APPRENTICESHIP AT WORK:

THE CASE OF COOKING APPRENTICESHIP AT EARLS RESTAURANTS

By

OLIVIER SCHITTECATTE

B.Sc., Simon Fraser University 1986

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES

DEPARTMENT OF EDUCATIONAL STUDIES

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

APRIL 1997

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 APRIL 8, 1997

DE-6 (2/88)

ABSTRACT

Apprenticeship is an old and venerable method of teaching skills and knowledge stretching back to antiquity. Most of the traditional aspects of this teaching and learning method, the practice of apprenticeship, takes place in the workplace where few educational researchers venture. In addition, because apprenticeship bridges issues related to education, training, labour market, social policy, and anthropology, research reports cover a broad spectrum but do not offer a synthetic view of apprenticeship.

This research, focuses on a single trade, in a single company, in order to document the practice of formal apprenticeship. To set the stage, a preliminary classification of the disparate literature on apprenticeship as well as a brief history of apprenticeship in Canada and in British Columbia is offered.

The registered cook apprenticeship in British Columbia studied shows that four major themes undergird the 'program': context, progression, knowledge, and vocational training. Context directly affects what can and is practiced on the job, hence affects the outcomes of the apprenticeship. In addition, it can be assumed that micro contextual differences play a role as important as macro contextual differences in apprenticeship. Progression represents the journey from neophyte to master and impacts apprenticeship as it charts one's career progression; a clear view of progression also seems to affect apprenticeship outcomes. Knowledge and vocational education seem to be linked and represent, for the apprentices and the masters, external yardsticks of achievement which are used to confirm stages of the journey.

The research shows that present day apprenticeships have retained much of their rich tradition. Historical elements can be recognized in the models which summarize writings about apprenticeship presented in this paper. The models help contrast the practice with the intent of apprenticeship; and allow for the creation of a composite model which best fits fit a real-life case.

Suggestions about the current practice of apprenticeship can be made from the models. But future research will have to further clarify some of the issues raised here, as well as chart a coherent course for the study of apprenticeship.

TABLE OF CONTENTS

LIST OF FIGURES

ACKNOWLEDGMENTS

This paper is dedicated to patience. First and foremost that of the committee who was benevolent enough to stay in touch throughout the admittedly long gestation period of this paper. I should also commend the people in my family who believed me when I repeatedly assured them that I was working on this project.

It goes without saying that the project would not have seen the light of day without the collaboration, cooperation, and friendship of Chuck Currie of earls' restaurants. I would be remiss if I forgot to mention the numerous cooks, leaders, and staff who made each visit at one of earls' restaurants a warm and welcome part of the research.

I served an apprenticeship in writing a research report and I can vouch that, like all apprenticeships, it has been a journey. Some of what happened made sense, some did not. Sometimes it seemed that there was a purpose and sometimes I was in free fall. But there was a goal and it acted as a magnet just like interprovincial certification does for cooks.

I again thank all of the people who have helped along the way knowingly and unknowingly. In particular I thank Jan, my partner, and Gabrielle and Pascale, beloved daughters, with whom I am still apprenticing.

CHAPTER 1

INTRODUCTION

In British Columbia, a cook apprentice spends only 12 of 156 weeks in a formal school during his/her training period. This represents less than 10% of the total time devoted to the training of these individuals. The rest of the time is spent on the job, where, in exchange for lower wages, the apprentice is taught the tricks of the trade. This makes the experiential teaching portion of the apprenticeship a major investment on the part of the trainee, and a major teaching effort on the part of the supervising journeyperson.

The British Columbia Apprenticeship Act (RS Chap. 17, 1979; see Appendix 1) defines an apprentice as "a person who, to receive training, enters into an apprenticeship agreement or a registered apprenticeship agreement". The Act provides interpretation for many terms, all of which are concerned with administrative dimensions of the program such as, for example, the "occupational training council" or the "board", or the "apprenticeable trade".

