not ask dietitians to reveal data that is personal in nature. It is beneficial to know about interests and characteristics of dietitians because it provides information that can be used to track trends in professional demographics, monitor professional interests and growth, and reveal potential strengths and contributions of dietitians.

#### Demographics: Gender, Age, and Family Structure

The vast majority of respondents were female (97.9%) while only a very small percentage (1.3%) was male (Table 3). These results are consistent with other published results that show dietetics is predominately a female profession (Bryk & Kornblum Soto, 1994). Currently, Dietitians of Canada does not keep statistics on gender distribution; however, the Provincial Center for Health Services Research Inventory (1995) showed that 99% of dietitians in British Columbia were female. The majority of respondents were neither young nor old as the average age of respondents was 40.5 years (SD=8.9). The Provincial Center statistics showed 70% of dietitians were 25-44 years old, compared to 68% of survey respondents who were between the ages of 25-44.

Considering that the majority of respondents were female and that many were within childbearing age, it follows that over half of respondents had children (Table 3). Respondents who had children likely had other roles such as nurturer, provider, and teacher. Respondents who



were parents may not think of themselves as teachers in a traditional sense, however, like teachers, they model, instruct, demonstrate, support, and guide their children everyday. It is difficult to determine how and to what degree parental roles and informal teaching responsibilities at home influence teaching responsibilities at work. However, it is probably fair to say that both likely interconnect and influence each other on some level. Respondents who had children may not have had superior teaching skills over those who did not have children, rather those with children held teacher roles in different capacities.

Table 3  
Gender, Age and Family Structure of Respondents

Variable	N	%
<b>Gender</b>		
Female	235	97.9
Male	3	1.3
Missing	2	0.8
Totals	240	100
<b>Age (years)</b>		
20-25	6	2.5
26-30	28	11.8
31-35	37	15.5
36-40	51	21.4
41-45	51	21.4
46-50	30	12.6
51-55	21	8.8
56-60	11	4.6
>61	3	1.3
Missing	2	0.1
Totals	240	100
Age:		
Mean	40.5	
Standard Deviation	8.9	
<b>Family Structure</b>		
Respondents with children	124	51.7
1 child living with respondent	26	22.8
2 children living with respondent	57	50.0
>2 children living with respondent	22	19.3
1 child not living with respondent	9	7.9
2 children not living with respondent	15	13.1
>2 children not living with respondent	6	5.3
Respondents Without Children	114	47.5
Missing	2	0.8
Totals	240	100

## Language Capabilities

The large majority of respondents spoke English (Table 4). Out of the 72 respondents who initially spoke another language, 29 spoke a European language while 24 spoke an Asian language. Ninety-two respondents currently spoke another language. The increase in the number of other languages spoken was mainly due to number of respondents who became fluent in French (an increase from 18 to 41). Although the vast majority of respondents currently speak English (95%), slightly over 40% are also fluent in another language. There was a small increase in the number of respondents who first learned to speak English and who those currently speak English. This small increase was probably attributed to respondents whose mother tongue was not English when they were younger but who learned to speak English over time.

It is difficult to equate languages spoken with cultural or national identities of respondents; however, languages spoken might provide some cultural information which is currently absent from the provincial membership database. Dietitians of Canada could benefit by learning more about the cultural background of its members. Dietitians of different cultures might have intimate and first hand knowledge of the challenges non-English clients face such as language barriers and religious or cultural norms. These dietitians could develop different resources such as culturally sensitive client educational materials that might be more appropriate and conducive for learning.

Another advantage of being aware of the ethnic origin or nationality of members is to give the national association an idea of how minorities are represented within the membership. If the national association kept cultural demographic information about its members just like Statistics Canada keeps demographic information on Canadians, then additional information would be available on how institutions and organizations are shaped and changed by members' cultures and nationalities. For example, the American Dietetic Association keeps statistics on the ethnic origin of its members and it reveals that over 90% of members are white while minorities are underrepresented (Byrk & Kornblum Soto, 1993). In its 1984 report the Study Commission of Dietetics noted, "While no effort has been made in the past to restrict other racial groups, or males, from the profession, little has been done to make the profession more attractive to them, nor has any strong effort been made to recruit them" (Kobel, 1997, p.256).

Table 4  
Languages Spoken Fluently by Respondents

Languages Spoken	Languages			
	Initially Spoken		Currently Speak	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
English	211	87.9	227	94.6
European: German, Greek, French, Italian, Spanish	29	12	55	22.9
Asian: Cantonese, Mandarin	20	8.4	19	7.9
Asian: Japanese	2	0.8	2	0.8
South Asian: Punjabi, Hindi	2	0.8	2	0.8
Southeast Asian: Vietnamese	0	0	0	0
Other	19	7.9	21	8.8
Totals <sup>a</sup>	283	117.8	326	135.8

<sup>a</sup> Totals exceed 100% because respondents were encouraged to identify as many categories that applied

## Formal Education

A relatively small number (21) of respondents had obtained Bachelor degrees outside of dietetics and of those who had, nine had Bachelor of Science degrees and three had Bachelor of Education degrees (Table 5). Bachelor of Science degrees included degrees in Biology, Food Science, Microbiology, Mathematics and Zoology. Although it is difficult to determine why those with previous degrees decided to enter dietetics, it does show that a small percentage of respondents have previous knowledge in areas outside of nutrition, particularly in sciences and education.

Less than one-quarter of respondents had obtained or were in the process of obtaining graduate degrees (Table 5). Of the 52 respondents who were either working toward or who had obtained graduate degrees, 20 had degrees in nutrition and general science while nine had degrees in Adult Education. It is possible that respondents who had already obtained Bachelor degrees in Dietetics and Nutrition would also be interested in furthering their expertise or knowledge directly within the field. However, it is interesting that the second most common graduate degrees were in adult education. It is difficult to determine why these respondents had chosen adult education or how they had come about their decision to pursue this degree. Perhaps word of mouth from other dietitians, undergraduate courses in Adult Education, or work-based teaching and educational experiences influenced these dietitians to pursue these degrees.

The provincial association (British Columbia Dietitians' and Nutritionists' Association) asks members to list other degrees obtained such as Bachelor and graduate degrees on membership renewal forms. However, at the time of request, a Dietitian of Canada representative stated they had not yet organized this data to produce a programmable report. In order to produce this report, it would take approximately six months and subsequently a cost would be passed down to the end user (G. Harris, personal communication, October 14, 1999). In comparison, the American Dietetic Association 1993 membership database survey revealed 51.2% of its members (compared to 21.7% in British Columbia) were either pursuing or had either completed one or more graduate degrees (Bryk, 1993). One possible explanation why more dietitians have graduate degrees in the United States than Canada is the presence of coordinated dietetic internships in the United States in which graduate degrees are completed concurrently with the dietetic internship.

A slightly greater number of respondents (58) had either obtained or were in the process of obtaining certificates or diplomas as distinct from graduate degrees (Table 5). Twenty respondents were in the process of obtaining or had completed certificates in business or management and thirteen had certificates in clinical nutrition. Dietitians who occupy manager, supervisor, or director roles have more opportunities to attend courses in business management. Clinical dietitians have opportunities to obtain certificates in their areas of clinical specialty such as diabetes or pediatric nutrition. Most clinical certificates were in diabetes education, breastfeeding, nutrition support, and dysphagia. Education certificates included adult education, health education, and instructional teaching. Other certificate categories included dental care, English as a second language, and social work.

Table 5  
Types of Degrees, Certificates, or Diplomas In-pursuit of or Completed

Variables	N	%
<b>Undergraduate Degrees</b>		
Bachelor degree-outside of dietetics	21	8.8
No Bachelor degree-outside of dietetics	215	89.6
Missing	4	1.7
Totals	240	100
<u>Types of Bachelor degrees</u>		
Bachelor of Science	9	42.9
Bachelor of Arts	2	9.5
Home Economics	2	9.5
Bachelor of Commerce	2	9.5
Bachelor of Physical Education	1	4.8
Unspecified	2	9.5
<b>Graduate Degrees (in-progress or completed)</b>		
In-progress	17	7.1
Completed	35	14.6
No graduate degrees	185	77.1
Missing	3	1.3
Totals	240	100
<u>Types of Graduate Degrees</u>		
Masters of Science – nutrition	18	34.6
Masters of Science – science	2	3.8
Masters of Adult Education	9	17.3
Masters in Business Administration	6	11.5
Ph.D.	4	7.7
Masters of Arts	2	3.8
Masters of Public Administration	2	3.8
Masters of Public Health	1	1.9
Unspecified	7	15.4
<b>Certifications or Diplomas (in-progress or completed)</b>		
In-progress	16	6.7
Completed	42	17.5
No Certificates or diplomas	177	73.8
Missing	5	2.1
Totals	240	100
<u>Type of Certificates or Diplomas</u>		
Management & administration	20	34.5
Clinical Nutrition	13	22.4
Education	3	5.2
Food Service	3	5.2
Communication & counseling	3	5.2
Unspecified	11	20.0
Other	5	8.6

## International Education

Fifty respondents had received some schooling outside of Canada (Table 6). Out of these 50 respondents, 17 had been schooled in the United States, 12 in Europe, 7 in Hong Kong and the remainder had been schooled in various institutions throughout the world. Although respondents attended school in different countries, the majority was taught in English. What this data shows is that less than one-quarter of respondents had attended school in a country outside of Canada. Just as it would be beneficial to know the cultural attributes of members, it would also be beneficial to know the number of respondents who have had different exposures to international educational approaches throughout their lives.

Table 6  
Respondents Who Have Attended School Outside of Canada

Variable	N	%
<b>Attended school outside of Canada</b>		
Yes	50	20.8
No	186	77.5
Missing	4	1.7
Totals	240	100
<b>Countries of study outside of Canada</b>		
USA	17	34.0
Europe	12	24.0
Hong Kong	7	14.0
Africa	2	4.0
Malaysia	2	4.0
Central America	1	2.0
Jordan	1	2.0
Philippines	1	2.0
Saudi Arabia	1	2.0
Missing	6	12.0
Totals	50	100
<b>Language of instruction outside of Canada</b>		
English	28	56.0
Chinese	8	16.0
French	2	4.0
German	2	4.0
Malaysian	2	4.0
Arabic	1	2.0
Dutch	1	2.0
Spanish	1	2.0
Swedish	1	2.0
Did Not Specify	4	8.0
Totals	50	100

Table 6 continued

Variable	N	%
<b>Level of schooling abroad</b>		
Elementary	25	50
High school	14	28
College & university	10	20
Did Not Specify	1	2
Totals	50	100
<b>Length of schooling abroad (years)</b>		
0-2	14	28
2-4	10	20
>5	13	26
Did Not Specify	13	26
Totals	50	100

#### International Work Experience in Dietetics

A relatively small number of respondents had worked as dietitians outside of Canada (Table 7). Of the 23 respondents who had international dietetic work experience, 11 worked in Europe, eight worked in the United States and the remainder worked throughout the world. The majority of work responsibilities included clinical dietetics and teaching (Table 7). It is beneficial to know about the work experiences of members particularly if they include working with different cultures, using different educational approaches, or having different work responsibilities. Members with international work experience could share their thoughts about dietetics from an international perspective and provide insight into their roles as dietitians and educators. Information on members' international dietetic work experience is helpful particularly as North American dietetic associations form alliances with other dietetic associations throughout the world.

Table 7  
International Work Experience in Dietetics

Variable	N	%
<b>International Work Experience in Dietetics</b>		
Yes	23	9.6
No	215	89.6
Missing	2	0.8
Totals	240	100
<b>Professionally employed in the following countries</b>		
Europe	11	47.8
USA	8	34.8
Africa	2	8.7
Australia & New Zealand	2	8.7
Hong Kong	1	4.4
Israel	1	4.4
Martinique	1	4.4
Saudi Arabia	1	4.4
Totals <sup>a</sup>	27	118
<b>Primary dietetic work responsibilities abroad</b>		
Clinical dietetics	15	65.2
Teacher & Instructor	6	26.1
Food Services & Admin.	4	17.4
Public Health	1	4.4
Research	1	4.4
Totals	27	118

<sup>a</sup> Totals exceed 100% because respondents were encouraged to identify as many categories that applied

#### Previous Careers Prior to Dietetics

Eight-five respondents chose dietetics as their first career while 13% of respondents had previous careers other than dietetics (Table 8). Respondents' previous careers were different and varied and ranged from farmer to fish health biologist. The only notable trend in respondents' previous occupations was that six respondents were teachers in some capacity. From this data it appears that most respondents graduate from high school and at some future point, enter university dietetic programs. For many respondents, dietetics is the first and only occupation that they will have been exposed to. Respondents who have previous careers also have different knowledge bases and work experiences to draw and perhaps different domains of inquiry and interpretations. For example, although debate exists on the professionalization of Adult Education, it is well known that faculties of Adult Education attract people from many educational backgrounds and occupations. Disciplines, fields of study, or professions with members of different occupational backgrounds and training often produce varied educational or professional aims. In this way, plurality of thought is acknowledged and debated.

Table 8  
Careers Prior to Dietetics

Variables	N	%
<b>Dietetics as first career choice</b>		
Yes	204	85.0
No	32	13.3
Missing	4	1.7
Total	240	100
<b>Types of careers before dietetics</b>		
Teacher	6	18.8
Secretary or reception or clerk	3	9.4
Chef or cook	2	6.3
Dental field	2	6.3
Food Technologist	2	6.3
Private industry	2	6.3
Social worker	2	6.3
Aircraft dispatcher	1	3.1
Banking	1	3.1
Crisis counselor	1	3.1
Driver examiner	1	3.1
Farmer	1	3.1
First-aid attendant	1	3.1
Fish health biologist	1	3.1
Non-health	1	3.1
Nursing	1	3.1
Sales	1	3.1
Special education	1	3.1
Sports & recreation	1	3.1
Unskilled jobs	1	3.1
Totals	32	100



## Professional Characteristics

Respondents have practiced dietetics for an *average* of 13.5 years ( $SD=8$ ); most respondents have at least five or more years of dietetic related practice and up to 22 years on which to draw from experience. However, some respondents have worked as little as two months while others have worked up to 43 years. Respondents have been in their current job position for an *average* of 6.1 years ( $SD= 5.2$ ). However, some dietitians have been in their current positions for as little as two months while other respondents have been in their current positions for up to 26 years.

### Professional Employment Characteristics

Less than half of respondents worked full-time (47.1%), and another one-third (31.3%) worked part-time (Table 9). Demographics from the British Columbia Provincial Center for Health Services (1995) showed similar statistical trends where 53% of dietitians were employed full-time and 32% worked part-time. In order to increase visibility, expand skills, and influence policy, dietetic literature encourages dietitians to explore non-traditional dietetic roles such as marketing, business, government, research, and private practice (Parks, 1994). A small percentage of respondents assumed these non-traditional roles; however, the majority of respondents worked within clinical and health care settings (Table 9). Other work contexts included professional association, non-profit health organization, and school districts.

Respondents were asked to indicate all the types of people they primarily interact with at work. Respondents indicated that out of ten types of individuals, they interacted with an average of 3.38 ( $SD=2.15$ ) types or groups of individuals, for example, clients, community groups, or students. The majority of respondents interact primarily with patients and clients, followed by other staff, administration, and colleagues. The fact that the many respondents interact with patients should not be surprising because many dietitians work within health care settings. Respondents do not tend to work in isolation but rather interact with a wide variety of people.

Table 9  
Professional Employment Characteristics

Variable	<u>N</u>	<u>%</u>
<b>Employment status</b>		
Full-time	113	47.1
Part-time	75	31.3
Self-employed	22	9.2
On-call	10	4.2
Unemployed	6	2.5
Other	11	4.6
Missing	3	1.3
Totals	240	100
<b>Primary work context</b>		
Hospital based	128	53.3
Long term care	31	13.0
Community health	30	12.5
Private practice	8	3.3
College & university	5	2.1
Private industry	4	1.6
Government	3	1.3
Other	27	11.3
Missing	4	1.7
Totals	240	100
<b>Number of groups that respondents interact with</b>		
Patients & clients	131	91.3
General staff	120	50.0
Management & administration	99	41.3
Dietitian colleagues	95	39.6
Other professional groups	87	36.3
General public	71	29.6
Community groups	51	21.3
Interns & students	48	20.0
Other	21	8.8
Totals <sup>a</sup>	723	530

<sup>a</sup> Totals exceed 100% because respondents were encouraged to identify as many categories that applied

### Work Responsibilities

Respondents were asked to rank how often they were involved with different work responsibilities by indicating "Not at All", "Somewhat" or "A lot" on the questionnaire. Table 10 lists the percentage of respondents that indicated they were involved "A lot" with different responsibilities at work. Results show that more than one-third of respondents felt that teaching was an important work responsibility. Nutrition counseling was ranked as the first work responsibility; however, it can be argued that some elements of nutrition counseling involve

teaching. If this is the case then over 85% of respondents were involved in teaching and teaching related responsibilities. This result shows that respondents have important teaching responsibilities at work in which information is shared between dietitians and learners. Other work responsibilities included nutrition care planning, committee work, and developing educational resources and programs

Some respondents may not describe themselves as teachers but teaching and education was a job function of many respondents. Respondents were asked to estimate the time spent educating others at work. Almost one-half (45.6%) of respondents stated that they were directly involved with teaching at work. Most respondents who felt they did not have a large teaching responsibility often held administrative or management positions. In another study that monitored educational activities, dietitians spent 61.6% of their work time involved with education-related tasks (Heiss, 1991). It appears respondents of this study are indeed teachers and educators of nutrition and have teaching responsibilities that occupy almost half of their work time.

Table 10  
Distribution of Work Responsibilities

Work responsibilities	% "A lot"	% "Somewhat"	% "Not at all"	Mean
Nutrition counseling	48.3	34.2	13.3	2.31
Teaching	37.1	50.0	5.4	2.24
Administration	25.0	43.3	24.2	1.93
Community interaction	15.8	52.9	22.5	1.85
Policy development	10.8	50.0	30.8	1.72
Public & media relations	8.3	32.9	49.6	1.50
Marketing	5.8	25.8	55.8	1.37
Research	3.8	33.8	51.7	1.41
Sales & advertising	3.3	9.6	72.9	1.16
Other	4.2	1.3	0.8	2.53
Totals <sup>a</sup>	162	334	327	

<sup>a</sup> Totals exceed 100% because respondents were encouraged to identify as many categories that applied

### Features of Dietetics that Respondents Were Attracted To

Respondents were asked to indicate what attracted them to the profession of dietetics, that is, what aspects of the profession they valued most. Respondents could choose from as many aspects they felt were important to them when they first entered dietetics. On average, respondents chose almost 5 (4.85 with a SD=2.66) valued aspects. Some individuals chose as few as two aspects while others chose as many as eight valued aspects. Table 11 shows that a large majority of dietitians said they were attracted to dietetics because of their interests in nutrition and health. It is not a surprise to find that many respondents were attracted to nutrition and health when they chose dietetics as a profession. Nutrition has a direct relationship to health because people can change how they feel, their physiology, and their health status by changing how they eat. It is more likely that respondents are concerned with the impact of nutrition in their own life just as they are interested with the health of other people. As a result, this personal interest in nutrition and health has probably been extended to an interest in pursuing a career in

dietetics. The majority of respondents also expressed a desire to help people. There is a logical relationship between the notions of health and helping others for many health professionals. Through an accumulation of knowledge and skills, dietitians have the opportunity to help individuals attain a higher quality of life.

Approximately one-third of respondents stated that the ability to get a job within dietetics, professional growth, and professional designation were equally as important as issues such as education and teaching opportunities. Respondents value the benefits of professionalism and its rewards such as societal recognition of professional status. However, one-third of respondents are also concerned with the practicalities of work such as the ability to be gainfully employed and the ability to expand and update their skills within the profession. Less than one-quarter of respondents valued employment stability and financial remuneration that accompanies dietetics. It appears that career stability and salaries were not the primary reasons respondents entered dietetics. Although dietetics is not a high paying or lucrative profession like medicine or law, respondents were attracted to the profession for other reasons.

Table 11  
Features of Dietetics that Respondents Were Attracted To

Valued Aspects in Choosing Dietetics as a Career	N	%
Relationship of nutrition to health	212	88.3
Help others	144	60.0
Work with health care team	100	41.7
Diverse work environment	89	37.1
Employability	87	36.3
Education or teaching opportunity	82	34.2
Professional growth	82	34.2
Professional designation or identity	81	33.8
Community involvement	64	26.7
Employment stability	57	23.8
Financially rewarding	45	18.8
Management & administration	29	12.1
Entrepreneurial opportunity	26	10.8
Research opportunity	20	8.3
Other	16	6.7
Totals <sup>a</sup>	1134	473

<sup>a</sup> Totals exceed 100% because respondents were encouraged to identify as many categories that applied

### Professional Interests

Respondents were asked to indicate their interests when they first entered dietetics and their current interests in dietetics (Table 12). Respondents indicated an average of four such (SD=1.97) initial interests out of a list of fifteen interests. They also showed an average of 5.38 current interests (SD=2.52) out of 15 current interests. The mean paired difference between initial and current interests is 1.83 (SD=2.21) and the difference was statistically significant (t-value=9.7, p<.01). This shows that on average, respondents' interests in dietetics increased by about 35% over time. Although this represents a modest increase, it demonstrates that respondents are becoming more interested in dietetic issues over time.

When respondents initially entered the profession, they were most interested in nutrition counseling and behavior change, health promotion, nutritional sciences, and teaching. Respondents' top initial interests indicate their attraction to the subject matter of nutrition as well as the benefits of helping clients incorporate healthy nutrition practices. These results are similar to results of Table 11 that indicated over 88% of respondents had been attracted to the profession of dietetics because of the relationship of nutrition to health. Not only were health promotion and teaching top initial interests but they also increased over time; there was a 49% increase in interest in teaching and a 24.7% increase in interest in health promotion.

Over time, respondents expressed the greatest interest in research (an increase of 201%), followed by food production and procurement (117%), cultural food habits (113%), management of people and resources (112%), entrepreneurial activities (95%), development of educational materials (92%), nutrition related societal problems (86%), teaching (49%), health promotion (25%) and international nutrition issues (8%).

Over time, respondents became more interested in research (an increase of 201%). Because the questionnaire did not ask respondents directly about their research interests it is difficult to determine what kind of research respondents would have been interested in and in what capacity they would be involved. One possible reason for the increase would be that as respondents gain work experience they also gain confidence in their skills as practitioners. As respondents gain confidence and expand their knowledge base, they begin to ask questions regarding their practice which increases their expertise and contributes to a community and body of knowledge.

Respondents' interest in cultural food habits increased 113% over time from 19.6% to 41.7%. Almost all respondents would have at one time or another interacted with and educated people of different cultures, languages, and nationalities. As most dietitians gain experience, they often realize how important and integral culture is to food choices of their clients. They learn that clients from different cultural and ethnic backgrounds might learn differently and might have different concepts of healthy lifestyles or appropriate food choices. Health professionals such as dietitians sometimes feel overwhelmed and frustrated when they are unable to help their clients attain optimal health status particularly when there are major language and cultural barriers. This may be a reason why respondents want to learn more about cultural food habits of their clients.

Table 17 shows that not many respondents were initially interested in issues dealing with management, food production, and private practice, however over time their interests in the topics increased. Some respondents may have worked for many years as clinicians and were then given opportunities to move into supervisory or management positions with food procurement responsibilities. For these dietitians, business and management responsibilities and interests would have come with more work experience. Many, although not all, dietitians enter private practice once they have attained institutional experience and some expertise in an area of nutrition. At this point, some respondents would have gained enough confidence in nutrition knowledge and skill to work on their own.

Respondents' interests in nutrition-related societal problems increased 86% over time. Ever since the profession of dietetics formed, dietitians have had an interest in the social and nutrition well-being and health of communities. One possible increase in the interest of nutrition-

related societal problems is that as respondents gained experience and matured professionally, they realized that health and nutrition is influenced by social structures and forces. Societal issues such as food availability, equity and safety, and health care budgets also affect the health of communities.

Four aspects or issues that respondents were not generally interested in over time were nutrition counseling and behavior change, involvement in dietetic associations, culinary interests and nutritional sciences. Out of these four, respondents were least interested in nutritional sciences. This may represent a general shift away from core basic sciences emphasized in universities and internships to a more practical application of health sciences and health promotion in the daily lives of individuals.

Table 12  
Initial Versus Current Professional Interests in Dietetics

Variable	Initial interests		Current interests		Change over time
	N	%	N	%	%
Nutrition counseling and behavior change	151	62.9	148	61.7	-1.9
Health promotion	142	59.2	177	73.8	+24.7
Nutritional sciences	110	45.8	62	25.8	- 43.7
Teaching	98	40.8	146	60.8	+49.0
Food & culinary interests	92	38.3	79	32.9	-14.1
Development of educational materials	59	24.6	113	47.1	+91.5
Nutrition related societal problems	51	21.3	95	39.6	+85.9
Cultural food habits	47	19.6	100	41.7	+113.0
Involvement in local or national associations	45	18.8	40	16.7	-11.2
Management of people & resources	39	16.3	83	34.6	+112.3
Private practice or entrepreneurial activities	37	15.4	72	30.0	+94.8
International nutrition issues	37	15.4	40	16.7	+8.4
Research	25	10.4	75	31.3	+201.0
Food procurement & production	23	9.6	50	20.8	+116.7
Other	4	1.7	12	5.0	+194.0
Totals <sup>a</sup>	960	400	1292	539	

<sup>a</sup> Totals exceed 100% because respondents were encouraged to identify as many categories that applied

### Activities Which Influenced the Teaching Practices of Dietitians

Respondents were asked to rank to what extent activities such as workshops, books, or courses influenced how they educated others by indicating "Not at All", "Somewhat", or "A lot" (Table 13). More than half the respondents indicated that workshops and seminars influenced how they taught others. It is unclear whether workshops and seminars directly pertained to topics of education, whether they were based on clinical topics that influenced how information was provided to clients, or whether personal contact with other colleagues and professionals at workshops influenced educational practice. It appears that personal contact and networking in a group setting like workshops is "somewhat" influential on the teaching practices of dietitians.

Books, articles, and self-directed learning projects influenced approximately one-third of respondents' educational approaches -- particularly for those who read and reflected on their own. Less than one-third of respondents were influenced by university coursework -- possibly because many were trained years ago and may have forgotten information on educational approaches or because university courses were not sufficient or comprehensive enough to influence the teaching practices of dietitians. The "other" category offers some interesting feedback on what has influenced the teaching practices of respondents. Some stated that work and practical "hands-on" experience plus other life experiences were influential. Others stated that colleagues and other professionals, dietetic internship, graduate education, beliefs, mentor relationships, working with teachers, counseling and communication courses, and formal teaching role also impacted how they taught others. Dietetic internships were not listed as a category, however, had it been listed it might have revealed to what extent internships and pre-professional training shaped the educational practices of future dietitians.

Table 13  
Activities Which Influenced the Teaching Practices of Dietitians

Variable	% "A lot"	% "Somewhat"	% "Not at all"	Mean
Workshops & seminars	53.8	41.7	4.6	2.54
Books & articles	35.8	56.3	7.9	2.32
Self-directed learning	32.9	43.3	23.8	2.20
University coursework	29.6	47.9	22.5	2.14
In-service program	17.1	41.7	41.3	1.90
Certification & diplomas	14.6	25.4	60.0	1.70
Other	18.3	2.1	1.3	2.79
Totals <sup>a</sup>	202	258	161	

<sup>a</sup> Totals exceed 100% because respondents were encouraged to identify as many categories that applied

### People Who Have Influenced Teaching Practices of Dietitians

Respondents were asked whether any individuals have significantly influenced the way they educate others. Respondents could choose from eight types of individuals that they felt were influential, for example, authors, colleagues, or family members. On average, respondents indicated 1.21 choices ( $SD=1.36$ ); other individuals had no influence on respondents' teaching practices while at least two or more other people influenced respondents' teaching practices. Sixty percent of respondents, or almost two out of three respondents, indicated that their teaching and educational practices were influenced by someone (Table 14). Of the 144 respondents who had been influenced, most (84) claim to have been influenced by a colleague, followed primarily by teachers of education and dietetics, and to a smaller degree, authors, family, and friends.

Dietitians who were colleagues, authors, and teachers (to a lesser degree) seemed to influence the teaching practices of other dietitians. This information is particularly valuable because it shows that thoughts, beliefs, and practices of dietitians influence each other. Teachers of education were the most influential teachers on the educational practices of respondents. Family, friends, religious leaders, and philosophers influenced the teaching practices of 72 respondents which showed that personal relationships, spirituality, and philosophy played a role in the professional lives of respondents. The "other" category included other health professionals, clients and patients, past experience, learning and motivation theory, mentor and boss, internship (negative influence), adult education, meditation, Masters degree research, students and self-directed learning.



Table 14  
Individuals Who Have Influenced Teaching Practices of Dietitians

Variable	N	%
<b>Significantly influenced by someone</b>		
Yes	144	60.0
No	90	37.5
Missing	6	2.5
Totals	240	100
<b>Influential person</b>		
Colleague	84	35.0
Teacher	54	22.5
Author	38	15.8
Family	31	12.9
Friend	21	8.8
Religious leader	15	6.3
Philosopher	5	2.1
Other	42	17.5
Totals <sup>a</sup>	290	121
<b>Type of influential teacher</b>		
Education	14	31.8
Dietetics	13	29.5
Other university professor	11	25.0
Other	6	13.6
Totals	44	100
<b>Type of influential author</b>		
Dietitians	10	35.7
Physicians or health professional	6	21.4
Motivation change theorist	6	21.4
Adult education author	4	14.3
Inspirational or motivational	2	7.1
Totals	28	100
<b>Influential family member</b>		
Spouse or partner	10	35.7
Mother	5	17.9
Parents	5	17.9
Father	4	14.3
Sibling or in-law or aunt	3	10.7
Children	1	3.6
Totals	28	103

<sup>a</sup> Totals exceed 100% because respondents were encouraged to identify as many categories that applied

## Educational Perspectives

The *Educational Perspectives Inventory* followed the format of the *Teaching Perspectives Inventory* previously developed by Pratt & Collins (1998). The difference between the two inventories was that the *Educational Perspectives Inventory* contained the words "education", "educating", and "nutrition" as opposed to "teach", "teaching", and "subject matter". The word "nutrition" replaced "subject matter" four times throughout the inventory. Different words were used so that respondents could better situate themselves in their own nutrition-related practice settings as they answered the questions. However, efforts were taken to assure the meaning of the questions were kept intact, that is, the questions still measured what they intended to measure.

The *Educational Perspectives Inventory* was comprised of three sections. The first section pertained to educational actions and asked dietitians what they do and say during the educational process. The second section pertained to educational intentions, and asked dietitians what they intend to accomplish during the educational process. The third section pertained to educational beliefs and asked dietitians what they believe about education and teaching. Each section contained 15 statements for a total of 45 statements in the inventory. Respondents were asked to indicate the response that best represented their thoughts and feelings. Each response was chosen from a five-item scale ranging from almost never to almost always or from strongly disagree to strongly agree.

The highest possible score on each of the five perspectives was 45 while the lowest possible score was 9. Table 15 shows the Educational Perspectives scores for dietitians and the scores for groups of 414 other professional educators, namely, college and university instructors and professors, civil service trainers, fitness instructors, lawyers, nurses, occupational counselors, pharmacists, and physicians. Dietitians' scores closely parallel scores of the groups of other professionals. Educational Perspective scores for dietitians were slightly lower for all perspectives except the Transmission Perspective. All differences among the dietitians' scores and the other groups' scores were statistically significant except for the Apprenticeship Perspective. Social Reform scores were the lowest Educational Perspective scores for both groups.

Dietitians in this study were a relatively homogenous group in terms of education, gender, training, and professional experiences. Although dietitians have important teacher and educator roles, most would not view their primary role as teachers but would see themselves as clinicians, health professionals, and managers. Collectively, other professional educators were more heterogeneous in their education, training, experiences, and knowledge base. The small differences in scores were statistically significant with the exception of the Apprenticeship Perspective. Although the difference in Apprenticeship Perspective scores between the two groups were not significant, they were the highest perspective score for both groups. Higher Apprenticeship scores could possibly be due to the amount of training and preceptorship programs that are often present for professional careers, such as nutrition, law, nursing, and medicine.

Dietitians were less of the Nurturing and Developmental Perspective than the groups of other professionals. When comparing scores, it appears that dietitians had lower Nurturing scores than the groups of other professionals. Dietitians also had lower Developmental scores which

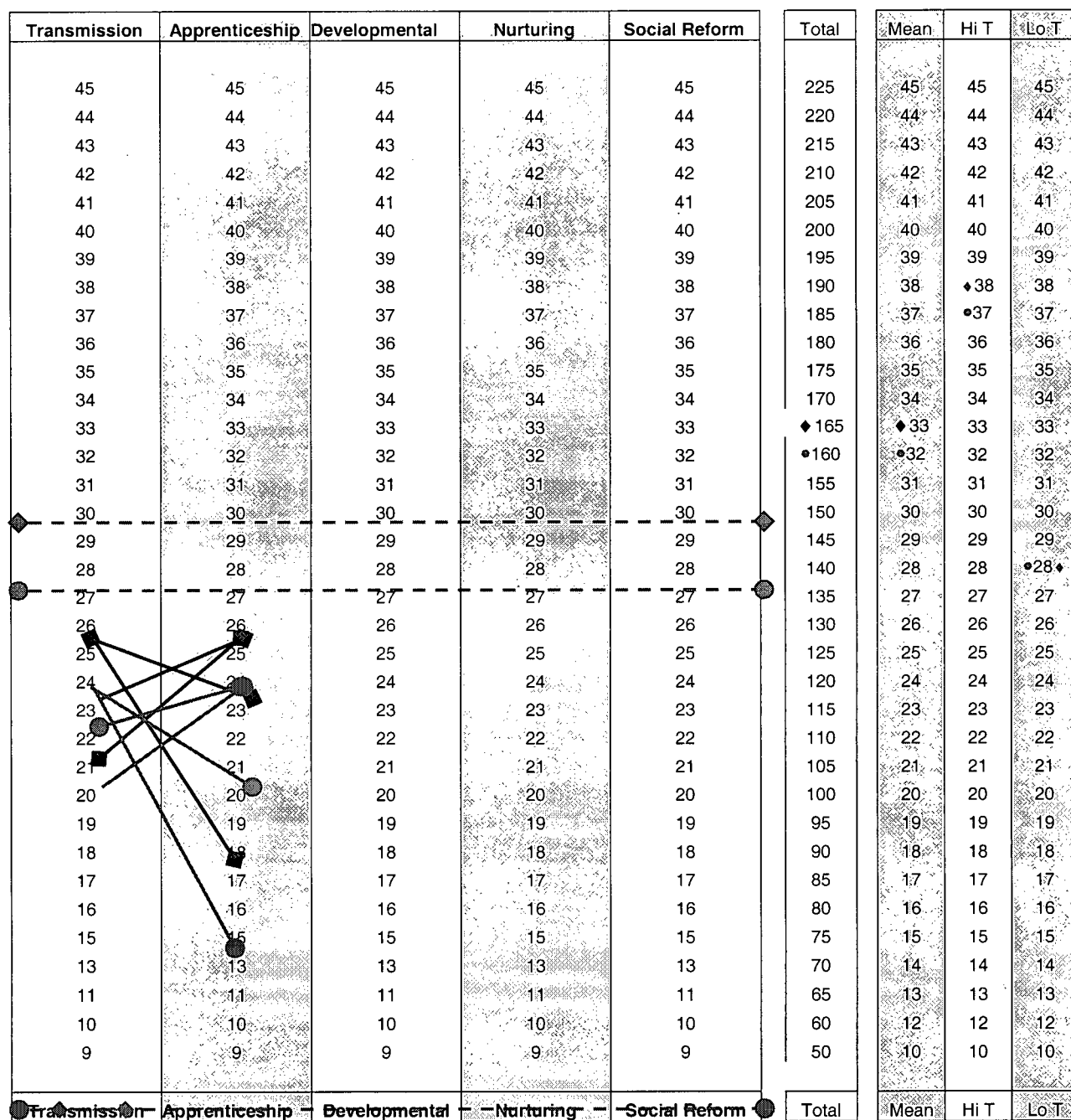
indicates they are less likely to ask more questions than provide answers, and are less likely to help their clients develop more complex ways of thinking of the topic of nutrition. Instead, dietitians had higher Transmission scores which reaffirm their roles as content experts whose job it is to accurately deliver information to clients. Both groups scored low in Social Reform compared to the other four perspectives which demonstrates that social change is not the primary goal for the dietitians or the groups of other professional educators. Figure 7 plots how Educational Perspective scores compare between dietitians and the 414 other professional educators.

Table 15

Educational Perspective Scores for Dietitians and 414 "Other" Professional Educators

Educational Perspectives	Dietitians' Mean Score	Standard Deviation	"Other" Mean Score	Standard Deviation	Difference in Mean Score	t value	p value
Transmission	33.59	3.76	31.87	4.99	1.72	4.93	.000
Apprenticeship	35.07	3.65	35.59	4.03	0.52	1.65	NS (.099)
Developmental	32.25	4.07	33.91	4.42	1.66	4.80	.000
Nurturing	34.67	4.55	36.07	5.06	1.4	3.60	.000
Social Reform	25.66	5.67	27.50	5.96	1.84	3.89	.000

Figure 8. Comparisons Between Mean Educational Perspective Scores for Dietitians and 414 "Other" Professional Educators



## Dominant Perspectives

In the previous section, Educational Perspective scores were compared among the dietitians in this study and groups of 414 other professional educators aggregated from several specialties. Slight but significant differences were apparent among all Educational Perspectives except the Apprenticeship Perspective. Another way to analyze Educational Perspectives is to determine whether dietitians had dominant perspectives over others. Although the *Educational Perspectives Inventory* yields individuals' dominant, backup, and recessive perspectives, for the purposes of this study, dietitians' backup and recessive perspectives were not analyzed in-depth.

It has been shown that many teachers and educators of adults have one and sometimes two dominant perspectives (Pratt & Collins, 2000). Dominant perspectives are perspectives with scores one standard deviation or more above an individual's personal mean of all five of the *Educational Perspective Inventory* scores. Table 16 shows the number of dietitians who had a dominant perspective among the five perspectives. Slightly over 8% of dietitians had no dominant perspectives. Dietitians who had dominant perspectives were most often dominant in Nurturing followed by Apprenticeship, Transmission and to a smaller degree Developmental and rarely Social Reform.

Table 16 shows that 43% of dietitians were dominant in the Nurturing Perspective and tended to focus on personal relationships with learners and help them increase their self-confidence and self-esteem. Dietitians were next dominant in Apprenticeship (41.3%) and then in Transmission (25.7%). There are two possible reasons that over 40% of dietitians were also dominant in the Apprenticeship Perspective. First, dietitians spend an intensive period of time during the dietetic internship modeling other dietitians' knowledge, practices, and skills which may in turn influence how they teach others. Second, dietitians teach clients how to make dietary changes for home even though clients are still in the hospital. Dietitians also coach clients to make changes on their own. That is, dietitians may first demonstrate how to read a food label or how to prepare foods and then provide less feedback and direction as clients become more autonomous.

Approximately one-quarter of dietitians were dominant in Transmission which showed that subject matter and delivery of information was important in their practice settings. Not very many dietitians were dominant in the Developmental Perspective (8.7%) which shows that helping clients develop more developed and complex ways of thinking about the subject of nutrition did not occur on a large scale. This result also shows that the majority of dietitians spend less time focusing on helping learners integrate previous knowledge with current knowledge. A very small percentage (1.3%) of dietitians were dominant in Social Reform which shows that most dietitians were not committed to social change.

Table 16 shows how groups of other professionals' dominant perspectives compare to those of the dietitians in this study. The groups of other professionals' were most dominant in Nurturing, followed by Apprenticeship, Developmental, Transmission, and Social Reform. Both groups were similar except that the groups of other professional educators were more dominant in Developmental but less dominant in Transmission. Again only a very small percentage of professional educators were dominant in the Social Reform Perspective (1.3%).

Some dietitians had two dominant perspectives. Twenty-eight dietitians were dominant in both Nurturing and Apprenticeship Perspectives while twenty dietitians were dominant in both

Apprenticeship and Transmission Perspectives. It appears from this result that generally respondents align more to the Apprenticeship, Nurturing, and Transmission Perspectives rather than the Developmental and Social Reform Perspectives.

Table 16

Dominant Educational Perspectives for Dietitians and 414 "Other" Professional Educators

Perspective	Dietitians		Other Professionals	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
No Dominant Perspective	19	8.3	23	5.6
Transmission	59	25.7	59	14.3
Apprenticeship	95	41.3	161	38.9
Developmental	20	8.7	81	19.6
Nurturing	99	43.0	210	50.7
Social Reform	3	1.3	9	2.2

### Relationships Among Professional, Social-Cultural Variables, and the Five Educational Perspectives

Up to this point, data analysis has focused on the personal and professional characteristics and the Educational Perspectives of dietitians. However, what is unknown is how demographics and personal and professional characteristics relate or influence the five Educational Perspectives. This section demonstrates the relationships among these variables. Tables 17 to 22 list the demographics, professional, and social-cultural variables that were correlated with the five Educational Perspectives. Asterisks indicate statistically significant relationships. It is worthwhile to note that all correlations among variables are comparatively weak, that is, the highest statistically significant correlation is 0.26. However, information regarding which personal and professional characteristics influence which of the five perspectives provides some information about the respondents that was not previously known.

### Personal Characteristics

Currently, there is limited information regarding demographics and personal characteristics of dietitians. Demographics such as age, sex, language capabilities and family structure provide basic information about the profession. From this information, professional dietetic associations are able to track how their memberships are changing and whether recruitments efforts are necessary. For example, if a large percentage of members are retiring perhaps more efforts are needed to recruit younger dietetic members. Sometimes knowing the cultural and ethnic distribution of memberships might be particularly helpful in terms of creating culturally sensitive educational materials. Also, respondents who speak different languages can communicate in ways and obtain different points of views from cultural groups that other dietitians may not familiar with. Knowledge of different levels of education and types of degrees obtained provides useful information for dietetic associations regarding members' interests and academic trends within the profession.

Table 17  
Correlations Between Personal Characteristics and the Five Educational Perspectives

Characteristics	Transmission	Apprenticeship	Developmental	Nurturing	Social Reform
<b>Demographics</b>					
Gender	.03	.01	.08	.07	.08
Age	-.06	-.07	-.13	-.11	-.14
Have children	.11	.09	.12	.13	.05
<b>Education</b>					
Bachelor degree outside of Dietetics	.11	.08	.08	-.06	-.14
Graduate degrees obtained or in-progress	.08	*.19	.12	-.06	.07
Certificate or diplomas obtained or in-progress	.06	.02	.04	.03	-.05
<b>International schooling, work experience, and language</b>					
Schooled outside of Canada					
International work experience	*.20	.14	.08	.03	.05
First language spoken	.03	.11	.01	-.07	.03
Current language spoken	.12	.07	.11	.06	*.18
Number of initial languages	.08	.05	.06	.09	*.19
Number of current languages	-.03	.01	-.06	.02	.07
	.05	.07	.05	.15	*.19

\*  $p < 0.01$  level, two-tailed. \*\*  $p < 0.001$  level two-tailed.

Table 17 shows five significant correlations among personal characteristics and the five perspectives. Dietitians who attended school in a country outside of Canada had slightly higher Transmission scores than dietitians who had not attended school outside of Canada ( $r=.20$ ,  $p<.01$ ). Respondents who were schooled outside of Canada may have been exposed to other teachers who were primarily of a Transmission Perspective. Subsequently, these respondents have similar beliefs and teaching practices. Respondents who had obtained or were in the process of obtaining graduate degrees had somewhat higher Apprenticeship scores than respondents who were not pursuing or who did not possess graduate degrees ( $r=.20$ ,  $p<.01$ ). This result is not surprising because many university academic settings, particularly at the graduate level, encourage students to use their prior knowledge, and allow students to learn from professors who are often experts in their own fields. Graduate settings are also learning communities, that is, graduate students learn to think and reason like their mentors and professors.

There are some significant correlations among languages spoken and the Educational Perspectives. Respondents who grew up speaking another language other than English had slightly higher Social Reform scores than those who spoke English only ( $r=.18$ ,  $p<.01$ ). Respondents who currently spoke another language other than English had somewhat higher Social Reform scores than those who spoke English only ( $r=.19$ ,  $p<.01$ ). Respondents who spoke more than one language had slightly higher Social Reform scores than respondents who spoke only one language ( $r=.19$ ,  $p<.01$ ). Generally, it appears that those that speak another language

besides English have higher Social Reform scores. Respondents who speak another language either due to ethnicity, travel, or interest appear to be more interested in social change or have a desire to incorporate ideals into their practices.

### Features of Dietetics That Respondents Were Attracted To

Other literature has documented aspects of the profession that attracted dietetic interns (Markley & Huyck, 1997; Kobel, 1997). However, there is a limited amount of information on what attracted individuals to dietetics in British Columbia. Knowing this information will help the dietetic association be more aware of what aspects of professional practice are most appealing for their members as they enter the profession. Dietetic associations could compare what dietitians value and are attracted to when they first enter dietetics, such as teaching opportunity, professional growth, or remuneration with whether those opportunities present themselves to practicing dietitians' and if not, what steps can be taken to bridge the gaps.

Table 18

Correlations Between Features of Dietetics That Respondents Were Attracted To and the Five Educational Perspectives

Valued aspects	Transmission	Apprenticeship	Developmental	Nurturing	Social Reform
Nutrition and health	-.00	.05	.07	-.02	-.03
Health care team	.02	.14	.01	.08	.04
Diverse work environment	.05	.12	.08	.06	.01
Management opportunity	*.18	.04	.15	.07	.10
Help others	-.07	.01	-.00	.13	.03
Employability	-.04	.01	-.06	-.01	-.14
Research opportunities	-.01	.04	.02	.01	.12
Teaching opportunities	.04	.12	.09	.16	.12
Community involvement	.02	.14	.02	.06	.11
Entrepreneurial opportunity	.04	.04	.07	.07	-.01
Professional designation	.03	.01	-.01	-.01	-.02
Employment stability	.01	-.01	.09	.10	.08
Financially rewarding	.06	-.03	.04	.01	-.05
Professional growth	.04	.15	.10	.09	.04
Other	-.10	-.03	-.05	.06	.01

\*  $p < 0.01$  level, two-tailed. \*\*  $p < 0.001$  level two-tailed.

Although the reason is not entirely clear, dietitians who valued management opportunities when they entered dietetics tended to have slightly higher Transmission scores than those dietitians who placed less value on management opportunities ( $r = .18$ ,  $p < .01$ ). Otherwise, there were no other correlations among any of these aspects of the profession and the five Educational Perspectives.



## Professional Characteristics

Data on whether dietetics was the first career choice provides information on how heterogeneous dietitians are in terms of knowledge and work experience (for example, dietitians who have left other careers to enter dietetics) or whether dietitians are a relatively homogeneous population (for example, dietitians who mainly enter the profession after high school).

Information on work related issues such as length of practice, length of time in job positions, and work responsibilities provide information on how long dietitians remain within profession, job position turnover rates, and work expectations and responsibilities (Table 19). Information such as this provides information on retention rates within the profession. For example, do the number of dietitians that enter the profession stay within the profession and if not, why?

Table 19  
Correlations Between Professional Characteristics and the Five Educational Perspectives

Work related activities	Transmission	Apprenticeship	Developmental	Nurturing	Social Reform
<b>First career in dietetics</b>	-.04	.03	.04	-.05	-.07
<b>Length of practice (years)</b>	.12	.11	*.18	.15	*.19
<b>Length of time in job position</b>	-.06	-.04	.01	.10	.04
<b>Work responsibilities</b>					
Nutrition counseling	-.02	.01	-.11	.14	*.17
Teaching	.12	.15	.11	.15	.07
Administration	.10	.08	.14	.08	.15
Research	.06	.06	.05	.02	-.04
Interact community groups	.05	.16	** .23	*.18	*.19
Policy development	.12	.10	.19	.00	.16
Marketing	.09	.05	*.18	.16	.15
Sales & advertising	.11	.07	.17	.12	.08
Public & media relations	.07	.15	** .23	** .24	** .23
<b>Primary interactions at work</b>					
Patients	-.06	.01	-.13	.08	*.21
Clients	-.05	.00	.07	.10	.09
Interns and students	-.02	.01	.10	.05	-.01
Dietitian colleagues	-.12	-.05	.10	.11	-.00
Management	.05	.12	.10	.07	.12
General public	-.02	.15	*.20	.10	** .22
Community groups	-.07	.01	*.18	-.03	.19
Other professional groups	-.02	-.08	.01	-.08	.13
Other staff	-.04	-.02	-.07	-.10	-.04
Other	.13	-.01	.06	.09	.08

\*  $p < 0.01$  level, two-tailed. \*\*  $p < 0.001$  level two-tailed.

Table 19 reveals 14 significant correlations. Respondents who have practiced dietetics longer tended to have slightly higher Developmental ( $r=.18$ ,  $p<.01$ ) and Social Reform ( $r=.19$ ,  $p<.01$ ) scores than respondents who have practiced less long. It appears that with more experience, respondents engage and involve clients more with nutrition related topics and in the process help them combine previous knowledge with current more developed knowledge. Respondents who practiced longer also tended to be more involved with social change issues as they realize that nutrition and food are interconnected with larger social processes such as food equity, availability, and distribution.

Respondents who were more engaged in one-to-one or small group nutrition counseling had slightly lower Social Reform scores than those not as involved with nutrition counseling ( $r=-.17$ ,  $p<.01$ ). Likewise, respondents who interacted primarily with patients had slightly lower Social Reform scores than respondents not as involved with nutrition counseling ( $r=-.21$ ,  $p<.01$ ). This result shows that these respondents focused their teaching efforts more on individual rather than social change. Respondents whose work responsibility included interaction with community groups tended to have slightly higher Developmental scores ( $r=.23$ ,  $p<.001$ ), Nurturing scores ( $r=.18$ ,  $p<.01$ ) and Social Reform scores ( $r=.19$ ,  $p<.01$ ) than those respondents who had less interaction with community groups. Also those respondents who interacted primarily with the general public tended to have higher Developmental scores ( $r=.20$ ,  $p<.01$ ) and Social Reform scores ( $r=.22$ ,  $p<.001$ ) than respondents who had less interaction with the general public. It appears that the level respondents interact with people, such as one-on-one or large communities does affect Educational Perspectives. Respondents who worked with individuals on a one-to-one basis focused more on transmitting and delivering information. Respondents who worked with communities cared about the state of health for communities but also wanted people to develop more complex and deeper ways of understanding larger issues that impact food choices and health.

Respondents who had marketing responsibilities had slightly higher Developmental scores ( $r=.18$ ,  $p<.01$ ). Respondents who had public and media relations had somewhat higher Nurturing ( $r=.23$ ,  $p<.001$ ), Developmental ( $r=.24$ ,  $p<.001$ ) and Social Reform scores ( $r=.23$ ,  $p<.001$ ) than those respondents who had no public and media relations responsibilities. The number of respondents with public and media relations responsibilities are small (Table 10). As a result, the findings may represent a very small group of individuals rather than all dietitians with these work responsibilities.

#### Initial and Current Professional Interests On Entering Dietetics

Awareness of how professional interests change over time could be very beneficial to dietetic associations (Table 20). For example, dietetic practice groups, research, workshops, and seminars could be designed to include current professional interests. In other words, members' interests fuel the kinds of educational opportunities available to them. It may also be interesting for dietitians to know whether and how their colleagues' personal interests change over time.

Table 20

Correlations Between Initial and Current Professional Interests On Entering Dietetics and the Five Educational Perspectives

Professional interests	Transmission	Apprenticeship	Developmental	Nurturing	Social Reform
<b>Initial interests</b>					
Health promotion	.10	-.02	-.03	-.02	-.11
Nutrition counseling	.03	.03	-.01	-.03	-.01
Teaching	.07	.09	*.18	*.18	.11
Food and culinary	-.01	.00	.03	-.02	-.04
Nutrition-societal problems	-.06	-.03	.02	.07	.04
Nutritional sciences	.06	.06	.08	.03	.03
Research	.05	.01	-.03	.06	-.02
Cultural food habits	.07	.05	.08	.08	*.17
Management	.14	.08	.16	.15	*.19
Dietetic associations	-.06	.01	.07	.10	.01
Food production	-.01	.03	.06	.00	*.17
Educational materials	-.03	.11	.07	.11	.09
Private practice	-.07	-.07	-.04	.08	.04
International nutrition	.07	.04	.05	.11	-.07
Other	-.17	-.03	-.16	-.11	-.01
<b>Current interests</b>					
Health promotion	.02	.07	-.00	-.03	-.01
Nutrition counseling	-.13	.02	-.12	.14	-.05
Teaching	.07	.14	.10	.12	.01
Food and culinary	.08	.11	.11	.03	.09
Nutrition-societal problems	-.08	.07	-.02	.08	.15
Nutritional sciences	.03	.08	.03	.07	.08
Research	-.03	-.07	.04	-.01	-.05
Cultural food habits	-.07	.03	-.04	.04	.10
Management	.11	.15	*.20	.06	*.20
Dietetic associations	.03	.12	.14	.09	.08
Food production	-.01	.01	.05	.02	.07
Educational materials	-.11	-.02	-.13	.01	-.05
Private practice	.05	.09	.06	.06	.11
International nutrition	.04	.03	.10	.13	.11
Other	-.12	-.14	-.03	-.03	-.02

\*  $p < 0.01$  level, two-tailed. \*\*  $p < 0.001$  level two-tailed.

Respondents initially interested in teaching had slightly higher Developmental ( $r=.18$ ,  $p<.01$ ) and Nurturing ( $r=.18$ ,  $p<.01$ ) scores than respondents not initially interested in teaching. It is not surprising that respondents who first entered the profession were more Nurturing inclined. This result is consistent with *Educational Perspective Inventory* data findings of over 1,000 participants which showed that teachers that are newer in their careers, and those still in training, tend to have higher Nurturing scores (Pratt & Collins, 2000). However, it is surprising to discover that respondents who first started their career also had higher Developmental scores. Teachers who are dominant in the Developmental Perspective are often already experts in their fields and provide more questions than answers to help learners develop deep approaches to learning. However, this initial interest in teaching disappears as dietitians work longer.

Respondents initially interested in cultural food habits ( $r=.17$ ,  $p<.01$ ), management ( $r=.19$ ,  $p<.01$ ), and food production ( $r=.17$ ,  $p<.01$ ) had slightly higher Social Reform scores than respondents not initially as interested in cultural food habits, management, and food production. It appears that whether respondents were interested in food in cultural contexts or food production contexts, larger social issues such as food safety, availability, and equity were of interest to some respondents. Respondents who were currently interested in management had somewhat higher Developmental ( $r=.20$ ,  $p<.01$ ) and Social Reform ( $r=.20$ ,  $p<.01$ ) scores than respondents who had less management responsibilities. One possible reason for this result is that respondents who are supervisors and directors must often think about larger intra and inter-departmental issues such as budgets as well as politic and power issues among groups of people. Another possible reason is that directors and managers are often more experienced and older than dietitians who first enter the profession, therefore, as dietitians practice longer and become managers they must focus on issues outside of clinical nutrition.

### Influences On Respondents' Teaching Practices

Determining who or what influences the teaching practices of dietitians is useful to know. For example, if certain activities influence teaching then these might be the key to future opportunities to encourage discussions on educational and teaching. Knowledge about who influences the teaching practices of dietitians reveals whose opinions are respected and whose values are influencing dietitians.

Table 21

Correlations Between Influences On Respondents' Teaching Practices and the Five Educational Perspectives

Influences	Transmission	Apprenticeship	Developmental	Nurturing	Social Reform
<b>Activities</b>					
University courses	*.19	*.19	.12	.02	.11
Workshops & seminars	.12	.15	.11	**.24	.16
Self-directed learning projects	-.03	.05	.09	.10	.05
Books or articles	.04	.12	.06	.12	.06
Certificate or diploma	.18	.12	.08	.06	.08
In-service education program	.13	.12	-.09	.03	.03
Other	.07	.16	.21	.32	.16
<b>People</b>					
Influential person	-.09	.13	.17	**.26	*.20
Author	-.14	.03	.08	*.17	.05
Colleague	-.10	.12	.16	*.21	.16
Teacher	.11	.06	.16	*.17	.08
Philosopher	-.03	-.07	-.03	.04	.04
Friend	.01	.06	.05	.11	.12
Family member	-.12	-.03	.05	.04	.09
Religious leader	.06	.04	-.01	-.02	.06
Other	-.03	.09	.12	.10	.13

\*  $p<0.01$  level, two-tailed. \*\*  $p<0.001$  level two-tailed.

Respondents whose teaching practices were influenced by university courses had higher Transmission ( $r=.19$ ,  $p<.01$ ) and Apprenticeship scores ( $r=.19$ ,  $p<.01$ ) than respondents who were not influenced by university courses (Table 21). This result is not surprising because universities are settings in which students learn from professors who are content experts (Transmission) and often experienced role models within the profession (Apprenticeship).

It appears that respondents whose teaching practices were most influenced by workshops and seminars or an influential person – particularly an author (mainly dietitians), colleague or teacher (many dietitians) had higher Nurturing scores than respondents who were not so influenced by workshops, authors, colleagues and teachers. Previous data from this study has shown that respondents' highest dominant perspective was Nurturing. In another analysis of the Educational Perspectives Inventory (Pratt & Collins, 2000), results showed that the majority of teachers of adults indicated Nurturing as their dominant perspective. If most dietitians are dominant in the Nurturing Perspective, it is not surprising that respondents who interact with colleagues, are taught by dietitians and other teachers of adults, read literature by dietitians and attend workshops and seminars with other dietitians also align themselves within a Nurturing Perspective. Dietetics is a helping profession and has a history of caring for the health and welfare of individuals and communities. Most dietitians – particularly those that work within clinical or community nutrition, form therapeutic relationships, help clients increase self-confidence with respect to their health and and according to the Code of Ethics, strive "to maintain integrity and empathy in professional practice" (Dietitians of Canada, 2000).

In summary, when personal and professional characteristics were correlated with the five Educational Perspectives, thirty-two correlations were statistically significant but were weak. As a result, it is difficult to say with a high degree of confidence that these personal and professional variables were strong predictors of respondents' Educational Perspectives. Although not very strong, there were some relationships and trends among characteristics and respondents' perspectives. Generally, it appears that respondents who interact with the community and public at large, who have management responsibilities and who have practiced longer are more inclined to show Developmental or Social Reform Perspectives. In contrast, respondents who attended graduate school or who were influenced by university courses were more inclined to be Transmission oriented. Finally, respondents whose teaching practices was most influenced by other colleagues, authors and teachers were most likely to have a focus on the Nurturing Perspective.

## Rewards and Challenges of Educating Others

### Rewarding Aspects of Teaching

Dietitians are health professionals who interact and educate a range of different clients everyday. If dietitians consistently express positive aspects of educating others, it could provide some insight into career satisfaction. On the other hand, if dietitians are consistently negative, then this shows that dietitians have many frustrations and barriers that must be addressed in order for them to be feel comfortable and confident in their roles as educators. Do dietitians generally enjoy educating others -- particularly when education is a significant work responsibility for the majority of dietitians? It appears that many respondents in this study expressed rewarding aspects of teaching (Table 22); Respondents were asked to list the most rewarding aspects of educating others. Table 22 provides a summary of 444 comments and subsequent themes that

emerged. Over 114 (26%) comments were about helping clients attain optimal health and helping them make the connection between nutrition and health. However, 68 (15%) comments pertained to changing health status through measurable and quantifiable changes, namely, behavior change. The presence of tangible results helped some respondents affirm their usefulness as educators and clinicians. In a way, when clients changed their nutrition and lifestyle behavior, respondents may have felt that nutrition information they provided was being "put to good use". Measurable behavior change was viewed as clients' fortitude to embark on lifestyle changes and was an indication that dietitians were being efficient communicators and educators.

As health professionals, most dietitians sincerely wanted to help their clients improve their health status and quality of life. This is not surprising because nutrition is linked closely with health and well-being. Dietitians want people to understand that nutrition and health are intimately related; lack of adequate nutrition or unbalanced food choices compromises human physiology, vitality and strength. This may be why respondents want clients to make the connection between nutrition and health. As dietitians encouraged clients to be aware of the power of nutrition, they also wanted clients to become more autonomous as they waded through the sea of nutrition information and misinformation.

Dietitians are busy practitioners who often see many clients. As health care institutions become busier and length of hospital stays decrease, many hospital dietitians have little contact with clients once they are discharged from the hospital. With the exception of home support and outpatient dietitians, most clinical dietitians do not form long-term therapeutic relationships with patients. Due to factors like time constraints, institutional settings and shorter length of stays, dietitians may not always receive immediate feedback -- particularly when changes in nutrition and health occur over long periods. Sixty-six comments (15%) reflected the idea that respondents in this survey did value being appreciated by clients and took pride when clients provided positive feedback.

Respondents felt an obligation to provide enough information to clients so that they can make informed decisions. Thirty-one comments pertained to the importance of providing accurate, up-to-date, and comprehensive nutrition information. However, 36 (8%) comments were on the provision of information as well as to help clients become more autonomous in their own decisions. In this way, respondents facilitated change whereby clients were given power to take ownership of their health and to make choices about food based on accurate information.

Some respondents (27 comments) felt they held dual roles, one as a teacher and one as a learner. Respondents viewed themselves as learners in ways that they acquired new information about nutrition to share with their clients and in ways they learned from their clients. A small group of respondents (22 comments) valued therapeutic relationships, particularly those where they could "connect" on a personal level and develop a rapport and relationship over a long period. Humanistic-focused respondents viewed clients not as diagnosis or medical conditions but as whole persons who are multi-faceted with many emotions and feelings. Thirteen comments were made regarding some respondents' need to help clients increase their self-confidence and self-esteem.

Table 22 shows that respondents felt rewarded as educators and teachers. Dietitians were keenly interested in helping clients discover the connections between nutrition and health and felt that change in nutrition practices was best met with behavior change. Although respondents

enjoyed providing accurate up-to-date information, some respondents felt that it was important to learn from patients and establish trusting relationships to ultimately improve learner self-esteem and confidence.

Table 22

Respondents' Views on the Most Rewarding Aspects of Teaching (N=Number of Comments, Total Comments=444)

Category	Sample statements from respondents
Enabling behavior change N=68	Knowing that a patient has changed his or her behavior to improve health  Seeing tangible results from behavioral changes
Feeling appreciated and making a difference N=66	Patients tells someone about you and what a difference you've made in their life  Hearing a sincere 'thank you' or receiving a handshake in appreciation – makes me feel like I made a difference
Increasing nutritional status and quality of life N=67	Increase people's awareness of how proper nutrition can have positive impact on their health  Seeing client's happiness increase due to improved health
Helping clients understand the connection between nutrition and improved health N=47	Seeing people take the information and use it reasonably, not compulsively, being able to be flexible and still have a positive outcome  Seeing the 'lightbulb' come on- an 'aha' moment
Facilitating change and client empowerment N=36	Giving people the power to make a choice  When clients are active, participatory in finding answers to their own questions
Providing and disseminating nutrition information N=31	Providing individuals with accurate nutrition information in a society bombarded with misinformation and nutrition quackery  Passing on the knowledge and hopefully wisdom I have gained over the years
Learning from patients N=27	I learn from the people I teach- they educate me about their experiences and their lives  What you can learn from others in return
Establishing a personal relationship with clients N=22	Connecting on a personal level with others  Forming a true 'connection' to a patient, client or student

---

Table 22 continued

---

Increasing client reflection and growth N=18	Seeing impoverished individuals grow, develop and improve their lives
	Opening someone's mind to allow them to think for themselves; develop their own philosophies/practices
Increasing enthusiasm and interest in topic N=17	People become enthused about the topic I'm interested in
	Having learners get excited about new information presented
Improving learner self-confidence and self-esteem N=13	Seeing people's attitude change to 'I can do this'
	Improving self-esteem in patients who have made changes in lifestyle
Improving client status via dietitian intervention N=12	When people come back to me after successfully implementing my recommendations
	Knowing that the patient will comply with your recommendations and they will recover faster
Being seen as a nutrition expert N=6	The opportunity to 'be the expert' and have others seek my advice
	Other professional groups/health care team refer to you as the "expert on nutrition"
Being involved with the community N=6	Food security/community development
	Started community garden and community kitchens in my community
Other N=8	See students get jobs
	Don't see it as a job – I'm getting paid to have fun

---



## Challenging Aspects of Teaching

Many dietitians may not have opportunities to articulate their frustrations and anxieties regarding their roles and responsibilities as educators. As a result, dietitians may not be aware other colleagues share similar feelings. If dietitians do not have avenues where they can voice their frustrations, they may feel isolated or helpless because they don't have the tools to seek solutions or develop alternate ways of understanding the educational and learning process. Uncovering challenges and frustrations is the first step towards that understanding.

Comparing Tables 22 and 23 reveal that respondents stated as many challenging aspects (441) of teaching as they did rewarding aspects (444). Almost one-quarter (100 comments) of all comments in Table 23 regarding challenging aspects of teaching were related to a lack of learner motivation, compliance and interest. Respondents were passionate in voicing their frustrations over this. Dietitians are keenly interested in the relationship of nutrition to health. They know the benefits of proper nutrition and lifestyle practices and can provide practical suggestions to their clients. Most respondents are perplexed when clients acknowledge the benefits of health but either overtly refuse to change their behaviors or covertly resist help. Disinterest, lack of enthusiasm, motivation, resistance to change, and negative attitudes from clients appear to cause the greatest degree of frustration, dissatisfaction and for some respondents helplessness.

Sixty-six (15%) comments revealed these dietitians were unsure of their teaching and educational approaches. They wanted to be effective but were also unsure of how to make nutrition interesting, fun and enjoyable. Dietitians constantly struggled to provide information that was at an appropriate level of understanding for various types of clients and groups. That is, they constantly reevaluated the information they provided and how they were able to convert complex ideas into practical suggestions. Sometimes respondents questioned their effectiveness as educators in bringing about behavior change. A few openly stated that they thought they were not effective educators but were unsure of what to do. A few others acknowledged their lack of self-confidence in their abilities as educators while others felt they were only "drops in the bucket". Although dietitians pride themselves as being reliable sources of information, perhaps respondents would be surprised to discover how many other colleagues also questioned their self-confidence, effectiveness and abilities as educators.

Twenty-nine comments (7%) pertained to issues often outside the control of dietitians, for example, limited finances, illiteracy, and compromised medical conditions that inhibit teaching. There are other context-related challenges (104 comments in total) and these primarily deal with time constraints, lack of resources and sub-optimal learning environments. Many respondents indicated that short length of hospital stays, increased client case loads, lack of time to develop teaching materials and inadequate time to conduct literature reviews on pertinent nutrition topics were all time induced challenges. Respondents also voiced frustration over a lack of administrative resources such as inadequate clerical support and limited monetary funds. The more administrative tasks that dietitians (with the exception of administrative dietitians) were involved with such as photocopying client education materials and phoning clients to book appointments, the less time they felt they could devote to teaching clients directly.

Twenty-five comments (6%) revealed that respondents viewed people from different cultures and who spoke different languages as a challenge primarily because respondents possess helpful nutrition information but are unable to communicate with their clients. This has implications for providing nutrition information and what clients are able to communicate back

to respondents. When clients are unfamiliar with the English language, let alone foreign medical terminology, they feel helpless, intimidated, scared, and thus have difficulty conversing and sharing their dietary concerns with health professionals. Respondents interact with clients of different cultures in many different work contexts. Subsequently, respondents have an advantage if they are aware of clients' cultural norms and practices. When this awareness is lacking, dietitians misinterpret clients' actions and behaviors as contradictory to treatment plan. It is not likely that respondents are suspicious or insensitive to individuals from other cultural groups but rather they too feel helpless because they are unable to communicate in ways to help their clients attain a better quality of life.

Eighteen comments (4%) were about challenges respondents face when they deal with people of different viewpoints and perspectives (Table 23). For these respondents, people with different opinions on nutrition were seen as difficult, "know-it-alls", and inflexible. It appears these respondents felt they held the correct nutrition information and that others who held different viewpoints were seen as distracting and argumentative. This frustration for respondents is likely connected to the nature of nutrition itself. Nutrition information is not regulated and as a result, many different diet theories and claims exist everywhere. Many of these claims are more appealing, flashy and seductive than advice given from a dietitian in a health setting. As a result, many individuals have likely experimented with different diets and food products and are convinced their dietary practices are superior to conservative recommendations of health professionals.

A small number of comments (10 or 3%) were from respondents who felt hospital environments were not conducive to teaching because clients are ill and often fraught with emotions which make learning difficult. Other reasons hospitals are not ideal teaching environments may be due to the lack of privacy that clients face when they share rooms with other patients and numerous medical tests and visits from other health professionals that patients must comply with. Sometimes, other tests and visits conflict with nutrition teaching sessions. Hospitals are contexts far removed from home settings where food is selected, prepared and eaten.

Some respondents acknowledged (26 comments or 6%) that staying abreast on new nutrition information and research is a daunting task. Respondents felt overwhelmed with the amount of information and misinformation out there -- particularly the latest nutrition fads and trends. If dietitians do not keep up with the latest information, their roles as reliable and accurate nutrition health professionals are compromised. Some also felt that the media, and to some extent other health professionals, were to blame for providing incorrect and misleading information thereby confusing the public. Finally, 24 comments (5%) revealed respondents were also frustrated with their lack of authority and respect from other health professionals and clients. Dietitians undergo substantial nutrition education and training but feel marginalized when others such as physicians, nurses, other health professionals and clients do not recognize or value their knowledge and skills. They feel frustrated that although they are university- educated and hospital-trained they must continuously market their abilities and expertise to others in addition to fulfilling their work responsibilities.

Table 23 summarizes these comments and challenges faced by dietitians. Dietitians were most frustrated with a lack of behavior change resulting from what they perceive to be client disinterest, lack of motivation or non-compliance. Dealing with people from different cultural backgrounds and socio-economic backgrounds or with different viewpoints on health and

nutrition proved to be challenging for some dietitians. Time constraints, administrative cutbacks, and hospital environments posed some difficulty for dietitians. Some respondents expressed that although they want to help clients achieve their goals, they are unsure of how to educate and teach clients to maximize nutrition their outcomes.

Table 23  
Challenges Dietitians Encounter When Teaching (N= Number of Comments,  
Total Comments=441)

Category	Sample statements from respondents
<b>Client-related challenges dietitians face when educating clients</b>	
Dealing with lack of learner motivation, compliance and interest N=100	Working with patients who are unable to make changes – the non-compliers – it makes me feel helpless  Those who don't follow your recommendations – waste your time
Changing long-standing behaviors N=26	Food is a huge cultural behavior integral to most people's personalities and it is very difficult to change  Making a change – need articles and lots of patience to change old habits
Dealing with different cultural backgrounds N=25	Not always enough time to be 'societally' or culturally sensitive  Learners of other cultures than Canadian
Being patient with different viewpoints N=18	Realizing that we think differently and will never think the same...controlling my urge to shout at them or to bop them over the head  People who are not professional dietitians or nutritionists who tell you what is right/wrong, but have come for your advice
Working with limited finances, literacy and education N=15	Working with people of low socio-economic status who have little or no resources  Limited intelligence and educational levels
Working with the medically or cognitively impaired N=14	When individual has other stresses, limitations, handicaps that make teaching difficult  Working with dementia, sensory deprivation (i.e. hearing loss)

Table 23 continued

**Context-related challenges dietitians face when educating clients**

Working with time constraints  
N=67

Time – not enough time for actually teaching or developing of appropriate education materials

Not enough time for me to explore or think

Feeling overwhelmed with administrative tasks or lack of resources  
N=27

Overwhelming administrative tasks – lack of clerical support

Being overworked and not being able to give all clients full attention

Working within a hospital environment  
N=10

Environment – acute care hospital – patients not in best state to be inundated with educational information

Teaching a patient in an acute care setting – not the optimal place to learn

**Challenges dietitians face as professionals and educators**

Choosing the right approach  
N=66

Choosing the right approach or method to deliver information to maintain motivation or raise motivation, so people can make changes

Presenting information in a way that people of various abilities will understand

Resistance to dietitian's authority  
N=24

Resistance by nursing profession to respect field of dietetics

Being seen as the "expert"- seems everyone is an expert – people believe what they read not what the nutritionist say

**Challenges dietitians face when dealing with nutrition information**

Feeling overwhelmed with new nutrition information  
N=26

Staying abreast of such a broad range of things to know and people expect you to know it all

When I'm not sure about the content in this ever-changing world

Dealing with conflicting nutrition messages  
N=12

Confusing messages about nutrition in the media – confuse public

Competing with media glitz

---

Table 23 continued

---

Other N=11	Students are attending sessions because it is mandatory  When the client feels that listening to me and my advice means they have given up hope for a cure for their child
---------------	--

---

### Dietitians Reflect on Their Roles as Educators

Respondents were asked to comment on their roles as educators and teachers. The vast majority of the 52 comments fortified the notion that dietitians are indeed teachers and educators. Respondents did not query whether they were educators but rather they positively affirmed their important educational roles or they voiced frustrations with their educational roles and responsibilities (Table 24). Twenty comments revealed that respondents were explicitly aware of their teaching roles and responsibilities and felt fortunate to be educators. These dietitians found teaching to be an “uplifting experience”, felt “passion” when they interacted with others and had “a true joy” when teaching others. Some respondents were not aware of their important teaching roles until they reflected on the questionnaire and realized that they are indeed teachers and educators.

Twelve comments pertained to the frustrations that respondents have as educators. Some felt that they were taken for granted especially when they “fought an uphill battle against quacks and nuts”. Dietitians are aware that anyone can provide nutrition information. Sometimes the information is in accordance with accepted nutrition philosophy and other times it is directly contradictory to what dietitians profess. As a result, dietitians must educate people not only on balanced nutrition practices but also on what and who they are as dietetic professionals. A few felt that if dietitians were better promoted and marketed as the only source of accurate nutrition information then there would not be the suspicion and distrust of dietitians from the public and some other health professionals.

Nine comments revealed that respondents felt there was inadequate preparation in education and teaching at university. Similarly, Heiss (1991) points out that formal training in education is quite variable and many dietitians have limited training in education. As respondents realized how integral and important education and teaching was throughout the questionnaire they also realized that they were not prepared for the extent of educating that they do now. These comments support other dietetic literature that states dietetic education and preparation are predominately focused on the biological sciences rather than education and the social sciences. Finally, respondents also again indicated that time constraints, lack of time for follow-up appointments and ineffective teaching settings such as hospitals are other frustrations that they encounter as educators.

Table 24

Dietitians Provide Feedback on Their Roles as Educators (N= Number of comments, Total Comments=52)

Category	Sample statements from respondents
Importance of educational role in dietetics N=20	<p>Didn't plan to teach- but it's really the core of being a dietitian.</p> <p>I don't often think of myself as an educator or teacher in my job, but throughout the questionnaire I realized how much a part of my job education is in many different ways.</p>
Frustrations with being an educator in dietetics N=12	<p>My role as an educator is not as enhanced as I would like it to be – there's a lot of room for increasing the role of dietitians as educators.</p> <p>Education would be helped if 'dietitians' as a profession were better promoted – people will listen to a physiotherapist or a doctor because they know what they do – when I say I am a dietitian – people ask 'what is that?' then they don't view me as a resource person as they would a doctor.</p>
Inadequate preparation in education at university N=9	<p>While studying at university I was never prepared for the extent of educating that I do as a dietitian.</p> <p>Our education should include courses from the faculty of education, as this is where we spend most of our time if we work in a hospital.</p>
Time constraints and lack of time for follow-up N=6	<p>I rarely feel like I have enough time as a dietitian to educate as well as I would like to.</p> <p>With the limited time constraints of our system, I can only hope to plant the seeds for more learning.</p>
Difficulty educating clients in a hospital N=5	<p>Hospitals have traditionally held the role of dietitians to be patient educators – it has become readily apparent this has never been an effective or appropriate venue for learning and increasingly less so, given ever shortening length of stays...</p> <p>Education of patients is becoming more difficult as workload often limits time available and acute care is not always the best setting.</p>

## Descriptive Words and Phrases Dietitians Use to Explain Their Role as Educators

Thirty-seven comments included descriptive words and phrases respondents' used to describe their roles as educators in the "final comment" section of the questionnaire (Table 25). Words and phrases used by respondents to describe what they do also reveal roles and relationships among content, learner and teacher. Respondents felt that one important role was that of disseminator and provider of information. However, nutrition information was considered valuable only if clients were able to understand it, apply to everyday life, and make informed food choices. Respondents also took their roles as providers of accurate and reliable nutrition information seriously. They felt dietitians must have a thorough knowledge of nutrition and that they must be up-to-date on current nutrition practices in order to be competent and respected health professionals.

An almost equal number of respondents also felt that they were facilitators. In other words, they were more than providers of information. They wanted to guide the process of teaching so that clients uncovered meaningful nutrition practices. Instead of simply telling clients what to do and what to eat, respondents wanted to give clients tools that they could use to make decisions on their own and in the process increase their self-confidence and self-esteem. Similarly, other respondents wanted to make a positive difference in the lives of their clients. Some respondents felt that their educator roles were that of entertainers and performers. These respondents were probably passionately interested and enthusiastic about the topic of nutrition and would want to present the subject matter in a way that was fun and engaging. A small number of respondents felt that dietitians should also be mentors and role models for others. Not only must they practice what they espouse to the public but they must also be cognizant of the influence they have on future dietitians.

Table 25

Descriptive Words and Phrases Dietitians Use to Explain Their Roles as Educators  
(N= Number of Comments, Total Comments=37)

Category	Sample statements from respondents
Provider of information N=10	My role is to provide people with information to help them make a decision about what changes they are able or willing to make and to offer solutions or ways this can be carried out.  Role is as a resource person to provide information or direct people to make more appropriate informed choices.
Facilitator & guide N=9	I strongly see my role as a facilitator – providing people with information from which they can choose to take and implement.  Help them understand their choices – I don't believe I can change anyone and highly value everyone's right to choice of what they will/won't do.

---

Table 25 continued

---

Performer and entertainer  
N=4

To be entertaining at the same time, effective and impacting knowledge and skill level.

Educating has to be entertaining – people like to use information I give them in a controlled setting – teaching people how to use our information and evaluate competing nutritional philosophies is what I do best.

Helper  
N=5

I see my role as helping people understand their nutritional/food needs and to follow through with appropriate actions/choices.

I hope that my role as an educator has helped make a difference in some of my client's lives to better/healthier living.

Role model  
N=3

I enjoy the role of educator but I also believe we need to model healthy eating/wellness.

As an educator we've got to be a role model and should practice what we teach.

Mentor  
N=2

I'm moving more toward coaching, mentoring and facilitating as opposed to teaching as a primary activity – shifting more responsibility to the client.

A balance among learning, assimilating and reorganizing my thinking framework and sharing the process with others – this allows me to be a mentor for some and to provide a thoughtful perspective on a subject for others.

Other  
N=8

I am much more of a practitioner than I am a teacher

I see myself as a communicator of nutrition, not so much an educator as that implies a one-way movement of information – “educator” or “teacher” is too rigid for me

---



### Respondent Comments on How the Questionnaire Promoted Their Reflection as an Educator

Respondents were asked to comment on how the questionnaire promoted their reflection as educators (Table 26). Eighty-one comments reflected respondents' important roles as educators. Some commented the questionnaire helped them to stop and take a serious look at what they do and would like to do. A few said it helped them see the educational process on a broader level and not just the technical aspects of teaching. For those that seriously reflected on their educator roles, some felt that they required more information and skills regarding education. They wanted to learn more about educational methods, techniques and principles. A few commented that they have been thinking about pursuing formal training in education for sometime and that this questionnaire reaffirmed their interests in educational studies.

Some comments (a dozen) were on the development of objectives, goals and behavior change. The intent of this study was not to promote one educational approach over another yet some respondents felt that their teaching practices could benefit more by incorporating behavioral change techniques. Perhaps the mere mention of those terms in the *Educational Perspectives Inventory* together with their interests with behavior change strengthened the notion that behavioral techniques and measurable outcomes were superior. Alternatively, a small number of respondents discovered that one's educational approach represented some kind of educational philosophy. One individual commented that the questionnaire provoked her to think more theoretically about adult education rather than just focus on the technical aspects of teaching alone. Just as a few respondents reflected on the notion of educational philosophies, other respondents entertained the idea that nutrition could be related to larger social processes. Questions on the *Educational Perspectives Inventory* regarding Social Reform likely encouraged respondents to reflect on social issues. The questionnaire helped some respondents to think more deeply about the social values and contexts of teaching nutrition while others realized that through improving health of individuals they were promoting social change.

Table 26

Dietitians Provide Feedback About the Questionnaire  
 (N= Number of Comments, Total comments=81)

Category	Sample statements from respondents
Reaffirmed important role as educator N=23	<p>This questionnaire made me refocus and emphasize my role as an educator in my current practice.</p> <p>Has made me think more about my educational practice and what I actually do versus what I would like to do.</p>
Identified need to update education skills N=16	<p>I realize I still have a lot to learn about being an effective educator.</p> <p>To evaluate my teaching methods to ensure that I incorporate my beliefs &amp; intentions.</p>
Reaffirmed importance of behavioral objectives and behavioral change N=12	<p>I am on the right track focusing my energies on learning more about educating and behavioral change.</p> <p>I likely need to spend more time in teaching learners about establishing learning objectives.</p>
Prompted thoughts on philosophies of teaching N=8	<p>Education is a lot more involved than I ever thought. It is a philosophy.</p> <p>This questionnaire has provoked me to think more theoretically about adult education rather than just the practical aspects.</p>
Role of social change in education N=6	<p>It has provoked my thinking about [nutrition] education in that in some instances it can be used to effect social change.</p> <p>Heightened my awareness of how effective we can be to improve health of individuals and promote social change.</p>
Other N=16	<p>Education in my job is related to staff and colleagues – I do not have the responsibility for nutrition education</p> <p>It's equally important to teach and evaluate your effectiveness by conducting evaluations</p>

## CHAPTER 5

### DIETITANS AS EDUCATORS

The *Educational Perspectives of Registered Dietitians* questionnaire provided information about personal and professional characteristics of dietitians and their educator roles. Results from both open and closed ended questions revealed that dietitians have important educator roles, show interest in nutrition and behavior change and are interested in the welfare of their clients. Respondents articulated their educational goals and elaborated on the rewards and challenges of teaching. Many respondents were rewarded when they helped clients attain optimal health and when they provided clients with practical information to make their own informed choices. Respondents viewed client non-compliance and disinterest, lack of behavior change, and time constraints as the most challenging aspects of teaching.

The first section of this chapter addresses themes that emerged from the research: dietitians' prominent educator role, behaviorism and behavior change, humanism, functionalism, professional interests, social-cultural factors, frustrations and barriers. Impacts of the survey on respondents are discussed as well. The second section of the discussion focuses on the results from the *Educational Perspectives Inventory* representing the five Educational Perspectives (Transmission, Apprenticeship, Developmental, Nurturing and Social Reform). Although the perspectives are presented separately, anyone taking the *Educational Perspectives Inventory* will have some combination of all five Educational Perspectives scores. Personal and professional characteristics and open-ended responses that pertained to roles, educational aims, concepts of knowledge and learning, and relationships with clients are discussed. The third section reveals relationships among personal and professional characteristics and the five Educational Perspectives.

#### Prominent Educator Role

Many respondents acknowledged their roles as educators and teachers. Some respondents were aware of their educational roles before they entered dietetics or realized early in their career that teaching was an important job function. These dietitians did not take their teaching roles for granted and felt it was a privilege to teach others; education was a central rather than a peripheral job responsibility. For example, respondents were asked to comment on their roles as educators and the following responses included, "the responsibility of being an educator is enormous and I never take the role for granted" and "educating is very important to me and my job – I am always striving to be a better educator." However, other respondents acknowledged the importance of the educational process but had not thought of themselves as educators and teachers. For example, "it took me years to see that my role as a dietitian was primarily that of an educator-I wish dietitians and other health professionals took educational issues seriously and didn't treat it as 'soft' or 'fluff'" and "I didn't plan to teach but it's really the core of being a dietitian" were a sample of some of the responses.

However, some respondents also expressed frustrations encountered with being an educator in dietetics, for example, "I both love and hate teaching – it can be so rewarding when I am permitted to set my own objectives and use my own style – only then do I feel I have been a successful educator", "my role as an educator is not as enhanced as I would like it to be – there's a lot of room for increasing the role of dietitians as educators" and "I'm often taken for granted

and mistreated as an educator – educating on content alone is easy, effecting change is a totally different matter – it's not for the faint of heart." Most frustrations also echoed how difficult it was to help people change their behaviors.

Dietitians also expressed the challenges they face as educators, namely, they queried the effectiveness of their teaching style, method, or approach. For example, some stated they had difficulty "establishing a person's initial understanding in order to build from there" and "choosing the right approach or method to deliver information to maintain motivation or raise motivation, so people can make changes." Subsequently, some respondents felt they needed to upgrade their teaching skills and techniques and some stated that it "made me once again consider pursuit of further academics especially in area of education to develop effectiveness", and "I realize I still have a lot to learn about being an effective educator."

Respondents estimated that they spent at least half of their time teaching others at work. This result shows that teaching occupied a significant portion of their workday. Dietitians may teach different people (for example, individuals, groups, the healthy, and the medically compromised); special nutrition information (for example, diabetes, cardiac, allergies, and pediatric) in a variety of settings (for example, hospitals, communities, universities, and industry). However the fact that dietitians are teachers is undeniable as one respondent stated, "all dietitians no matter what their area of practice have a role as an educator or teacher."

Over one-third of respondents were drawn to dietetics for the opportunity to teach and educate others and more than 60% of respondents expressed current interests in teaching within dietetics. Respondents were interested in both teaching and in the development of educational materials. Some dietitians had previous formal education and work experience related to teaching while other teachers directly influenced how respondents taught others. Out of 52 respondents who had either completed or were in the progress of completing graduate degrees, nine had pursued degrees in Adult Education. Dietitians may have learned of Adult Education either from colleagues or they may have been exposed to undergraduate courses in education. Six out of 32 respondents had teaching careers before they entered dietetics. Also, out of 23 respondents who occupied dietetic positions outside of Canada, six were instructors or teachers in some capacity. Of those respondents whose teaching practices were influenced by other teachers, teachers of education influenced most respondents. Professional interests, formal education, international work experience, and previous careers highlight the influence of teaching on the lives of respondents.

A small number of respondents questioned if further education or teaching preparation would be more harmful than helpful, for example, "I know I bring a personal perspective and also very practical orientation to nutrition communication...I have no formal education courses which I feel may not necessarily be a detriment" and "one can certainly learn continually from books, seminars etc. – but I am an 'old dog' believing that a good teacher is born that way – education and development of skills of course help but I feel that a real educator has it from within (from the heart)." When respondents were asked to indicate what had influenced the way they taught, there were twenty comments about the practical experience of teaching and "just doing it". Respondents realized their important role as teachers and queried how they should improve the teaching process. However, many respondents also believed if teaching skills and techniques were acquired it would be for the benefit of increasing learner motivation and behavior change.

## Dominant Influences: Behaviorism and Humanism

### Behaviorism and Behavior Change

The language of behaviorism is used throughout dietetic literature today and many health professionals such as dietitians continue to use behaviorist approaches. Holli & Calabrese (1986) suggest that dietitians become proficient behavioral change specialists among other roles, so that behavior modification can be successfully implemented. Schwartz's review of nutrition education research and intervention in the US since 1980 reveal the most effective programs are behaviorally focused and theory based (Shwartz, 1996). Others view the goal of nutrition education to be the voluntary adoption of eating and other nutrition-related behavior conducive to health and well-being (Randell, 1995 cited in Shwartz, 1996). Johnson and Johnson (1985) recommend that theoretical frameworks within nutrition educational research be based on educational and behavioral related domains. Dietetic literature promotes the notion that behavior change is the goal of nutrition education. Behavior change has a place within dietetics. Overt nutrition behavior change is one helpful way for dietitians to gauge their effectiveness.

Dietitians are concerned with identifying problems for clients and then suggesting, encouraging and persuading them to adopt different behaviors more desirable and conducive to health. In this approach, dietitians play dominant roles as disseminators and change agents. Similar within dietetic literature, respondents commented on the satisfaction they receive when clients change their nutrition related behaviors. For example, respondents enjoyed "direct changes evident from education provided", "feedback in the form of behavior change" and "positive changes from dietary changes." Change that is measurable and quantifiable is an indicator that respondents, along with clients, have been successful and that "being able to see the results of information taught" is also very rewarding. What is interesting and ironic is although dietetics has been influenced by behaviorism and stresses the importance of behavior change strategies through education and training, several studies showed both interns and dietetic professionals have low behavioral counseling skills such as shaping, contracting, stimulus control, behavioral substitution, contingency management, and cognitive restructuring (Roach et al, 1992; Schlundt, 1994).

Respondents listed behavior change as the most rewarding aspect of teaching. However, respondents also listed behavior change as the second most challenging aspect of teaching as respondent expressed difficulty with, "not being able to bring about change in behavior and health" and "trying to break people's old habits or beliefs." Although respondents valued behavior change, some acknowledge behavior change is difficult for clients. For example, one respondent stated that "food is a huge cultural behavior integral to most people's personalities and it is very difficult to change" and another individual discovered that "knowledge does not necessarily translate into action." However, for most respondents, failure to bring about behavior change was perceived to be mainly due to low learner motivation or interest, non-compliance, a lack of behavioral teaching techniques, or ineffective client-counselor relationships (Holli & Calabrese, 1986). The influence of behaviorism continues to strongly pervade dietetics. Establishing objectives, designing an instructional plan, and evaluating outcomes that are measurable and quantifiable are important responsibilities of many dietitians.

## Humanism

A large number of dietetic publications cover the technical knowledge, skills and expertise needed by dietitians, but ignore the human skills required of the health care professional in working with others. Within literature on dietetic counseling skills, the humanistic approach, for example client-centered Rogerian therapy (presence of empathy, acceptance and genuineness) has been presented as another approach to developing learning relationships with clients. (Rogers, 1951).

There were many other ways that respondents voiced their humanistic educator concerns. Although they valued behavioral change, accurate nutrition information and nutritional expertise they preferred when "clients are active and participate in finding their own questions." Dietitians wanted to be learners as well as teachers as stated by one individual, "I learn from people I teach and they teach me about their experiences and lives." They also wanted to improve learner self-esteem and confidence by "empowering people by building their self-confidence", establish personal relationships with clients by "connecting on a personal level with others"; and finally increase client reflection and "enable clients to embrace broader and new perspectives."

Dietitians have been defined as service-oriented professionals who are qualified experts and committed to improving the lives of clients (Hodges, 1989). Dietetic literature mentions that many dietitians want to help people attain optimal health (Gables, 1997). Payne-Palacio (1996) states by its very nature, dietetics is a helping profession that serves people through care, respect and concern. However, how respondents define "help" depends on how they define their roles and relationships with the learners. Nearly two-thirds of respondents entered dietetics to help people. Although most respondents did not explicitly encourage learners to express emotions during an educational encounter, many commented on their desire to facilitate client empowerment "give people the power to make a choice"; help make a difference "satisfaction of having helped somebody"; establish a personal relationship with clients "connecting on a personal level with others"; allow clients to grow "seeing impoverished individuals grow; develop and improve their lives" and improve learner self-confidence and self-esteem "seeing peoples' attitude change to 'I can do this'".

Dietitians who are humanistic-centered may view help as creating safe, supportive environments for their clients in which both parties share knowledge for a common purpose. In these situations there may not be single solutions or solutions that are attainable in a finite period. Humanistic dietitians feel comfortable allowing clients to share thoughts and feelings regarding their eating behaviors and create supportive relationships where clients feel comfortable making small meaningful changes.

## Dominant Paradigm: Functionalism

Some respondents echoed responses that were similar to notions of functionalism and technical rationality, namely maintenance of nutrition expertise and scientific orientations within dietetics. Respondents valued their expert nutrition knowledge and wanted the opportunity to “be the expert and have others seek my advice” and enjoyed when “other professional groups or health care team members refer to you as the expert on nutrition.”

Many dietitians see themselves as sources who can de-mystify and clarify controversial and often confusing media messages about nutrition, “Our efforts continue to be countered by the people who promote nutrition misinformation. These people range from nutrition terrorists with their alarmist attacks on a principle, message, food, ingredient, or technology all the way to purveyors of food quackery, that is, those who promote for profit special foods, products, processes or appliances with false or misleading health or therapeutic claims” (Schwartz, 1996, p. 696). Respondents also acknowledge the presence of conflicting media messages where “confusing messages about nutrition in the media – confuse the public.” Respondents expressed their discomfort with clients who held different viewpoints and challenged their knowledge and status. Respondents also voiced frustrations when they had to deal with “know-it-alls” and when “people who are not dietitians and who tell you what is right or wrong but have come for your advice.” They also expressed frustration with other sources of nutrition information that are sometimes unreliable and “confuse the public” or when they have to “compete with conflicting information.”

Sciences form the foundation for the practice of dietetics. Within Canada, the framework for the education and training of dietitians in the 21<sup>st</sup> century locates the sciences at its core (Dietitians of Canada, 2000). Similarly, other dietetic research has focused on further elaborating the scientific underpinnings of the profession (Parks, 1994). Although almost half of respondents were initially interested in nutritional sciences on entering the profession, this percentage decreased 20% over time in which slightly over one-quarter of respondents were interested in the nutritional sciences. Dietitians who first enter the profession are new graduates and thus would have just completed courses in nutritional sciences, for example, biochemistry, food science, and microbiology. Over time, dietitians value the application of scientific knowledge to practical problems in order that clients can incorporate new knowledge or practices into daily life. Although it appears that respondents focus less time on the nutritional sciences, they are still concerned with providing scientifically up-to-date information.

## Professional Interests

Respondents shared a genuine interest in nutrition and health. For many respondents their intense interest in the subject matter of nutrition and its practical application to health were the main reasons they entered the profession. More than 88% of respondents initially valued the relationship of nutrition to health when they first chose dietetics and many respondents expressed both an initial and a current interest in health promotion. One study surveyed 1,695 dietetic interns regarding their decisions to enter into the field of dietetics. Results showed that a personal interest in nutrition was the strongest factor influencing a student’s decision to study dietetics (Kobel, 1997). In another study in which 419 dietetic students were surveyed regarding factors which attracted them to the dietetics profession, helping others and an awareness of how nutrition promotes health were characteristics strongly influencing students to pursue a career in dietetics (Markley & Huyck, 1992).

Respondents' interests in nutrition and health promotion were probably the primary reasons that respondents wanted their clients to reap the benefits of healthy nutrition practices. Rewarding aspects of teaching included helping clients improve their nutritional status and quality of life. For example, "helping clients make positive changes with accurate information they can trust" and "helping people to improve health and well-being through nutrition" were important for many respondents. Other respondents wanted clients to make a connection between nutrition and health. For example, one respondent was pleased when "clients say that information is valuable to them and they can incorporate into their own life" while another felt rewarded when "people state they are more aware of nutrition."

A review of the results of this survey and other dietetic literature reveal that dietitians have a genuine interest in nutrition and health. Most entered into the profession to help people achieve optimal well-being through healthy nutrition practices. Respondents were enthusiastic regarding the topic of nutrition and wanted to share their excitement with others.

### Social-Cultural Factors

The majority of respondents did not comment on societal influences or political-economic forces that affect the health status of individuals. Nor did the majority of respondents' comments pertain to societal change; instead, intervention was individual-focused rather than societal-focused. However, the very small number of comments (less than ten) that focused on the interconnection among nutrition, health and society tended to be well-articulated and expressive.

When entering dietetics, respondents were only moderately interested in the cultural food habits of their clients; however, these interests increased 113% over time. Although interest in the culture of clients increased, twenty-five respondents also voiced frustration when interacting with clients from different cultures. Dealing with clients from other backgrounds was the third highest challenge faced by respondents, particularly with regard to language and cultural barriers. Respondents appeared to want to learn more about cultural aspects of nutrition yet needed guidance and help themselves in order to understand the impact of culture on the learning process.

The relationships between dietitians and client are "probably easiest to establish when both share similar educational and social-economic backgrounds" (Holli & Calabrese, 1986, p. 6). However, in reality, dietitians interact with people who are elderly, illiterate, hearing-impaired, disabled, severely ill or who have limited formal education, have substance abuse issues or are from different cultural, religious and ethnic backgrounds. It might be valuable if dietitians examine their own values and personal attitudes toward others in order to establish meaningful relationships. Holli & Calabrese (1986) go on to say that being more self-aware might illuminate existing prejudices and incorrect assumptions.

Not all dietitians work within acute care or long term care settings. Survey results revealed that 12.5% of respondents worked within public health units or were community-based and more likely to address societal focused-nutrition issues such as food availability, equity and security. Similarly respondents had increased their interest in nutrition-related societal problems and expressed that, "I've realized that as a dietitian and potential educator, my role is to help affect society attitudes and change" and "some questions certainly made me think about my



goals as an educator-- the questionnaire has made me more aware of those goals-- yes, it seems I have used the subject of food to teach about higher ideals."

### Frustrations and Barriers

Issues of client non-compliance and lack of motivation are prominent within dietetics. Non-compliance with medical advice has been well documented - adherence to long-term medical regimens averages about 50% and adherence to dietary regimens is approximately 30%, with a range of 13 to 75% (Glanz, 1981 cited in Holli & Calabrese, 1986). Respondents' voiced their views on frustrations of learner non-compliance, disinterest, and lack of motivation, for example, "when patients do not take responsibility for themselves and want you to fix their problems for them", "people who want information but are unmotivated to change", and "people will learn and do what they truly want to. A doctor's referral isn't good enough - what will it take to make people get intrinsically motivated about nutrition? - I'm tired of not seeing results...maybe it's time for my second career."

Non-compliance in nutrition refers to when clients have not followed prescribed diet therapy for either disease treatment or prevention and as a result, the pre-determined behavior changes fail to occur. Dietitians often keep track of whether their client has been compliant with prescribed dietary recommendations, either from verbal communication from clients or physiological and anthropometric indices. Using this definition, non-compliance is viewed predominately as the learners' fault and thought of as a lack of discipline, will power, or "rebellious" personality. Dietitians often view themselves as sources of expert knowledge who have the ability to translate scientific information into practical and useful advice for their clients. Once this information has been organized into discreet learning objectives, and discussed and provided, there is often an assumption that learning and behavior change will automatically take place. Gable (1997), a dietitian and counselor, offers another description of the frustrations encountered by dietitians who interact with learners,

Many patients appear not to heed advice given, however, clearly the dietitian thinks she is putting it across. There are also many times when it seems that the patient's difficulties are not diet related. Frustration, helplessness, and disenchantment can develop for the dietitian who may think 'what am I doing wrong?' or 'this patient is not worth bothering with'. Once the dietitian finds herself groaning inwardly at the prospect of yet another patient, she is likely to find herself developing a routine 'spiel' to help her get through yet another busy clinic. Lack of skill and confidence in talking to certain people, a concern about giving up-to-date and accurate information, a desire to help and to please, a fear of confrontation and an uncertainty about how to cope with another's emotional distress, are common themes for dietitians (p.5).

Other factors that contribute to dietary non-compliance are dietitians who overload clients with information, clients who have excessive anxiety, lack of varied educational techniques (verbal, written instruction, visual aides), poor rapport between client and dietitian, and a physical environment not conducive with education or counseling (Dunbar & Stunkard, 1979 cited in Holli & Calabrese, 1986). Another possible reason for non-compliance is the impact that medical diagnoses have on patients and the ensuing emotional repercussions. For example, clients who have been told they have a life-threatening disease are in a period of shock when first admitted into hospital and are unlikely to process dietary recommendations. Non-compliance also increases when the dietary regimen is complex. For example, if the prescribed

diet is very different from the current diet, if dietary changes are for a long duration, if the new diet has higher food costs, if there is a lack of access to proper foods, or if extra time is needed for food preparation then the risk of non-compliance becomes greater.

Almost one-quarter of all comments (100/441) regarding challenging aspects of teaching were about the lack of learner compliance, motivation, and interest. It appears that many respondents were perplexed and frustrated when clients did not make the appropriate behavior changes. Clients who did not follow their treatment plan were deemed difficult, uncooperative, or unmotivated. If clients are not physically well but are provided with tools and practical information to change their status, why do clients resist help and why don't they change their behaviors? This question probably enters the minds of many dietitians at some point in their career. Respondents provided a range of possible answers to this question that ranged from "audience apathy", "people who do not take nutrition seriously", and "counseling people who don't really want to change their diets but are there because the physician told them to."

However, dietitians must be careful not to equate all lack of behavior change with client laziness, disinterest, or lack of motivation. If dietitians feel they have provided and disseminated reliable nutrition information but behavioral change still does not occur then they must search for other reasons such as psychological, social, economic, and cultural factors that influence clients' decisions. As dietitians become less like judges and more like co-investigators, they can work with clients to uncover reasons that prevent clients from taking more ownership of their health.

Dietitians are individuals who are part of social structures and influenced by social structures. Like the frame factor theory, teaching is not solely an individualistic endeavor, that is, although individual thought and agency affect the teaching and learning process so do the social structures in which dietitians are members. Via open-ended responses, respondents revealed numerous factors or "frames" that they perceived to be outside of their control and were sources of frustration. The ways dietitians perceive themselves as educators, external pressures which may be outside of their control (for example, time pressures, budgetary constraints), expectations to know a large amount of nutrition information and inadequate university preparation in education, affected respondents' roles and responsibilities in the teaching process.

Researchers in another study observed an interdisciplinary team setting and concluded that dietitians had the least sense of personal accomplishment and the greatest sense of depersonalization in comparison to three other main health professionals: physicians, nurses, and social workers (Dalke et al, 2000). This finding suggests inherent problems in the self-perceived roles of the dietitians. Although dietetic practitioners are regarded as experts in nutrition, there is still a lack of recognition from the public (Payne-Palacio, 1996). Most dietitians feel they have valid, scientific knowledge they can transmit to their clients but sometimes feel the significance of their work is not adequately acknowledged by others clients and professionals who often view dietitians as peripheral rather than central health care workers (Devault, 1995). Respondents voiced feelings of either being under-appreciated or taken for granted, for example, one found it difficult to "earn respect and significance as a health care professional" while another thought "education would be helped if 'dietitians' as a profession was better promoted – people will listen to a physiotherapist or doctor because they know what they do – when I say I am a dietitian- people ask ' what is that?' then they don't view me as a resource person as they would a doctor."

Time constraints were listed as frustrations that respondents face at work. As one respondent noted, "within the time constraints of our system, what I would like to achieve and what I am able to are often quite different." While another stated, "the lack of time, especially in health care systems, make it very difficult to spend the appropriate amount of follow-up time to assess learning - as an educator I have high expectations of myself and my clients - we fall short of those expectations due to limitations of time - long waiting lists can be discouraging to clients."

As discussed previously, some respondents felt traditional hospital environments may not be most conducive to learning, particularly when dietitians are asked to teach life long nutrition practices to patients who are not feeling well or who may feel emotionally burdened with a newly diagnosed medical condition. One respondent stated, "hospitals have traditionally held the role of dietitians to be patient educators - it has become readily apparent this has never been an effective or appropriate venue for learning and increasingly so, given ever shortening length of stays." This frustration has been documented in the literature in the all too often scenario (Wylie, 1976 cited in Holli & Calabrese, 1986),

Upon receipt of the physician's order for a diet instruction, the hospital dietitian taught the patient his modified diet using a printed sheet of instructions. Too often, the request was received at the last minute prior to hospital discharge, and the instruction was a one-shot, hit-or-miss situation. Fifteen or twenty minutes is not sufficient time to effect significant change in an individual's eating pattern...nutrition counseling should not be a one time service, follow-up counseling is an important part of care (p. 9).

Nutrition research is constantly evolving in which new facts become known and old facts revisited and modified. As nutrition experts and providers of accurate up, to date information, many dietitians find it challenging to read and keep current on the vast amount of nutrition knowledge present; as one respondent stated, it was a challenge to "stay abreast of such a broad range of things to know and people expect you to know it all." Possible penalties of not keeping abreast include damaged credibility and decreased trust from both clients and other professionals.

Dietitians acknowledge the lack of formal training in teaching and want the opportunity to learn about teaching just as they have had access to education on nutritional science. Several respondents felt that in comparison to the amount of teaching and education done on the job, dietetic education preparation was inadequate -- particularly at the university level. As one respondent stated, "I don't think dietitians are taught to be good teachers and would benefit from more emphasis at university with required education courses." Another stated, "while studying at university I was never prepared for the extent of educating that I do as a dietitian."

## Impact of Survey on Respondents

Over 40 respondents commented that the survey helped reaffirm their role as educators. For example, one respondent stated that the questionnaire “definitely made me take a serious look at my role as a dietitian” while others stated “this questionnaire made me focus and emphasize my role as an educator in my current practice” and “it has made me think more about my educational practices and what I actually do versus what I would like to do.” Other respondents stated that the questionnaire reaffirmed their intentions to update their educational practice through “pursuing further academics in an area of education” while others commented that “I have still have a lot to learn about being an effective educator.” Eight respondents commented that the questionnaire prompted them to think about philosophies and theories of teaching, for example, “education is a lot more involved than I every thought. It is a philosophy” and “this questionnaire has provoked me to think more theoretically about adult education rather than just the practical aspects.”

Respondents offered both negative and positive feedback regarding the survey. Negative feedback and constructive criticism included comments that the survey was too focused on “dietitians in a teacher role” even though efforts were taken to use the word educator and education throughout the survey. Fewer than five respondents felt that the mention of values, beliefs, and morals did not pertain to education, for example, “I don’t feel it is my role to teach moral issues if I’m involved in teaching nutrition” and “I wonder if the questions imply that dietitians have a higher moral value than those they teach”. It appears that some respondents felt that the mere mention of “morals” meant dietitians should be moralistic or thrust their own religious or personal ethical standards onto their clients. The word “morals” was mentioned once in the questionnaire and appeared as the last question in the *Educational Perspective Inventory* which stated, “For me, educating is a moral act as much as an intellectual activity.” Although this word was used only once, it appears that some respondents had a strong reaction to its presence in the questionnaire.

Positive feedback included, “thanks for the opportunity to learn something new about myself” and “it encouraged me to re-think my educational perspectives and evaluate my role as an educator”. One comment was succinct and explicitly stated that dietitians are educators but lack the educational tools and frameworks to be effective educators; “It has made me consider my own beliefs and values and compare them to what I’ve learned in my undergraduate dietetics degree, internship and finally what I’m learning as a graduate student- it made me realize how little education a dietitian receives in education and counseling. We need more training in this area, thank you for your research in this important area.”

## The Five Educational Perspectives

The *Educational Perspective Inventory* was a useful tool to study dietitians’ educational practices, intentions, and beliefs. Although the following discussion categorizes the five Educational Perspectives separately, in reality, each respondent embodies some aspects of all five perspectives. For example, when individuals complete the *Educational Perspectives Inventory* their results yield five scores which represent the Transmission, Apprenticeship, Developmental, Nurturing, and Social Reform Perspectives. Respondents who complete the inventory are rarely of one Educational Perspective. Instead, respondents possess one dominant perspective with one or two background perspectives. First, a discussion of each perspective follows and includes a brief summary of the perspective, open-ended responses consistent with

beliefs within perspectives and personal or professional characteristics that corroborate the perspectives. Second, relationships among personal and professional characteristics and the Educational Perspectives will be addressed.

Teachers of adults commonly possess one, and sometimes two, dominant perspectives, that is, perspectives with scores one standard deviation or more above their personal mean—the mean of all five of their TPI scores (Pratt & Collins, 2000). They also commonly hold one perspective as “recessive”; indicating their score on that perspective is one or more standard deviations below their personal mean. Over eight percent of respondents had no dominant perspective. The greatest percentage of respondents (43%) was dominant in the Nurturing Perspective, followed by the Apprenticeship Perspective (41.3%) and then the Transmission Perspective (25.7%). A small percentage of respondents were dominant in the Developmental Perspective (8.7%) and an even smaller degree of respondents were dominant in Social Reform (1.3%).

It is not surprising that many dietitians held a Nurturing Perspective particularly in light of dietetics’ history as a helping profession and the nature of food when used to heal others. On some level, almost all respondents help individuals; however, this result also shows that respondents also value the personal relationships they form with their clients. Some respondents stressed the importance of improving learner self-confidence

The next highest dominant perspective was Apprenticeship where respondents viewed themselves as coaches and role models. There may be several reasons why respondents align themselves with the Apprenticeship Perspective. First, most dietitians spend an intensive year in a dietetic internship and learn how to become part of the professional community and model themselves after supervising dietitians. Many interns who become dietitians become supervisors of other dietetic interns. Thus education, training and professional practice becomes a cyclic process. Second, although hospitals are not “authentic-home” contexts for many patients, respondents still strive to coach clients and model healthy nutrition behaviors so that clients will succeed in their own environments.

The Transmission Perspective was the third most dominant perspective. Although only one-quarter of respondents were dominant in Transmission, respondents voiced their desires to be reliable content experts who disseminate accurate information to ultimately enable behavior change. Large amounts of new nutrition information and competition with media and other persons espousing nutrition advice were a cause of concern for respondents. Respondents also fervently voiced frustrations when measurable change failed to occur which many attributed to lack of client motivation, interest and compliance.

Only 8.7% of respondents were dominant in the Developmental Perspective. It appears that this small percentage of respondents wanted to help their clients develop increasingly complex forms of thought related to nutrition and wanted to help them make connections between nutrition and health.

Only 1.3% of respondents were dominant in Social Reform. Less than ten comments were consistent with the Social Reform Perspective. Many of these comments pertained to how the questionnaire provoked thoughts and actions regarding the interconnectedness among educator, learner, and society rather than assertions about current actions and thoughts consistent with the Social Reform Perspective.

## The Transmission Perspective

The central belief of the Transmission Perspective is that teachers have a responsibility to accurately describe, organize and deliver a relatively stable body of knowledge about an objective phenomenon which in turn must be reproduced by learners. Content mastery is of utmost importance to Transmission teachers since their credibility depends on it. Dietetic education, training and professional practice stress the importance of subject mastery in order for nutrition information to be delivered accurately and appropriately to learners and clients. Transmission teachers are closely connected to their content or subject matter and primarily influence or change information.

Through open-ended questions, respondents who were most dominant in Transmission likely voiced beliefs, commitments, roles and responsibilities consistent with the Transmission Perspective. These respondents commented that rewarding aspects of teaching included "providing others with information that may positively affect their health and life", while a small number of respondents expressed that "being recognized as a nutrition expert" was also rewarding. Respondents described their role as educators in ways consistent with the Transmission Perspective, first, as providers of information, "it is my personal goal to develop my knowledge and skills to the best of my ability and to be able to convert this information and applicable knowledge and skills for my client's benefit". Secondly, some respondents felt they had to be performers and entertainers as "educating has to be entertaining..." and "making the information attractive and sought after so that the recipient is motivated to put the information into practice" was deemed important.

Teachers holding a Transmission Perspective usually have an intense interest and enthusiasm of their subject matter and it is often the primary reason for entry into a particular job or profession. Most survey respondents consistently revealed their interests in nutrition and health were the main reasons for entering the profession. Most of the 240 respondents (88.3%) indicated the relationship of nutrition to health was the main factor in choosing dietetics as a career. The top three initial interests on entering the profession were all related to the subject matter of nutrition and health or the communication of nutrition where 62.9% of respondents were initially interested in nutrition counseling and behavior change, 59.2% were interested in health promotion and 45.8% were initially interested in the nutritional sciences. Respondents also shared an enthusiasm about nutrition as stated by one individual "it [nutrition] is fun. The subject matter can encompass a lot of areas of health, that is, exercise, nutrition, food etc".

Pre-selection of teaching materials, learning objectives, organized and sequential delivery of content, and measurable and quantifiable learning outcomes are responsibilities often used by transmission teachers. Teachers who often rely on measurable and quantifiable learning outcomes tend to also rely on behavioral objectives and competencies. Sixty-eight respondents listed that the most rewarding aspect of teaching were positive health outcomes as a result of behavioral change and appreciated when "someone has successfully changed their behavior as a result of what I've taught them." Alternatively, one hundred respondents indicated the top challenging aspect of teaching was the lack of learner motivation, interest and compliance while twenty-six respondents were frustrated with the lack of behavioral change. When measurable, pre-determined learning and behavior outcomes failed to occur, respondents perceived that poor learner motivation, compliance and interest were the likely causes. Respondents expressed the following comments about unmotivated and disinterested learners such as "working with

patients who are unable to make changes – the non-compliers – it makes me feel helpless”, “those who don’t follow your recommendations – waste your time” and frustrations with “people that understand the role of nutrition but refuse to accept.”

Although the intention of the survey was not to promote any one educational perspective over another, twelve respondents commented that the questionnaire reaffirmed the importance of behavioral objectives and changes that are consistent themes found within the Transmission Perspective. Some examples of comments pertaining to behavioral objectives include “I likely need to spend more time in teaching learners about establishing learning objectives” and “it caused me to think about doing more confidence building of my patients and to think more in terms of objectives.” One possible explanation is the mere presence of questions on the Educational Perspectives Inventory related to the behavior change and learning objectives, for example, “I cover the required content accurately and in the allotted time” and “I follow the learning objectives carefully” might have been construed by some participants to mean those functions are “good” and should be included in the teaching process.

In the Transmission Perspective, the teacher and content are the two main elements in the teaching process. There were comments from respondents that reinforced the notion that their knowledge, skill and contributions were important. Thirty-six respondents enjoyed being a teacher especially when they felt appreciated for their efforts and when improvement in client health was directly attributed to their intervention. Respondents felt appreciated “when patients appreciate my effort, wealth of knowledge and practical tips” and when “I get back as much as I give.” Respondents felt teaching was rewarding when improvements in the health of clients were primarily due to dietitian intervention and reflected in comments such as “when people can successfully incorporate one of my suggestions in their daily life” and “seeing the patients feel better when they follow the suggestions.”

Transmission teachers who perceive themselves as experts perceive themselves to have the most amount of control in the teaching process because they determine what, how, and when information is provided. However, most teachers within this perspective don’t explicitly acknowledge their control because either they are not aware of it or they do not feel it relates to the teaching process. One notable source of power teachers have is the degree of jargon and complexity of their subject material especially for those who claim the rights to dispense elaborate and complex information such as in law or medicine. The field of nutrition and dietetics is no exception, particularly in its alliance with the medical and scientific fields.

Respondents in this study did not explicitly mention control or power within the teaching process. However respondents stated their important role as providers of a domain of knowledge, “providing individuals with accurate information in a society bombarded with misinformation and nutrition quackery” and in their ability to control the learning outcomes and focus on “behavior change as a result of information presented”. The kind of control that respondents have is not menacing or destructive, rather it is the kind afforded to them because of the knowledge they possess and dispense to clients. Respondents voiced their frustrations and challenges when they perceived a lack of control. For example, respondents appeared most frustrated when behavior change did not occur, “inability to provoke behavior change”; when clients expressed little interest or motivation; “dealing with people who will not or cannot see the benefits of diet improvements”; time constraints, “not enough time for actually teaching or developing appropriate education materials”; and scarce administrative resources, “lack of monetary resources.”

## The Apprenticeship Perspective

The key belief in the Apprenticeship Teaching Perspective is that expert knowledge is acquired and developed within a specific context of application. A teacher whose dominant perspective is Apprenticeship Perspective assumes an intimate relationship among context, content and teacher and to separate any of these elements would create an inauthentic learning experience. Although content is very important, it is a vehicle in which individuals learn how to relate to it within a particular setting, that is, content, task and skills can never be separated from the place of application; "knowledge, role (identity) and context are inseparably entwined" (Pratt, 1989, p. 227).

There are several interesting and unique aspects of the Apprenticeship Perspective. First, learners not only learn the subject matter but they learn how to think and act in ways similar to the professional community. In other words, learners enter a period of intensive socialization. This process of socialization is not static. Instead, roles and responsibilities of learners evolve over time. Second, the Apprenticeship Perspective differs from the Transmission Perspective because the purpose of learning is not only to master a well defined body of information, but learning is expected to be applied in real and practical settings under the supervision of a more experienced practitioner. Third, the learner usually begins the learning process on the periphery of the community of practice. With time and experience, the learner is given more responsibility and autonomy as she moves from the periphery toward the center of practice. Two variables exist within dietetics that may influence individuals to view teaching through an Apprenticeship Perspective. The first is the dietetic internship and the second is the nature of nutrition itself and its immediate application in real settings such as home or work.

Dietetic internships are often 12-month intensive programs where newly graduated university students work and study primarily within hospital or health care settings (a limited number of community internships currently exist). Interns are under supervision by staff dietitians and rotate through different specialties for example, pediatrics, diabetes, cardiac and maternity. Interns initially observe dietitians and through time assume more responsibility for nutrition assessment and teaching until they are engaged in staff relief and generally work on their own without direct supervision. A dietetic internship is the critical point where interns bridge the gap between theory and practice.

If the context (health care setting) were removed or separated from the subject matter (nutrition) then dietetic internships would not exist. Interns are socialized into a professional community in which knowledge, acceptable behavior, and attitudes are highly contextualized. The dietetic intern's role evolves as she spends time learning from more experienced practitioners. When respondents were asked to indicate activities that influenced teaching, only five respondents stated that dietetic internships influenced teaching. It is difficult to determine how many other respondents would have indicated dietetic internships if it had been listed as a separate category.

Second, the nature of nutrition lends itself to application. Dietitians are trained to teach people to immediately apply principles of healthy eating when clients return home. In an ideal world dietitians would educate people at their place of residence where food is selected, stored, prepared and eaten. However, dietitians teach clients in non-residence settings such as hospitals



and other health care settings. Dietitians often speak of the importance of practicality and tailoring nutrition information so clients can immediately apply those principles at home.

Questions on the *Educational Perspectives Inventory* that measured the Apprenticeship Perspective included “My job is demonstrated in how nutrition fits into everyday life” and “I want people to understand the realities of nutrition in the real world”. Questions like these asked respondents to think about the practical application of nutrition. In open-ended questions respondents commented that an important purpose of teaching was to stress the practicality of nutrition as revealed in the following statements, “I try to present the material in a realistic way so they can incorporate it into their realm of living – this means being practical from *their* perspective – not just mine” and “To make the learning applicable and useful, it must be practical.”

Learning and socialization within a community of practice does not stop after university or internship training. Instead, it continues throughout the professional lives of dietitians especially during transition times such as employment in new dietetic work settings and upgrade of skills in clinical specialties. Dietitians continue to influence each other in areas of learning and teaching. For example, out of the 144 of respondents whose teaching was influenced by someone, dietetic colleagues influenced 84 respondents. Of the 54 respondents whose teaching was influenced by a teacher, a teacher of dietetics influenced 13 respondents. Of the 38 who were influenced by an author, dietitians influenced 10 respondents. Although the primary role of the apprenticeship teacher is of a role model and coach, a very small number of respondents (five) explicitly stated their role was of a role model, “as an educator, we’ve got to be a role model and should practice what we teach” and mentor, “I’m moving toward coaching, mentoring and facilitating as opposed to teaching as a primary activity – shifting more responsibility to the client”.

As with each perspective, issues of power are present within the Apprenticeship Perspective. Teachers control what will be learned, how it will be learned, and where it will be learned, often without input from learners. Within dietetic internships, staff dietitians and internship directors also judge interns’ knowledge and skills which are usually dependent on length and type of experience. Those with more experience are often given more differentiated responsibilities within the community of practice. Within internship settings, internship directors are given control in determining who will enter into the profession and how learners progress or do not progress through dietetic training.

### The Developmental Perspective

Within the Developmental Perspective, educators want learners increase their ability to think about one’s subject matter, discipline, or practice using deep, complex, and sophisticated forms of thought. Teachers whose dominant perspective is Developmental desire to help learners make connections between present and desired ways of thinking and to highlight the centrality of prior knowledge. The relationship between learners and content is dominant within the Developmental Perspective and teachers use the content as a means by which learners can develop thinking and reasoning skills.

The Developmental Perspective is rooted within constructivism and distinguished by two beliefs. First, learners perceive the world through frames or lenses, which have been previously developed and formed by experience. Learners’ previous knowledge is considered essential in

the teaching process because it is from this point that further learning occurs. In the Transmission Perspective, teachers may think learners come to the teaching environment with a clean slate ready to be filled with the correct information. In the Developmental Perspective teachers acknowledge learners have previous conceptions of knowledge, perceptions about themselves in the world and beliefs about the content or how they will learn the content. When asked to expand on their role as educators, several respondents felt it was important to build on learners' previous knowledge, for example, comments include, "it is important in educating to first find out the level of knowledge of the client and to develop a rapport with them- listening to clients is as important as talking to them" and "each client must be met at the psychological, emotional status alive in them today – it is being received and understood that enables them to be open and integrate new knowledge with which to make change – people need tools and methods to better understand own functioning so they are freer and able to see choices they can make."

Second, the focus of learning in this teaching process is not so much on quantity of knowledge but rather the quality of thinking and reasoning about knowledge. Although learners come with previous ways of thinking about content it does not necessarily mean those thoughts and ways of thinking are entirely accurate and complete. Therefore, the teacher challenges learners to develop a deeper understanding of how they think and reason about the knowledge or content.

Respondents also expressed two rewards of teaching similar to the beliefs found within the Developmental Perspective. One reward is that respondents want their clients to understand and make connections between nutrition and improved health (the majority of comments do not pertain to the development of higher cognitive process but rather greater comprehension between nutrition and health). Clients then learn how to think about nutrition and the choices that support their goals. When asked to list their rewards of teaching, some respondents valued "seeing people take the information and use it reasonably, not compulsively, being able to be flexible and still have a positive outcome" and "seeing people make the connection between nutrition and health." The second reward is that respondents wanted to help clients grow and become more reflective and in the process "open up someone's mind to allow them to think for themselves and develop their own philosophies/practices" and "enable groups of individuals with different perspectives to embrace broader and new perspectives."

Teachers with high Developmental Perspective scores tend to be guides and co-inquirers more than simply content experts and providers of information. As respondents commented on their role as educators, they wanted to be both teacher and learner as revealed by the following responses, "I learn from the people I teach- they educate me about their experiences and their lives" while "learning from others' experience" was seen as important in the teaching process. They help learners make connections between their current ways of thinking about something that might be overly simplistic or based on incorrect assumptions and more developed ways of thinking. The Developmental Perspective is a major departure from the Transmission and Apprenticeship Perspectives, as "effective teaching takes its direction from the learners' knowledge, not the teachers': bridges are built *from the learners point of view*" (Pratt, 1998, p. 237).

Again, as with other Teaching Perspectives, there are control and power issues within the Developmental Perspective, however power is shared with learners rather than being predominately with teachers – becoming issues of empowerment rather than power. As learners are encouraged to articulate their thoughts on what they have learned thus far and how they

understand something, teachers must be sensitive to not openly critique too early in the teaching process as this may silence or intimidate the learner from sharing.

### The Nurturing Perspective

The Nurturing Perspective is based on the belief that there is a strong and important relationship between learners' self-concept and learning. It acknowledges the importance of previous learning but focuses primarily on developing a trusting and safe environment in which learners feel free to express emotions during the learning process. The primary relationship within Pratt's general teaching model is between the learners and the teacher.

Nurturing teachers try to be both friend and facilitator. However, teachers within this perspective need to strive to achieve a balance between challenging and caring. Through challenging, teachers uphold achievable goals that result in a genuine sense of accomplishment and self-esteem for the learner and through caring, teachers are sensitive to learners' difficulties or hardships (Pratt, 1998). Teachers learn how to support individuals and build self-confidence so they can think and act on their own but they need to respect professional boundaries and ethics. Instead of the teacher being viewed as a content expert, authority, or someone to emulate, learners are encouraged to embark on a journey of self-discovery in the learning process. Nurturing teachers also think holistically and try to be aware of learners emotional and cognitive dimensions as well as "emotional wholeness of the learner" (Pratt, 1998, p.242).

Close to 60% of all survey respondents indicated helping others was a factor in choosing dietetics. Many health professionals, like dietitians, want to improve the quality of life of their clients in some way. Respondents wanted to help clients take more control of their health, establish personal relationships with clients, help make a difference and improve learner self-confidence and self-esteem. However, very few respondents encouraged their clients to express themselves emotionally. Sample statements regarding empowering clients include "empowering others to make choices regarding their health" and "facilitating change-seeing people change and grow." Some respondents also felt it was important to establish personal relationships with clients by "forming a true 'connection' to a patient, client or student" and " 'touching' someone". Other respondents wanted to make a difference and expressed they had "personal satisfaction-feeling as though I am making a difference" and an "ability to make a difference in people's health status." Improving self-confidence and self-esteem were important for some respondents as they stated "watching changes in self-confidence of students" and "seeing people's attitude change to 'I can do this'" were importance aspects of the teaching process.

### The Social Reform Perspective

Teachers who hold a Social Reform Perspective have an explicitly articulated ideal and a "unique sense of mission which directs and defines their teaching" (Pratt, 1998, p. 248). Social Reform teachers have a clear ideal and believe they can help to bring about a better society. Social Reform teachers operate from three assumptions, first, their ideals are applicable and appropriate for everyone; second, their ideals set the stage for a better society; and third, social reform is the goal of education. Although the teaching process starts with the learners' knowledge and experiences, it is not an individualistic psychological endeavor. Instead, knowledge and experiences are always socially, culturally, politically, historically and economically framed so that learners can critically examine their taken for granted understandings about the world and their place in it.

Issues of power are central to the teaching process and discussed explicitly while social not individual change is stressed. Social Reform teachers feel power is imbedded among different sectors and institutions of society and occur at all levels of the educational and teaching process. During the teaching process, Social Reform teachers do not conceal but rather reveal their beliefs and ideologies at the beginning of a teaching session. Social Reform teachers do not view content as value-neutral; instead, content is socially constructed and is always framed within a cultural and historical time and place. Learning is not a static process where content is digested uncritically but instead learning is a process of transformation.

Out of all the open-ended survey comments on education in dietetics, fewer than ten respondents acknowledged their role as social change agents or as advocates of a particular ideal. Six respondents commented that nutrition education could serve a social service aim, although, most respondents were not currently engaged in nutrition education for social change. Some respondents commented on how they were provoked into thinking about society and nutrition education, for example, "it has provoked my thinking about education in that in some instances it [nutrition] can be used to effect social change" and how it was important "to query more deeply the social values context of teaching nutrition". Seven respondents voiced confusion and trepidation in introducing the notion of societal influence and change, for example, "I am very skeptical of changing society to change people -- I would rather give information so people can make their own decisions -- it has confirmed that I believe in individual responsibility for health" and one respondent was "geared so much at educating clients as an individual I have not considered trying to encourage them to help society change -- this seems a daunting task." It appears that most respondents do not operate or practice from a Social Reform Perspective in which social ideals are explicitly articulated or where they integrate social, cultural, political, historical and economical issues into their educational practice.

#### Relationships Among Personal and Professional Characteristics and The Five Educational Perspectives

Although no one Educational Perspective is "better" than another, results from this section reveal what experiences foster Educational Perspectives and whether those perspectives and perceptions are most conducive to the goals and aims of the profession. Table 27 summarizes the significant relationships (the statistically significant correlations) between 117 personal and professional variables in the survey and the five Educational Perspectives. There are a total of 35 significant correlations. However, there are cautions when interpreting the statistical data. First, correlations do not presume causality. Therefore, statistically significant correlations are viewed as relationships or influences rather than causes. Second, the statistically significant correlations in this study are not strong correlations and as a result, relationships among variables are relatively weak. Nevertheless, some associations do exist among variables and may provide some insight into the influences that shape Educational Perspectives. Social Reform had the most number of significant correlations (14), followed by Nurturing (8), Developmental (8), Transmission (3) and Apprenticeship (2).

Table 27

Summary of Significant Correlations Among Personal and Professional Characteristics and the Five Educational Perspectives

Characteristics	Transmission	Apprenticeship	Development	Nurturing	Social Reform
<b>Personal Characteristics</b>					
Schooled outside of Canada	.20	--	--	--	--
Graduate degrees	--	.19	--	--	--
First language spoken	--	--	--	--	.18
Current language spoken	--	--	--	--	.19
Number of current languages spoken	--	--	--	--	.19
<b>Professional Characteristics</b>					
Years of practice within dietetics	--	--	.18	--	.19
Valued management opportunities on entering dietetics	.18	--	--	--	--
Initial interest in teaching within dietetics	--	--	.18	.18	--
Initial interest in cultural food habits	--	--	--	--	.17
Initial interest in management of people and resources	--	--	--	--	.19
Initial interest in food procurement and production	--	--	--	--	.17
Current interest in management of people and resources	--	--	.20	--	.20
Responsible for nutrition counseling	--	--	--	--	-.17
Responsible for interacting with community groups	--	--	**.23	.18	.19
Responsible for public or media relations	--	--	**.23	**.24	**.23
Responsible for marketing	--	--	.18	--	--
Interaction with patients	--	--	--	--	-.21
Interaction with community groups	--	--	.18	--	--
Interaction with the general public	--	--	**.20	--	**.22
Influence of university coursework on teaching	.19	.19	--	--	--
Influence of someone or something on teaching	--	--	--	**.26	.20
Influence of a colleague on teaching	--	--	--	.21	--
Influence of a teacher on teaching	--	--	--	.17	--
Influence of an author on teaching	--	--	--	.17	--
Influence of workshops or seminars on teaching	--	--	--	**.24	--
<b>Total significant correlations</b>	<b>3</b>	<b>2</b>	<b>8</b>	<b>8</b>	<b>14</b>

All correlations  $p < .01$  unless otherwise indicated, \*\*  $p < 0.001$  level two-tailed.

Table 27 provides a summary of all the significant correlations between personal and professional characteristics and the five Educational Perspectives. There were three significant correlations between personal and professional variables and the Transmission Perspective. Respondents who were generally Transmission oriented attended school in a country outside of Canada, valued management opportunities within dietetics, and felt university coursework had influenced their teaching practices. Dietitians who attended school in a country outside of Canada had higher Transmission scores than dietitians who had not attended school outside of Canada. Of the 50 respondents who attended school abroad, 17 attended school in the United States, 12 attended school in Europe and seven studied in Hong Kong while a smaller degree of respondents studied in regions such as Africa, Asia, Central America, and the Middle East. Respondents who studied in Europe did not often specify the European country. This is an interesting result because the three regions (United States, Europe and Asia) listed most by respondents are separated not only by a large geographical divide but also along cultural, ethnic and language lines. Another question arises as to how teaching in Canada and the United States is considered different enough for those who studied in the United States to be more influenced by the Transmission Perspective than those who studied in Canada.

Dietitians who viewed university coursework as a stronger influence on teaching had higher Transmission scores than those dietitians who placed lower value on university coursework as an influence on teaching. Professors and teachers within university or college settings may be predominately transmission oriented where the focus is on content expertise and delivery of information that allow for measurable outcomes such as exams and tests. Therefore it might be more likely those dietitians who view university coursework as being a strong influence on teaching might themselves be influenced to view the teaching process within their own practice in a similar way. Although the reason is not entirely clear, dietitians who valued management opportunities when entering dietetics tended to have slightly higher transmission scores than those dietitians who had placed less value on management opportunities on entering dietetics.

Two personal and professional variables were significantly correlated with the Apprenticeship Perspective. Respondents who were generally Apprenticeship oriented tended to possess graduate degrees and felt university coursework had influenced their teaching practices. Dietitians who had obtained or were in process of obtaining a graduate degree had higher Apprenticeship scores than dietitians who were not pursuing or who did not possess a graduate degree. There is a higher likelihood that graduate students work closely with advisors or professors and are immersed within a context (usually academic) in which content is learned under the guidance or direction of a more experienced or master teacher (professor). Dietitians who viewed university coursework as a stronger influence on teaching had higher Apprenticeship scores than those dietitians who placed less value on university coursework as an influence on teaching. Dietetic professors who were practicing dietitians at one time, guest dietitian lecturers, and field projects in which students spend time in a particular work setting with professional dietitians are ways in which university dietetic students are exposed to real-life work contexts and potential preceptors. University settings are the initial setting in which soon-to-be dietitians learn what discussions, behaviors, and inquiries are accepted within the profession.

Eight personal and professional variables were significantly correlated with the Developmental Perspective. Respondents who were generally Developmental oriented tended to practice dietetics longer, had an initial interest in teaching within dietetics, were currently interested in management of people and resources, had job responsibilities that included interacting with community groups, public and media and marketing, and interacted with community groups and the public.

Dietitians who practiced dietetics longer tended to have higher Developmental scores than those dietitians who had not been practicing as long. This result is consistent with the notion that Developmental Perspectives are more associated with teachers who have practiced longer, accumulated experience and have developed more complex ways of thinking themselves and their practice. Respondents who practiced dietetics longer also tended to have slightly higher social reform scores than those dietitians who had not been practicing as long. Over time these respondents may have realized that effective nutrition education and teaching is a combination of both discovering individual agency which is stressed in university and pre-professional training and locating the individual within society. Dietitians who had an initial interest in teaching within dietetics had higher Developmental scores than those dietitians who did not express an initial interest in teaching. This result appears contradictory because one would have expected beginner teachers to feel more comfortable in the expert role where they would provide more answers rather than helping learners create complex cognitive changes.

Those whose current interest in dietetics included managing people and resources had somewhat higher Developmental scores than those dietitians who had less current interest in managing people and resources. One possible explanation for this result may be those respondents in management positions may not consider themselves (nutrition) content experts per se but because they are managing budgets and departments they must keep in mind how larger processes interconnect together. Managers and directors often encourage and challenge their staff to think differently about how they do and think about things, especially during times of change.

Dietitians whose work responsibility included interactions with community groups had higher Developmental scores than dietitians who had fewer interactions with community groups at work. Dietitians who interacted with community groups while at work tended to have higher Developmental scores than those dietitians who had fewer interactions with community groups. Dietitians who interacted with the public tended to have higher Developmental scores than those dietitians who had fewer interactions with the public. One possible reason respondents who had greater interaction with community groups or the public had higher Development scores than respondents who did not primarily interact with the community is because community dietitians must often take into account large scale social-cultural factors. These factors include ethnic distribution within a community, economic factors such as food equity and availability at food banks, political factors such as food security and environmental factors such as agricultural pesticide use within the community. In other words, dietitians working within a community must help their clients as well as other professionals make connections among these complex forces and challenge them to evaluate their ways of thinking and reasoning about the subject matter.

Respondents who had marketing responsibilities at work had slightly higher Developmental scores than dietitians who had less work responsibilities in marketing and dietitians whose work responsibility included public and media relations had higher developmental scores. Although it is reasonable to assume that those with these types of work

responsibilities might want people to make connections between products and their benefits it is unclear how these respondents help their clients to develop more complex ways of thinking and understanding. Four respondents worked in private industry and eight respondents worked in private practice. It is more likely that those that have public and media relations work in private practice. There is caution in assuming most dietitians who have marketing, sales or media responsibilities might have higher developmental scores because a very small number of respondents had these work responsibilities. It may be that these a small number of respondents feel this way regardless of their work responsibility or context.

Eight personal and professional variables were significantly correlated with the five Educational Perspectives. Respondents who were generally Nurturing oriented were initially interested in teaching, had job responsibilities that included interaction with community groups and public or media relations, and whose teaching practices were influenced by activities such as workshops and seminars and were influenced by other people such as colleagues, teachers of education and educational authors. Dietitians who were initially interested in teaching within dietetics had slightly higher Nurturing scores than those dietitians who were less interested initially in teaching within dietetics. One possible reason for this may be dietitians who first enter the profession after internship may earnestly want to help clients succeed and provide encouragement for clients to make changes. Although respondents who had higher Developmental and Nurturing scores had an initial interest in teaching, there does not appear to be a current interest in teaching. With time, these respondents may have acquired other interests as well.

Dietitians who interacted with community groups at work had slightly higher Nurturing scores than dietitians who had fewer interactions with community groups at work. Respondents who worked with community groups concentrate on helping groups of individuals attain greater health status, for example, through equitable access and distribution of food and nutrition policy issues. In community initiatives, nutrition and health issues are usually applicable at a societal level rather than an individual level. Although dietitians who counsel individual patients establish trust and help clients' self-esteem and confidence, this result shows that dietitians who work on a larger level also aim to establish trusting relationships and ultimately help communities become more self-sufficient and increase self-confidence.

Those whose teaching was influenced by someone or something had somewhat higher Nurturing scores than dietitians whose teaching was less influenced by someone. Of the respondents who indicated someone had influenced their teaching most were influenced by colleagues, followed by primarily a teacher of dietetics and education, an author who was a dietitian or physician, a spouse and to a lesser degree friend, religious leader, and philosopher. Dietitians who had a colleague influence how they taught others had higher Nurturing scores than those dietitians who had not had a colleague influence how they taught others. Dietitians whose teaching was influenced by a teacher had slightly higher Nurturing scores than those dietitians whose teaching was less influenced by a teacher. Dietitians whose teaching was influenced by an author had slightly higher Nurturing scores than those dietitians whose teaching was less influenced by an author. One common thread with the above data is that other dietitians who were colleagues, authors, or teachers influenced respondents. This result may not be surprising considering the profession has described itself as a nurturing profession in dietetic literature. (Lanz, 1983; Holli & Callabrese, 1986; Curry Bartley, 1987). Other health professions like dietetics are considered helping professions because they assist individuals in need of support during times of distress or discomfort. Many dietitians primarily help clients improve



their health status. Respondents who are influenced by dietitians are likely to be influenced by other dietitians who share a need to help clients.

Without knowing the type of workshops and seminars, it is difficult to ascertain why respondents whose teaching was influenced by workshops and seminars had slightly higher Nurturing scores than respondents whose teaching was less influenced by workshops and seminars who attended workshops and seminars had higher nurturing scores. One possible explanation is that respondents who value workshops and seminars might also value the commonality, friendship and mutual trust that workshops provide. In this environment, respondents are able to interact with each other and learn about the work of other dietitians in a setting that has been designed for and by dietitians.

Dietitians who had public and media relations responsibilities at work had somewhat higher Nurturing scores than those dietitians who had less public and media relations responsibilities at work. Four respondents worked in private industry and eight respondents worked in private practice. It is more likely that those that have public and media relations work in private practice. There is caution in assuming most dietitians who have marketing, sales or media responsibilities might have higher Nurturing scores because a very small number of respondents had these work responsibilities. It may be that a small number of respondents feel this way regardless of their work responsibility or context.

Fourteen personal and professional variables were significantly correlated with the five Educational Perspectives. Respondents who were generally Social Reform oriented tended to speak other languages other than English, practiced dietetics longer, and were initially interested in cultural food habits, management of people and resources, and food production; however, they were only currently interested in management of people and resources. These respondents also tended to interact with community groups and the general public, were responsible for public and media relations and felt that their teaching practices were influenced by activities or other people. However, those who were Social Reform were less responsible for nutrition counseling and one-to-one interactions with patients. If only a small number of dietitians were dominant in Social Reform, what could explain the high number of significant correlations associated with this perspective? It may be that Social Reform dietitians are passionate, vocal, and feel strongly about issues within dietetics. Perhaps, Social Reform educators are just a different group of educators, unlike teachers of other perspectives.

Respondents whose first language was not English, who currently spoke another language besides English, or who spoke more than one language had slightly higher Social Reform Scores than respondents whose first language was not English, who did not currently speak another language besides English, or who did not speak more than one language. Whether respondents learned another language while growing up in another country, growing up in their home in Canada, at school, while traveling, or out of interest, generally respondents who spoke another language were more likely to be more articulate of ideals and beliefs – particularly those that pertain to some kind of social change. Could one extrapolate the data and investigate whether the focus on social change and ideals is a matter of nationality, family life, global perspective, and curiosity with different cultures? Although this study does not have the data to specifically answer these questions, it does provide a chance for further inquiry into the impact of language and perhaps even ethnicity on the Educational Perspectives.

Dietitians who were initially interested in cultural food habits had somewhat higher Social Reform scores than those dietitians who were not initially interested in cultural food habits within dietetics. Respondents who were initially interested in cultural food habits, would likely be cognizant of the fact nutrition is more than scientific facts but rather is deeply connected to the cultures that people reside in.

Dietitians who were initially interested in management of people and resources within dietetics had slightly higher Social Reform scores than those dietitians who were not initially interested in management of people and resources within dietetics. Dietitians who were currently interested in managing people and resources within dietetics had somewhat higher Social Reform scores than those dietitians who were not as interested in managing people and resources. Dietitians who were initially interested in food procurement and production within dietetics had higher Social Reform scores than those dietitians who were not initially interested in food procurement and production within dietetics. Respondents who have management or administrative duties do not usually have clinical responsibilities (that is, counsel clients on nutrition issues), instead they manage departments, supervise other staff, interact with different managers, and are responsible for budgets. Respondents who are managers might have a departmental 'vision' in which they need to be aware of many institutional forces (for example, political, economic).

Dietitians who were involved with nutrition counseling at work had lower Social Reform scores than those dietitians who were not as involved with nutrition counseling at work. Respondents who primarily counsel patients are more likely to focus on individual change and whether counseling is humanistic, behavioral or cognitive science centered- the focus is on the individual and likely not society. Dietitians who interacted with the public tended to have higher Social Reform scores than those dietitians who had fewer interactions with the public. Respondents who worked with community groups or the general public may be more aware of societal issues, for example, food availability, food security, and community concerns and interests, as these issues prompt respondents to look beyond the pure subject matter of nutrition and to focus more on the complex array of forces (economic, political, cultural) interconnected with food.

Respondents whose teaching was influenced by someone or something had higher Social Reform scores than dietitians whose teaching was less influenced by someone or something. People who were passionate about their ideals and beliefs may have influenced respondents to also think deeply about their own beliefs or ideals. Dietitians who interacted primarily with patients at work tended to have lower Social Reform scores than those dietitians who had fewer interactions with patients at work. It appears that respondents that work one on one with clients focus their education efforts on individual change.

It is interesting that Social Reform had the highest number of correlations (14), followed by Developmental (8), Nurturing (8), Transmission (3), and Apprenticeship (2). Social Reform was the least dominant perspective and had the least number of open-ended comments yet it had the highest number of significant relationships. One possible reason may be because even though there are a small number of respondents who may be of a Social Reform Perspective, they are quite passionate about their ideals. Similar can be said for the Developmental Perspective which also is not a very dominate perspective yet has the second highest (along with Nurturing) number of significant relationships. Ironically, Apprenticeship was the second highest dominant perspective yet, has the lowest number of significant relationships. Also, the only two negative

relationships existed among personal and professional variables and Social Reform; the more individual the connection and relationship, the lower the Social Reform scores.

### Limitations of the Study

Correlation studies determine how two or more variables are related to one another. In other words, correlation studies are examples of relational research which involve systematically analyzing relationships among variables. However, a limitation of using correlation studies is that they do not prove causality. For example, respondents who had obtained or were in pursuit of graduate degrees had higher Apprenticeship scores than those respondents who had not obtained or were in pursuit of graduate degrees. This result does not mean that respondents with graduate degrees will necessarily hold an Apprenticeship Perspective. Instead, it means that there is a relationship between respondents with graduate degrees and their Apprenticeship Perspective scores.

Another caution must be used when interpreting the statistically significant correlations in this study. Although statistically significant, relationships among personal and professional variables and the five Educational Perspectives were not strong. The highest statistically significant correlation was .26 which represents a relatively weak relationship between variables; however, a relationship nonetheless.

Approximately 37% of dietitians in British Columbia were represented in this survey. Due to the low total response rate (25% of respondents automatically excluded themselves when they declined third-party mail), it is not possible to claim that the survey results represent the majority of provincial dietitians. Although there are not major disadvantages to this, information that represents one-third of provincial dietitians might have less influence on the national associations' education-related training, practices and standards than if survey results represent larger segment or voice of provincial dietitians.

Although respondents could complete the survey in the privacy of their home or workplace within a relatively short period (approximately less than 30 minutes), answers to open-ended questions were not as detailed as those obtained from personal interviews. One-on-one interactions between researchers and participants allows for greater exploration and elaboration of concepts such as beliefs, attitudes, and values. Mail surveys are limiting because they restrict participants' feedback. Also, this study did not include observations of participants in the teaching process. The results from the *Educational Perspectives Inventory*- particularly the actions and to some extent the intentions, could have been buttressed with what respondents actually did as well as what they say they do.

The Teaching Perspectives and the general model of teaching represent a lens through which to view the phenomenon of teaching. As with any research that uses a conceptual framework or model, some questions are asked while others are not. Analysis is usually limited to the parameters of the model or framework. For example, the Teaching (Educational) Perspectives addresses concepts such as educational beliefs and intentions; however, the model is not steeped in social critical theory or feminist pedagogy, among other world views.

### The *Educational Perspectives Inventory Profile* Sheet

Respondents were offered the opportunity to receive individual feedback on their Educational Perspectives scores as part of the survey package. Out of 240 total respondents, 97 (40.4%) of respondents requested their individual Educational Perspectives Inventory Profile. The 97 respondents appear to be more interested in finding out about their personal feedback regarding their roles as educators; however, are they different in any way from those that did not request an *Educational Perspectives Inventory*?

There were no significant correlations between respondents who requested an *Educational Perspectives Inventory Profile* and the five Educational Perspectives. Correlations for Transmission were ( $r=-.06$ ), followed by Apprenticeship ( $r=.11$ ), Developmental ( $r=.04$ ), Nurturing ( $r=.12$ ), Social Reform ( $r=-.02$ ). In other words, respondents who requested an *Educational Perspective Inventory Profile* Sheet were generally no different from the other 143 respondents who did not.

One could conjecture whether there would be any significant differences in terms of Educational Perspectives or personal and professional characteristics between the group of dietitians who requested profiles and the group of dietitians who did not. Indeed, when the Educational Perspectives scores of respondents who requested an *Educational Perspectives Inventory Profile* sheet were correlated with 17 selected variables, only one variable – the number of different factors that attracted dietitians to the profession of dietetics – was significant. The other variables included age, years of practice, years in current job position, primary interactions at work, valued aspects of the profession, activities that influence teaching practices, initial and current interests, people who influence teaching practices, respondents with children, first languages spoken, current languages spoken, number of first languages spoken and the number of current languages spoken. It appears that respondents who requested a profile sheet were generally similar to the rest of the respondents but they were slightly more attracted to the profession of dietetics ( $r=.17$ ,  $p<.01$ ). Perhaps those that requested a profile sheet were more curious about their profession and their educator roles. Their curiosity and desire for personal and professional growth might have spread to other areas and interests of dietetics.

## Summary

As pragmatic professionals, many dietitians value knowledge which can be immediately applied. However, being overly utilitarian and concerned with techniques and skills does not provide dietitians opportunities to question and challenge belief structures and ideologies that heavily influence actions. There is some evidence to show that reflection (thinking) and action (doing) are one in the same, just as man and world are in constant interaction and do not exist without the other (Brookfield, 1995; Pratt, 1998; Freire, 1970; Elias and Merriam, 1980; Nesbit, 1997; Schon, 1983).

Theory and practice intertwine to influence each other over time, that is, one does not exist without the other. There are two dangers of separating practice from theory. Division and not unity occurs between practitioners and researchers; and second, it negates the notion that practitioners can and should be researchers particularly if dietitians engage in practice-based research which addresses local, institutional and community concerns. Another pitfall of separating practice and theory is that dietitians become consumed in the day-to-day activities and don't allow for systematic inquiry into what they do, how they do and why they do it. The majority of respondents acknowledge that educating and teaching is an important part of what they do as dietitians. Dietitians must allocate time and priority not only to what they teach and educate individuals, but to how and why they guide the teaching process in certain ways over others.

Respondents expressed various opinions on themselves as teachers, their subject matter, the contexts in which they work and the learners with whom they interacted with on a daily basis. Respondents viewed the majority of their roles as providers of accurate practical information, authorities on nutrition, or flexible facilitators who guide the teaching process. For many there seemed to be an implicit notion they were teachers and educators, while others commented how their roles as educators had been emphasized and reaffirmed in the study.

Many dietitians were intrigued and enthused by the topic of nutrition and they often wanted others to be interested and motivated to make positive changes. Although roles and responsibilities may differ, most respondents genuinely wanted to help their clients realize the importance of good nutrition practices so ultimately clients could increase their nutritional status and quality of life. Many dietitians appeared to be sincerely interested in the well being of their clients. Some respondents expressed their need to establish relationships with their clients to help them grow, gain self-confidence, and make decisions on their own. However, the primary aim for the vast majority of respondents was behavior change.

Most "failure" in the teaching process was usually externalized to other factors which seemed out of the control of respondents and which also brought the most frustrations and challenges. Other factors included perceptions of marginalized roles held by either the respondents or by others in the work environment, limitations due to context, nature of nutrition information (vast amounts of rapidly changing information), different perspectives and cultures of learners, time constraints plus a lack of resources. These themes also reinforce the notion that teaching is not a strictly psychological phenomenon but instead is influenced by larger structural and historical, cultural, economic, and societal forces.

Respondents indicated that colleagues, dietetic authors, and dietetic instructors and professors influenced how they taught others. Dietitians have a responsibility to seek different ways to understand their roles and responsibilities as teachers and the ideals that shape their those roles not only because it provides personal insight but because dietitians are a collective group who influence each other.

A few comments in the survey pertained to the fact that studying theoretical conceptions of teaching might be too academically oriented and instead the focus should be on practical and pressing issues in the field of dietetics, "The questions seem to be extremely academic and theoretical in nature- while changing of society values, knowledge of nutrition and their self-esteem are important...these are motherhood issues. While in acute care, the dietitian is responsible for delivery of care relevant to a client's need...prevention and health promotion should be the focus to reduce the demand in acute care." Although practical problems and solutions are critical in the day-to-day practices of dietitians so too are the theories, beliefs, and ideologies that underlie and guide practice.

Theoretical teaching frameworks and models allow for systematic inquiry of assumptions of teaching. The five Educational Perspectives and general model of teaching were used as theoretical tools to help reveal assumptions about dietitians and their learners, content, context, and beliefs about knowledge and learning. The major advantage of Pratt's Teaching Perspectives was that it explicitly recognizes the ideals and beliefs that drive the teaching process and it also embraces a plurality of perspectives. Most current dietetic literature on teaching focuses on prescriptive techniques and skills; however, there has been an inadequate discussion of theoretical and conceptual frameworks behind teaching. This study provided both informative personal, professional, and demographic information which needs to be used to better understand dietitians' interests, experiences, and professional and teaching practices. Equally important, this study provides a framework which can be used to better understand the beliefs and commitments dietitians have as teachers and educators.

## CHAPTER 6

### FURTHER RESEARCH

Many books and articles on teaching and education discuss the importance of “professional reflection”. Dietitians are busy practitioners who often find it challenging to keep abreast of advances in nutrition information. In view of the demands of their job, budgetary constraints, and increased workload, some dietitians might view professional reflection on teaching assumptions and beliefs as a luxury rather than a necessity. Instead of leaving reflection to chance, it would be helpful if dietitians had opportunities to systematically discuss their roles as teachers.

#### Practical Significance and Recommendations

Dietitians can discuss their actions, intentions and beliefs about teaching through dietetic practice groups, journals and publications, and online discussion groups. There are many national dietetic practice groups within Dietitians of Canada, such as cardiology, nephrology and diabetes to name just a few. Dietetic practice groups are organized and supported by members with similar professional interests. Dietitians who belong to practice groups network through mail, Internet, workshops and seminars where ideas and educational resources are shared. Members who share an interest in teaching and education could also form an Adult Education dietetic practice group, in addition to the other practice groups they belong to. Within this practice group dietitians can discuss issues such as educational aims and philosophies of the profession, teaching beliefs and assumptions of dietitians and research ideas on education and teaching. They can also provide suggestions to Dietitians of Canada regarding improvements in undergraduate programs and internships.

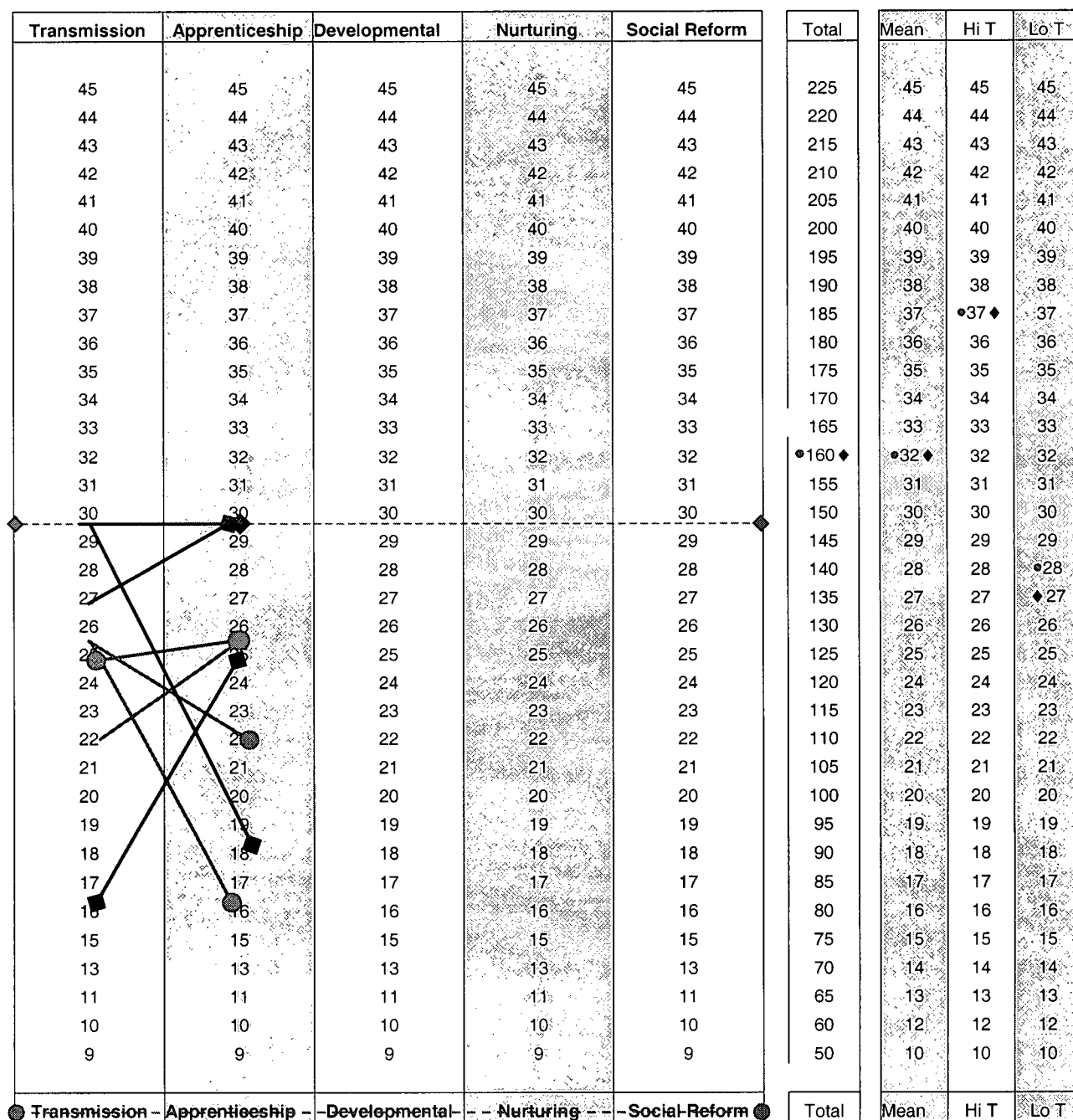
Several ways that dietitians can contribute to literature on teaching philosophies and beliefs are through the peer-reviewed *Canadian Journal of Dietetic Practice and Research* (CJDPR) and the *Practice Newsletter* found within CJDPR. The CJDPR, along with the Practice Newsletter, are published four times a year. The CJDPR invites practicing dietitians and academic researchers to submit their findings on many facets of dietetic practice. The Practice Newsletter is an informal publication found within the CJDPR that allows members to contribute information on a variety of practice issues. The Practice Newsletter could incorporate a recurring article on different viewpoints, approaches, and conceptions of teaching. Subsequently members are encouraged to write in, share their views, and network from across the country. Currently the Practice Newsletter is approximately one to two years “old” and continues to undergo revisions based on feedback from dietitians. For example, Figure 9 represents a sample of a column that could appear in a dietetics newsletter such as the Practice Newsletter. This column introduces dietitians, throughout Canada, to the educational research on Educational Perspectives explored in this study. It highlights previously unknown professional and personal characteristics of dietitians, such as work responsibilities and social-cultural information. In this way, dietitians can get a “snap-shot” of other educational research or opinions, viewpoints, and practices. Figure 10 represents a sample of an *Educational Perspective Profile* sheet that would also appear along side the newsletter column (Figure 9). Dietitians would receive a profile if they complete an Educational Perspectives of Registered Dietitians survey. In this way, dietitians across Canada are invited to learn more about their educational roles.

Online discussion groups, dietetic practice groups, courses, and educational resources are supported by Dietitians of Canada so that members are kept up to date on key issues and develop

skills for current dietetic practice. Local action groups have the resources of a national organization supporting them to provide leadership on food and nutrition issues in their communities. Similarly, these action groups could help organize forums where dietitians can communicate on issues dealing with teaching and education. Practice groups are committed to communicating with their members regularly through newsletters, correspondence and the Dietitians of Canada Web site. Some dietetic practice groups provide tools and organize meetings, workshops and other networking opportunities.



Figure 10. Sample Individual Educational Perspectives Profile :  
Comparisons Between Mean Educational Perspectives Scores for Dietitians in British Columbia  
and Educational Perspective Scores for Tenny Kussat



●Dietitians N=230

Tr 34 Ap 35 Dv 32 Nu 35 SR 26 T 161 M 32 HT 37 LT 28

♦Tenny Kussat

Tr 26 Ap 34 Dv 37 Nu 37 SR 26 T 160 M 32 HT 37 LT 27

Discussions on the practical significance of *Educational Perspectives* and beliefs have pertained mainly to the professional lives of dietitians thus far. However, what is lacking is a discussion of its implications in undergraduate and dietetic internships. Undergraduate university education is the first place that future dietitians are socialized into the profession of dietetics. The focus on nutritional and biological sciences is necessary so that dietetic health professionals have strong foundations in nutrition. However, dietitians are more than just reservoirs of nutrition facts and numbers; they are teachers and educators of nutrition information. Nine respondents commented that university training regarding teaching is insufficient, for example, "I don't think dietitians are taught to be good teachers and would benefit from more emphasis at university with required education courses." Currently education courses in university dietetic programs tend to be elective but not mandatory. Courses in Adult Education and teaching should be mandatory throughout undergraduate education. The aim is not to produce a group of people who prescribe to only one or two ways of thinking. Instead, dietetic students should be accustomed to the art of critical analysis on teaching and educational frameworks.

Dietetic internships are intensive periods of socialization where interns learn to be professional dietitians. Interns quickly learn kinds of knowledge that are valued, what constitutes evidence that clients have learned something, acceptable ways to interact with clients, acceptable ways to interact with other members of the health care team and their place within the medical hierarchy. The internship year is busy and interns are expected to work alongside dietetic staff members during the day, to complete clinical assignments at night and to contribute in additional ways such as case studies, major projects or poster presentations. Some may say that dietetic interns do not have the time to personally reflect on their roles as teachers. If this is the case then the field of dietetics is producing future professionals who amass and deliver clinical information but lack the ability to articulate why they do what they do as teachers.

Dietetic internship education competencies should extend past teaching techniques, program planning and development of educational materials to include an awareness of teaching and education theories and a paper or presentation on which theory is most influential for interns within a particular time period. Ultimately interns should be able to articulate their beliefs of knowledge and learning that will most shape their future practice. Beliefs may change over time; however, dietetic interns must be exposed to teaching tools and frameworks that will support further critical analysis. One practical suggestion includes various types of teaching and education theory seminars presented by interns for interns and staff members. In this example, dietetic interns would research and present their findings just as they would research clinical nutrition and medical topics. Teaching case studies along with clinical case studies should be an expectation throughout the internship. Teaching case studies help interns articulate their actions, intentions and beliefs during an encounter with a client or group of clients. The dietetic internship is the pivotal point where future practitioners can learn the importance of critical reflection especially in their roles as teachers and educators and can assert beliefs and ideals that drive their practice.

Dietetic associations could benefit from knowing more about the demographics and characteristics of their membership. Questions on the *Educational Perspectives of Dietitians* offered some examples as to the type of questions that could be included on the annual membership or as an addendum. Questions such as age, sex, previous careers, length of time in current positions, professional interests, languages spoken, ethnicity (although not addressed in the questionnaire in this study) and international work experience in dietetics are helpful in

providing a more complete (personal and professional) picture of the association and its members, provides a database with which to monitor trends, interests, and professional movement both within and outside the profession.

### Recommendations for Further Research

Many dietetic practices rely on assumptions based on tradition rather than on research-based evidence (Hauchecorne, 2000). While dietitians are in the best position to ask research questions relevant to practice, many clinical dietitians have been hesitant to become involved in research (Hendricks, 1987 cited in Hauchecorne, 2000). Thus dietitians have had limited impact on the knowledge which has shaped and molded the profession. Dietitians view research as important to the profession of dietetics as a whole but do not feel research should be a requirement of their job (Hauchecorne, 2000). Dietitians have a professional duty to contribute to the knowledge of the profession and not just to serve as benefactors of research either from within dietetics or other fields.

Since dietitians are teachers and educators they should participate in research that adds insight into their practice assumptions about teaching, knowledge, learning, and beliefs. Research efforts can occur in many settings and is not restricted to academic contexts. In fact, funding support from Canadian Foundation for Dietetic Research (CFDR) strongly encourages dietitians to engage in practice-based research. Research that studies actions, intentions and beliefs of dietitians would help to create broad discussions regarding roles as teachers. A broad array of research ideology and subsequent methodologies, both qualitative and quantitative, should be embraced to reveal multiple goals and perspectives.

Research on dietitians' educational and teaching practices, assumptions and beliefs can be elaborated in several ways. First, further research on the *Educational Perspectives Inventory* can be conducted. In this study the *Educational Perspectives Inventory* was administered to a group of dietitians at one particular point in time, that is, it was a cross-sectional (or snapshot) study. An additional option is to assess if and how educational beliefs change over time by conducting a longitudinal study. For example, a group of dietitians who initially completed the *Educational Perspectives Inventory*, like the ones in this survey, could be followed over time at five year intervals to assess whether beliefs change over time and to investigate factors which may influence beliefs. Factors may include length of experience, work contexts, and other work and non-work related responsibilities.

Another option is to assess how educational beliefs differ depending on length of dietetic work experience. That is, do educational beliefs differ among undergraduate dietetic students, dietetic interns, entry-level practitioners or experienced practitioners? If differences do arise, it may reveal how assumptions about knowledge and learning change as practitioners mature and develop. Alternatively, if no such differences arise, it may reveal that beliefs are relatively stable over time regardless of types or lengths of experience.

Second, other kinds of research that address the educational roles of dietitians could be explored. A series of studies could be designed in which the goal would be praxis (reflection followed by action). Dietetic action groups could be formed where ideologies of teaching and education could be discussed. This analytical approach challenges and deconstructs taken-for-granted notions such as knowledge, learning, health, and education. For example, dietitians could explore what knowledge base is currently emphasized in education and training and assess

whether that knowledge base (life sciences versus social sciences) is sufficient and comprehensive enough for practicing dietitians. A greater emphasis in social sciences could help dietitians uncover the politics and economics of health, the sociological and anthropological influences on eating behaviors and cultural notions of health and well-being. The basis for establishing social action groups is collective social change. These social action groups could also be perceived as task groups who make recommendations to the Dietitians of Canada. Subsequently, dietitians could effect structural change in the profession mainly through reorganization of undergraduate, pre-professional training and continuing professional education.

Most current dietetic research is quantitative rather than qualitative; although this description implies a dichotomy, in reality, these two types of approaches do overlap and often incorporate features from the other (Palys, 1997). While neither type of methodology is superior, dietetics might benefit from the types of knowledge and information that are produced from both types of research. For example, autobiographical accounts, institutional ethnography, and case studies can provide different ways of understanding dietitians' perceptions as educators. However, there may be barriers to this type of research as a recent study showed that clinical dietitians did not view subjective data as useful as objective data in research (Hauchecorne, 2000).

In this study, professional and personal information about dietitians was obtained. However, many more research questions and endeavors resulting from this study could be further explored. For example, to what degree do dietitians' social and cultural characteristics such as ethnicity or family background or other activities such as community involvement or religious affiliation, influence their philosophies on teaching? Also, respondents expressed a large interest in research over time. What kinds of research are dietitians interested in and more specifically, what kinds of educational research would dietitians be interested in pursuing?

Do dietitians have important educator and teacher roles? Unequivocally yes. This study showed that respondents educate a variety of individuals and groups everyday to help increase health and well-being. With the aid of this questionnaire, some respondents discovered that they are indeed educators. While for other respondents, the questionnaire reaffirmed their roles as teachers and educators. Respondents were articulate in the rewards, challenges, and descriptions of their educator roles and they were able to express their beliefs on what constitutes learning, valid knowledge, and learning relationships. This study also contributed to knowledge regarding personal and professional characteristics of respondents which had not yet occurred on a large scale. National and provincial dietetic associations could benefit from the knowledge of this study in three ways. First, personal information on age, sex and family status, and international education provides basic information which can be tracked to see changes in the population characteristics of dietitians. Second, other professional characteristics such as professional interests and values and work responsibilities provide insight into professional trends. Third, information on teaching, such as influences on teaching practices suggests further areas for research.

Teaching and education is intricately woven into the professional lives of dietitians. This study has shown that teaching is a dynamic process fused with beliefs and ideals that shape teaching practices and client relationships. This study also revealed the important role of dietitians as health professionals, but has helped crystallize the very nature of dietitians as educators.

## REFERENCES

- Achterberg, C., and Clark K.L. (1992). A retrospective examination of theory use in nutrition education. *Journal of Nutrition Education*, 24, 227-233.
- American Dietetic Association. (1985). *A new look at the profession of dietetics*. Chicago.
- American Dietetic Association. (1995). The position of the American Dietetic Association: the role of registered dietitians in enteral and parenteral nutrition support. *Journal of American Dietetic Association*, 95, 302-304.
- American Dietetic Association. (1996) Position of The American Dietetic Association: nutrition education for the public. *Journal of American Dietetic Association*, 96 (11) 1183-1187.
- Anderson, B. (1998). Reflection on practice: dietitian as partner or expert? *Journal of The Canadian Dietetic Association*, 59 (3), 138-142.
- Apps, J.W. (1991). *Mastering the teaching of adults*. Malabar, Florida: Krieger Publishing Co.
- Baldwin, T., and Falciglia, G.A., (1995). Application of cognitive behavioral theories to dietary change in clients. *Journal of the American Dietetic Association*, 95 (11), 1315-1317.
- Barber, M.I. (1959). *History of the American dietetic association*. Philadelphia: J.B. Lippincott Co.
- Barer-Stein T., and Draper J.A. (1989). *The craft of teaching adults*. Toronto: Culture Concepts Inc.
- Boshier, R.W. (1994). Initiating research. In D.R. Garrison (Ed.), *Research perspectives in adult education* (pp. 73-117). Florida: Krieger Publishing.
- Briscoe, C. (1991). Beliefs, role metaphors, and teaching practices: A case study of teacher change. *Science Education*, 75 (2), 185-199.
- British Columbia Health Statistics (1995), Health Human Resources Unit. The University of British Columbia.
- Brookfield, S.D. (1995). *Becoming a critically reflective teacher*. San Francisco: Jossey-Bass Publishers.
- Browne, M.B. (1992) Presentations to the public. In R. Chernoff (Ed.). *Communication as professionals*. Chicago: American Dietetic Association.

- Burrell, G., and Morgan, G. (1979). *Sociological paradigms and organizational analysis*. Portsmouth: Heinemann.
- Burtis, G., Davis, J., and Martin, S. (1988) *Applied nutrition and diet therapy*. Montreal: W.B. Saunders Company.
- Bryk, J.A., and Kornblum Soto, T. (1994). Report on the 1993 membership database of The American Dietetic Association. *Journal of the American Dietetic Association*, 94 (12), 1433-1438.
- Canadian Institute for Health Information (1999) *Report: Canada's Physician Supply*. Retrieved April 20, 2000 on the World Wide Web: <http://www.cihi.ca/facts/fac.htm>
- Canadian Nurses Associations. Retrieved April 20, 2000 on the World Wide Web: <http://www.can-nurses.ca>
- Carr, C.M. (1998) Poster Presentation: Assessing teaching style preferences that influence teaching style preference of registered dietitians. Supplement to the *Journal of the American Dietetic Association*, 98 (9), A-27.
- Carruth, B.R., (1990). Selection Criteria for dietetic internship admission: what do internship directors consider most important? *Journal of the American Dietetic Association*, 90 ( 7), 999-1001 .
- Cevero, R. (1988). *Effective continuing education for health professionals*. San Francisco: Jossey-Bass.
- Chan, C.H. (1994). *Operationalization and Prediction of Conceptions of Teaching in Adult Education*. Unpublished dissertation, The University of British Columbia, Vancouver, British Columbia.
- Chernoff, R. (Ed.). (1994). *Communicating as professionals*. Chicago: The American Dietetic Association. *Journal of the American Dietetic Association*, 90 (7), 999-1001.
- Contento, I. (1980). Thinking and nutrition education: what to teach, how to teach it, and what to measure. *Teachers College Record*, 421-447.
- Contento, I. (1995). Theoretical frameworks or models for nutrition education. *Journal of Nutrition Education*, 27 (6), 287-290).
- Curry-Bartley, K. (1987). *Dietetic practitioner skills*. Toronto: Macmillan Publishing.
- Dahlke, R., Wolf, K.N., Wilson, S.L., Brodник, M. (2000). Focus groups as predictors of dietitians' roles on interdisciplinary teams. *Journal of the American Dietetic Association*, 100 (4), 455-460.
- Devault, M.L. (1995). Between science and food. *Research in the Sociology of Health Care*, 12, 287-312.

Dietitians of Canada, *What Does a Dietitian Do?* Retrieved February 15, 2000 on the World Wide Web: <http://www.dietitians.ca/career/i3.htm#1>

Dietitians of Canada, *Code of Ethics*. Retrieved February 15, 2000 on the World Wide Web: <http://www.dietitians.ca/career/i2.htm>

Dietitians of Canada. (1996). *Dietetic Internship Package: definition of competency*.

Dunbar, J.M., and Stunkard, A.J. (1979). Adherence to diet and drug regimen. In R. Levy (Ed), *Nutrition, Lipids and Coronary Heart Disease*. New York: Raven Press.

Elias, J.L., and Merriam, S. (1980). *Philosophical foundations of adult education*. Malabar: Krieger Publishing.

Eisenbraun, C.I. (1986). *Consultants in the kitchen: the professionalization of dietetics*. Unpublished master's thesis. University of Kent at Canterbury, England.

Farnham-Diggory, S. (1994) Paradigms of knowledge and instruction. *Review of Educational Research*, 64 (3), 463-477.

Fox, D. (1983). Personal theories of teaching. *Studies in Higher Education* 8 (2), 151-163.

Fowler, F.J. Jr. (1993). *Survey Research Methods* (2<sup>nd</sup> ed.). London: Sage Publications.

Frain, J. Professional People Assuming Teacher Role. (1948, November 17). *The Vancouver Sun*.

Freidson, E. (1970). *Professional Dominance: the social structure of medical care*. New York: Atherton Press.

Freire, P. (1970). *Pedagogy of the oppressed*. New York: Herder and Herder.

Gable, J. (1997). *Counseling skills for dietitians*. Oxford: Blackwell Science.

Gagne, R. (1974). *Principles of instructional design*. New York: Holt, Rinehart, and Winston Inc.

Galbraith, A. (1975). Excellence defined. *Journal of the American Dietetic Association*, 67, 211.

Glanz, K. (1981). Trends in patient compliance. Chicago: *American Dietetic Association*.

Gillespie, A.H., and Brun, J.K. (1992). Trends and challenges for nutrition education research. *Journal of Nutrition Education*, 24 (5), 222-226

- Gillespie, G.W., and Gillespie, A.H. (1990). Using theories in nutrition education: is it practical ? *Working Paper for Cornell Cooperative Extension*, Division of Nutrition Sciences, New York: Cornell University.
- Gillespie, A.H., Yarbrough, P. (1984). A conceptual model for communicating nutrition. *Journal of Nutrition Education*, 16 (4), 168-172.
- Goodman, J. (1988). Constructing a practical philosophy of teaching: A study of preservice teachers' professional perspectives. *Teacher and Teacher Education*, (4), 121-137.
- Gowan, D.B. (1981). *Educating*. New York: Cornell University Press.
- Hagan, D.W., and Traynor, K.S. (2000). Letter to the editor- Let dietitians, not physicians write diet prescriptions in hospital settings. *Journal of the American Dietetic Association*, 100 (1), 21.
- Hauchecorne, C. (1996). Perky, passionate pig inspires premonition for practice: guiding principles for the future of dietetic practice. *Journal of The Canadian Dietetic Association*, 57 (2), S4-10.
- Hauchecorne, C. (2000). Self-perceived competence of clinical dietitians to participate in research: A needs assessment. *Canadian Journal of Dietetic Practice and Research*, 61 (1), 6-12.
- Heiss, C. (1991). Survey clock RD's educational activities. *Journal of the American Dietetic Association*, 91 (6), 417-418.
- Hendricks, S. Research as a priority for the dietetic profession. *Journal of the Canadian Dietetic Association*, 48 (2), 69-71.
- Hodges, P.A.M., Vickery, C.E. (1989). *Effective Counseling: Strategies for dietary management*. Maryland: Aspen Publishers Inc.
- Holli, B.B., and Calabrese, R.J. (1986). *Communication and education skills: the dietitian's guide*. Philadelphia: Lea & Febiger.
- Jasmund, J.M. (1981). *The diet history: A tool and a process*. Michigan: Michigan State University Press.
- Jersild, A.T. (1955). *When teachers face themselves*. New York: Teachers College, Columbia University.
- Johnson, D. (1974). The dietitian-a translator of nutritional information. *Journal of the American Dietetic Association*, 64, 608.
- Johnson, D.W., and Johnson, R.T. (1985). Nutrition education: A model for effectiveness, a synthesis of research. *Journal of Nutrition Education*, 17, S1-S44.



- Kember, D. (1997). A reconceptualization of the research into university academics' conceptions of teaching. *Learning and Instruction*, 3, p255-75.
- Kent, G. (1988). Nutrition education as an instrument of empowerment. *Journal of Nutrition Education*, 20, 193-195.
- King Helm, K. (1995). *The competitive edge: advanced marketing for dietetics professionals* (2<sup>nd</sup> ed.). Chicago: American Dietetic Association.
- Kirby Moore, K. (1995). Criteria for acceptance to preprofessional dietetics programs vs desired qualities of professionals: an analysis. *Journal of the American Dietetic Association*, 95 (1), 77-81.
- Knowles, M.S. (1980). *The modern practice of adult education: from pedagogy to andragogy*. Chicago: Follet Publishing Company.
- Kobel, K.A. (1997). Influences on the selection of dietetics as a career. *Journal of the American Dietetic Association*, 97 (3), 254-257.
- Lanz, S.J. (1983). *Introduction to the profession of dietetics*. Philadelphia: Lea & Febiger.
- Mangione, T.W. (1995). *Mail surveys: Improving the quality*. London: Sage Publications.
- Markley, E.J., and Huyck, N.I. (1997). Factors affecting a student's choice of dietetics as a profession. *Journal of the American Dietetic Association*, 92, 933-937.
- Mezirow, J. (1989). Personal perspective change through adult learning. In C. Titmus (Ed.), *Lifelong education for adults an international handbook* (pp195-198) New York: Pergamon Press Inc.
- Monsen, E. (1993). Forces for research. *Journal of the American Dietetic Association*, 93 (9), 981-985.
- Nesbit, T. (1997). Teaching in adult education: opening the black box. *Adult Education Quarterly*, 48, 157-70.
- Novak, J.D. (1977). *A theory of education*. New York: Cornell University Press.
- Palys, T. (1997) *Research Decisions: quantitative and qualitative perspectives*. Toronto: Harcourt Brace & Company.
- Parks, S.C. (1994). Challenging the future: impact on information technology on dietetics practice, education and research. *Journal of the American Dietetic Association*, 94 (2), 202-204.
- Parks, S.C. (1994). President's page: Future Search Conference helps define new directions in practice, education, and credentialing. *Journal of the American Dietetic Association*, 94 (9), 1046-1047.

- Payne-Palacio, J and Canter, D.D. (1996). *The profession of dietetics: a team approach*. New Jersey: Simon and Schuster.
- Peck, E.B. (1976). The "professional self" and its relation to change processes. *Journal of the American Dietetic Association*, 69, 534.
- Pratt, D.D. (1989). Conceptions of teaching. *Adult Education Quarterly*, 42 (4), 203-220.
- Pratt, D.D. and Associates. (1998). *Five perspectives on teaching in adult and higher education*. Florida: Kreiger Publishing.
- Pratt, D.D., and Collins J. (1998) Teaching Perspectives Summary Sheet.
- Pratt, D.D., and Collins J. (2000) *The Teaching Perspectives Inventory*. Paper presented at the Adult Education Research Conference, Vancouver, BC, pp 346-350.
- Pratt, D.D., and Nesbit, T. (2000). Discourses and cultures of teaching. In E. Hayes & A. Wilson (Eds.) *Handbook of Adult and Continuing Education*, San Francisco: Jossey-Bass Publishers, 1-7.
- Randell, J.S. (1995) Special issue: The effectiveness of nutrition education and implications for nutrition education policy, programs, and research: review of research. *Journal of Nutrition Education*, 27, 279.
- Roach, R.R., Pichert, J.W., Stetson, B.A., Lorenz, R.A., Boswell, E.J., and Schlundt, D.G. (1992). Improving dietitians' teaching skills. *Journal of the American Dietetic Association*, 92 (12), 1466-1470.
- Roberts, J. (1995) Concept Mapping: an effective instructional strategy for diet therapy. *Journal of the American Dietetic Association*, 95 (8), 908-911.
- Rogers, C.R. (1983) *Freedom to learn for the 80s*. Ohio: Merrill Publishing.
- Shanklin, C.W. (1993). Debating dietetics education: what do students need to succeed. *Journal of the American Dietetic Association*, 93, 1223-1229.
- Schiller, R. (1993). Dietitians' self-perceptions: implications for leadership. *Journal of the American Dietetic Association*, 93 (8), 868-874.
- Schlundt, D. et al (1994). Evaluation of training program for improving adherence-promotion skills of dietetic interns. *Journal of the American Dietetic Association*, 94 (12), 1421-1425.
- Schon, D.A. (1983). *The reflective practitioner: how professionals think in action*. Basic Books.
- Schwartz, N.E. (1996). Communicating nutrition and dietetics issues: Balancing diverse perspectives. *Journal of the American Dietetic Association*, 96 (11), 1137-1139.

- South, M.L. (1981). Charting for the changing scene. In A.G. Vaden (Ed.) *Charting for the changing scene*. Chicago: American Dietetic Association.
- Sullivan, B., Schiller, M.R., and Horvath, M.C. (1990). Nutrition education and counseling: knowledge and skill levels expected by dietetic internship directors. *Journal of the American Dietetic Association*, 90 (10), 1418-1422.
- Tarasuk, V., and Reynolds R. (1999). A qualitative study of community kitchens. *Canadian Journal of Dietetic Practice and Research*, 60 (1), 11-16.
- Travers, K. (1997). Nutrition education for social change: critical perspective. *Journal of Nutrition Education*, 59, 57-62)
- University of British Columbia (1998). *University Academic Calendar*.
- University of British Columbia (1999). Human Nutrition 207 Course Outline.
- Vickery, C., Cotugna, N., and Hodges, P.A.M. (1995). Comparing counseling skills of dietetic students: a model for skill enhancement. *Journal of the American Dietetic Association*, 95 (8), 912-914.
- Wagner, M.G., and Dreyer, A.S. (1962). The dietitian's perception of authority. *Journal of the American Dietetic Association*, 41, 205-212.
- Wardley, B.L., and Dalton, S. (1993) Professional image of British and American dietitians. *Journal of the American Dietetic Association*, 93 (6), 684-685.
- Whitehead (1973). Meta-Analysis of Nutrition Education Research. *Journal of Nutrition Education*, 73 (6), 240-256.
- Willick, C.M. (1981). *History of Dietetics in British Columbia 1926-1980*: British Columbia Dietitians' and Nutritionists' Association.
- Winterfeld, E.A., Commentary. Food and nutrition for the 1980s: moving ahead. *Journal of the American Dietetic Association*, 75, 115.
- Wulf, K.M., and Biltz, P. (1978). Toward achieving the dietitian's goal: client education. *Research Report*, (ED162974), 3-16.
- Wylie, J. (1976). Growth process in nutrition counseling. *Journal of the American Dietetic Association*, 69, 505.



## **Educational Perspectives of Registered Dietitians**

Although dietitians work within different contexts and with different learners or clients, educating others, sharing knowledge and learning is a common thread. Your educational perspectives are the lens through which you view education. These perspectives affect your interaction with learners and determine your roles and responsibilities as an educator.

As you complete the questionnaire, remember that your feedback is critical and will contribute to discussions about the role of dietitians' as educators.

In the following questionnaire, check the appropriate category or print a short answer. Once you have completed the questionnaire, please read the directions on the last page on how to receive a summary profile of your educational perspectives.

Thank you,

Tenny Chandy, RDN

# Current Work Activities

Please check the appropriate box or print your response.

1. In which setting do you **work most of the time**? (Check *ONE* only)

- |  |  |
|--|--|
| <input type="checkbox"/> Hospital—acute care             | <input type="checkbox"/> Community-based             |
| <input type="checkbox"/> Hospital—extended care unit     | <input type="checkbox"/> Government, non-health unit |
| <input type="checkbox"/> Hospital—outpatient             | <input type="checkbox"/> Private practice            |
| <input type="checkbox"/> Long term care hospital         | <input type="checkbox"/> Food Industry               |
| <input type="checkbox"/> Private-long term care facility | <input type="checkbox"/> Pharmaceutical company      |
| <input type="checkbox"/> Public health unit              | <input type="checkbox"/> Other _____                 |
| <input type="checkbox"/> College/university              |  |

2. What is your **current employment status**? (Check *ONE* only)

- |  |  |
|--|--|
| <input type="checkbox"/> Permanent full-time | <input type="checkbox"/> Casual/on-call status |
| <input type="checkbox"/> Permanent part-time | <input type="checkbox"/> Self-employed         |
| <input type="checkbox"/> Temporary full-time | <input type="checkbox"/> Currently unemployed  |
| <input type="checkbox"/> Temporary part-time | <input type="checkbox"/> Other _____           |

3. At work, with whom do you **interact primarily**?

(Check *ALL* that apply)

- |  |  |
|--|--|
| <input type="checkbox"/> Patients                  | <input type="checkbox"/> General public            |
| <input type="checkbox"/> Clients                   | <input type="checkbox"/> Community groups          |
| <input type="checkbox"/> Interns/Students          | <input type="checkbox"/> Other professional groups |
| <input type="checkbox"/> Dietitian colleagues      | <input type="checkbox"/> Other staff               |
| <input type="checkbox"/> Management/administration | <input type="checkbox"/> Other _____               |

4. How many **years** have you been **practicing as a Registered Dietitian**?

\_\_\_\_\_ years

5. How many **years** have you been in your **current job position**?

\_\_\_\_\_ years

6. Was dietetics your **first career**? (Check *ONE* only)

☐ Yes

☐ No

If no, please list your previous career(s):

\_\_\_\_\_  
\_\_\_\_\_

7. When you first chose dietetics as a career, what **aspects of the profession** did you particularly value? (Check *ALL* that apply)

- ☐ Relationship of nutrition to health
- ☐ Work with a health care team
- ☐ Diverse work environment
- ☐ Management opportunity
- ☐ Help others
- ☐ Employability
- ☐ Research opportunities
- ☐ Educational or teaching opportunities
- ☐ Community involvement
- ☐ Entrepreneurial opportunity
- ☐ Management opportunity
- ☐ Professional designation or identity
- ☐ Employment stability
- ☐ Financially rewarding
- ☐ Opportunity for professional growth
- ☐ Other \_\_\_\_\_

8. Please indicate your **initial interest** in dietetics upon first entering the profession in the left-hand column. Please indicate your **current interest** in dietetics in the right hand column. (Check *ALL* that apply in each column)

Initial	Current
<input type="checkbox"/>	<input type="checkbox"/> Health promotion
<input type="checkbox"/>	<input type="checkbox"/> Nutrition counseling and behavior change
<input type="checkbox"/>	<input type="checkbox"/> Teaching
<input type="checkbox"/>	<input type="checkbox"/> Food/culinary interests
<input type="checkbox"/>	<input type="checkbox"/> Nutrition-related societal problems and solutions
<input type="checkbox"/>	<input type="checkbox"/> Nutritional sciences
<input type="checkbox"/>	<input type="checkbox"/> Research
<input type="checkbox"/>	<input type="checkbox"/> Cultural food habits
<input type="checkbox"/>	<input type="checkbox"/> Management of people and resources
<input type="checkbox"/>	<input type="checkbox"/> Involvement in local/national dietetic association
<input type="checkbox"/>	<input type="checkbox"/> Food procurement and production
<input type="checkbox"/>	<input type="checkbox"/> Development of educational materials/resources
<input type="checkbox"/>	<input type="checkbox"/> Private practice/entrepreneurial activities
<input type="checkbox"/>	<input type="checkbox"/> International nutrition issues
<input type="checkbox"/>	<input type="checkbox"/> Other _____

9. To what extent have each of the following influenced the way you teach or educate others?

Not at all    Somewhat    A lot

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Taken university/college coursework       |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Attended workshops/seminars               |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Initiated self-directed learning projects |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Read books or articles                    |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Completed certificate/diploma             |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Completed inservice education program     |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Other _____                               |

10. Of everything you do at work as a Registered Dietitian, please estimate the **percentage of your time spent educating others:** \_\_\_\_\_%.

11. As a Registered Dietitian, please indicate how much you do each of the following **while at work:**

Not at all    Somewhat    A lot

- |                          |                          |                          |                                |
|--------------------------|--------------------------|--------------------------|--------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Nutrition counseling           |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Teaching                       |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Administration                 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Research                       |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Interact with community groups |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Policy development             |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Marketing                      |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Sales/Advertising              |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Public/media relations         |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Other _____                    |

12. Have you obtained a bachelor level degree **outside of dietetics** (Check ONE only)?

- ☐ No  
☐ Yes

If yes, list the type of degree(s):

\_\_\_\_\_  
\_\_\_\_\_

13. Have you obtained or are you in the process of obtaining a **graduate degree?** (Check ONE only) Note: graduate degree refers to either Masters and/or Doctorate degrees

- ☐ No  
☐ Yes, graduate degree in progress  
☐ Yes, graduate degree(s) completed

If yes, list degree(s) \_\_\_\_\_

specialization(s) \_\_\_\_\_

14. Have you obtained or are you in the process of obtaining any **other certificate(s) or diploma(s)?** (Check ONE only)

- ☐ No  
☐ Yes, certificate/diploma in progress  
☐ Yes, certificate/diploma obtained

If yes, certificate/diploma(s) \_\_\_\_\_  
specialization(s) \_\_\_\_\_

15. Has anyone or anything (e.g. a mentor, class/seminar, book) **significantly influenced the way you educate others?** (Check ONE only)

- ☐ No    If no, proceed to question 17.  
☐ Yes    If yes, proceed to question 16.

16. Who has **significantly influenced** the way you educate others? (Check ALL that apply)

- ☐ An author  
Author's name/book: \_\_\_\_\_  
☐ A colleague  
☐ A teacher  
Teacher of what: \_\_\_\_\_  
☐ A philosopher  
Name of philosopher: \_\_\_\_\_  
☐ A friend  
☐ A family member  
Relationship to you: \_\_\_\_\_  
☐ A religious leader  
☐ Other  
Specify: \_\_\_\_\_

17. Please list the **two most rewarding aspects of teaching or educating others** in your job:

1. \_\_\_\_\_  
\_\_\_\_\_  
2. \_\_\_\_\_  
\_\_\_\_\_

18. Please list the **two most challenging or difficult aspects of teaching or educating others** in your job:

1. \_\_\_\_\_  
\_\_\_\_\_  
2. \_\_\_\_\_  
\_\_\_\_\_

# 19. Educational Perspectives Inventory

While you may not see yourself as an educator, you may have educational responsibilities that involve educating or teaching others. As you consider the following statements, think of a situation in which you have some educational or instructional responsibility.

For each statement circle the word or phrase that best represents what you do or set out to accomplish.

## ACTIONS—What do you do when educating or teaching?

1. I cover the required content accurately and in the allotted time.  
Almost never   Rarely   Sometimes   Usually   Almost always
2. I put my subject within a context of practice or application.  
Almost never   Rarely   Sometimes   Usually   Almost always
3. I ask a lot of questions while educating others.  
Almost never   Rarely   Sometimes   Usually   Almost always
4. I find something to compliment in everyone's work or contribution.  
Almost never   Rarely   Sometimes   Usually   Almost always
5. I use the subject matter as a way to teach about higher ideals.  
Almost never   Rarely   Sometimes   Usually   Almost always
6. I follow the learning objectives carefully.  
Almost never   Rarely   Sometimes   Usually   Almost always
7. I model the skills and methods of effective practice.  
Almost never   Rarely   Sometimes   Usually   Almost always
8. I challenge people's understanding of the content.  
Almost never   Rarely   Sometimes   Usually   Almost always
9. I encourage expressions of feeling and emotion.  
Almost never   Rarely   Sometimes   Usually   Almost always
10. I emphasize values more than knowledge in my teaching.  
Almost never   Rarely   Sometimes   Usually   Almost always
11. I make it very clear to people what they are to learn.  
Almost never   Rarely   Sometimes   Usually   Almost always
12. I arrange it so that novices can learn from more experienced people.  
Almost never   Rarely   Sometimes   Usually   Almost always
13. I encourage people to challenge their own thinking.  
Almost never   Rarely   Sometimes   Usually   Almost always
14. I share my own feelings and expect learners to do the same.  
Almost never   Rarely   Sometimes   Usually   Almost always
15. I help people see the need for changes in society.  
Almost never   Rarely   Sometimes   Usually   Almost always

## INTENTIONS—What do you intend to accomplish when educating or teaching?

16. My job is to present content and to verify that people have learned.  
Almost never   Rarely   Sometimes   Usually   Almost always
17. My job is to demonstrate how nutrition fits into everyday life.  
Almost never   Rarely   Sometimes   Usually   Almost always
18. My job is to help people develop more complex ways of reasoning.  
Almost never   Rarely   Sometimes   Usually   Almost always
19. My job is to build people's self-confidence and self-esteem as learners.  
Almost never   Rarely   Sometimes   Usually   Almost always
20. My job is to challenge people to seriously reconsider their values.  
Almost never   Rarely   Sometimes   Usually   Almost always
21. I expect people to master a lot of information related to the subject.  
Almost never   Rarely   Sometimes   Usually   Almost always
22. I expect people to know how to apply my subject in real settings.  
Almost never   Rarely   Sometimes   Usually   Almost always
23. I expect people to develop their own insights about nutrition.  
Almost never   Rarely   Sometimes   Usually   Almost always
24. I expect people to enhance their self-esteem through my teaching.  
Almost never   Rarely   Sometimes   Usually   Almost always
25. I expect people to be committed to changing our society.  
Almost never   Rarely   Sometimes   Usually   Almost always
26. I want to verify that people have learned correctly.  
Almost never   Rarely   Sometimes   Usually   Almost always
27. I want people to understand the realities of nutrition in the real world.  
Almost never   Rarely   Sometimes   Usually   Almost always
28. I want people to see how complex and inter-related things really are.  
Almost never   Rarely   Sometimes   Usually   Almost always
29. I want to provide a balance between caring and challenging.  
Almost never   Rarely   Sometimes   Usually   Almost always
30. I want to make apparent what people take for granted about society.  
Almost never   Rarely   Sometimes   Usually   Almost always

**BELIEFS—What do you believe about educating or teaching?**

For each statement circle the word or phrase that best represents your Agreement or Disagreement.

31. Learning is enhanced by having predetermined objectives.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

32. To be an effective teacher, one must be an effective practitioner.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

33. Most of all, learning depends on what one already knows.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

34. It's important that I acknowledge learners' emotional reactions.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

35. My education focuses on societal change, not the individual learner.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

36. Good teaching is like an artistic performance of one's subject matter.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

37. The best learning comes from working alongside good practitioners

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

38. Education should focus on changing the way people think about nutrition.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

39. In my education, building self-confidence in learners is a priority.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

40. Individual learning without social change is not enough.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

41. Effective educators must first be experts in their own subject areas.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

42. Knowledge and its application cannot be separated.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

43. Education should build upon what people already know.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

44. Prior success at learning is the most important key to new learning.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

45. For me, educating is a moral act as much as an intellectual activity.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree



# Your Background

Please check the appropriate box or print your response. Remember, all personal responses in this questionnaire are kept confidential.

**20.** Are you female or male: (Check ONE only)

☐ Female

☐ Male

**21.** List the year in which you were born (for example, 1961) ?

19 \_\_\_\_

**22.** Do you have any children? (Check ONE only)

☐ No

☐ Yes I have \_\_\_\_ children living with me.

I have \_\_\_\_ children not living with me.

**23.** Which language(s) from the list below, did you first learn to speak with some fluency? (Check ALL that apply)

☐ English

☐ Spanish

☐ Cantonese

☐ Mandarin

☐ German

☐ Greek

☐ Japanese

☐ French

☐ Punjabi

☐ Vietnamese

☐ Italian

☐ Hindi

☐ Other (Please specify) \_\_\_\_\_

**24.** Which language(s) from the list below, do you currently speak with some fluency? (Check ALL that apply)

☐ English

☐ Spanish

☐ Cantonese

☐ Mandarin

☐ German

☐ Greek

☐ Japanese

☐ French

☐ Punjabi

☐ Vietnamese

☐ Italian

☐ Hindi

☐ Other (Please specify) \_\_\_\_\_

**25. Have you ever worked as a Registered Dietitian  
outside of Canada?** (Check ONE only)

- ☐ No If no, proceed to question 26.  
☐ Yes If yes, complete the following:

<u>Country:</u>	<u>Primary job responsibilities:</u>
1.) _____	_____
2.) _____	_____
3.) _____	_____

**26. List each country that you have lived in or traveled to, outside  
of Canada for 1 month or more.**

1.) _____	4.) _____
2.) _____	5.) _____
3.) _____	6.) _____

**27. Have you ever attended school** (elementary, high school, or  
university) **in other countries outside of Canada?**

- ☐ No  
☐ Yes If yes, complete the following:

Indicate the country	Level of schooling (e.g. high school)	Length of instruction (e.g. 2 years)	Language of instruction

Please go to the next page.



# Final Thoughts

What final thoughts or comments do you have about **your role as an educator or teacher?**

---

---

---

---

---

---

---

How has this questionnaire **provoked your thinking about education?**

---

---

---

---

---

---

---

---

Thank you very much for taking the time to complete this questionnaire.

*If you are interested in receiving a summary profile of your educational perspectives, please write your name and your mailing address on the enclosed mailing label and place in the return envelope along with your completed questionnaire.*

**Please return the questionnaire in the enclosed addressed, stamped envelope to:**

Tenny Chandy, RDN  
University of British Columbia  
Department of Educational Studies  
2125 Main Mall  
Vancouver, B.C. Canada V6T 1Z4