But of the thirty two sections which comprise the Act, not one clearly specifies the nature of the training, or even provides a definition of the term "training". In the same vein, the Apprenticeship Regulations (B.C. Reg. 584/79, O.C. 3160/79, revised Jan.15/87; see Appendix 2) are also silent on the subject of training. Instead, two schedules of apprenticeable occupations are provided, and a description of each occupation is provided by listing activities which are included in the practice of that

occupation. Each description varies in length and in comprehensiveness such as, for example:

"Boilermaking" or **"Boilermaking (Erection)"** means the laying-out, burning, shearing, sawing, cutting, punching, drilling, reaming, boring, tapping, riveting, caulking, bolting, connecting, fastening, welding, gouging, shaping, fitting, handling and rigging of structural members, plates and tubes in the fabrication, erection, repair and maintenance of dust, air, gas, steam, water or other liquid-tight containers, structures and equipment and any other work that is usually performed by a journeyperson;

"Cooking" means the supervision of all phases of kitchen activity, including the preparation and distribution of food and any other work that is usually performed by a journeyperson cook;

Figures regarding the number of apprentices in British Columbia and the funds disbursed by the provincial government for the training of apprentices can be found in several ministries' Annual Reports. These reports were published by the Ministry of Labour before 1986, by the Ministry of Advanced Education and Job Training from 1986 to 1989, by the Ministry of Advanced Education, Training and Technology from 1989 to 1992, by the Ministry of Skills, Training and Labour from 1992 to 1996, and by the Ministry of Labour after 1996. These Annual Reports provide some scope to the apprenticeship enterprise as a whole. In 1986, the number of registered apprentices

was 9847, and 4030 indentured apprentices graduated (British Columbia, Ministry of Labour 1987). A year later, in its first report, the Ministry of Advanced Education and Job Training declares that "over 10 000 people" took advantage of this method of training and that $11.875 million were set aside for "training, remedial, and upgrading services" (British Columbia, Ministry of Advanced Education and Job Training 1988, p 43). The following year, the Ministry's figures have increased to "more than 12 000" while expenses are scattered under different programs, the sum of which appears to total $10.793 million (British Columbia, Ministry of Advanced Education and Job Training 1989, p. 44). After yet another year, the renamed Ministry announces that "about 14 000 apprentices were registered" while the expenses amounted to $13.5 million (British Columbia, Ministry of Advanced Education, Training and Technology 1990, p. 8).

These figures gain significance when they are compared to other educational ventures in B.C. The 1990 Annual Report allows such a comparison as it provides the reader with a student/learner enrollment breakdown for all expenses accrued by the Ministry of Advanced Education, Training and Technology. In terms of enrollment, the apprenticeship program in B.C. had about as many students as UVic, SFU, or BCIT, about half of the enrollment of UBC, twice the enrollment figures of OLA, or roughly 25% of the total enrollment of all of B.C.'s Community Colleges (British Columbia, Ministry of Advanced Education and Job Training 1990, p. 23).

Unfortunately, these reports provide no empirical data regarding the 144 week on-the-job apprenticeship practices for cooks. Therefore, it would seem worthwhile to see if some sort of theoretical construct is available in the literature and is applicable to the

practice of apprenticeship in British Columbia. As well, since registered apprenticeship

indentures are government supervised agreements between two individuals, a learner

(the apprentice) and a teacher (the journeyperson), who may have different beliefs,

intentions, and actions about and during apprenticeship, it would seem profitable to

document the practice of apprenticeship in the field. Hence, this research proposes to

document the practice of apprenticeship in British Columbia and to link it with models or

descriptive practices found in the literature. It will, however, limit itself to only one of the

apprenticeable occupation: cooking.

The problem

There are many descriptions of apprenticeship in the literature. But on the whole, a few

salient factors separate those descriptions in two major classes: (1) descriptive

apprenticeships and, (2) prescriptive apprenticeships. Within these two classes, a

number of different categories can be identified. Descriptive apprenticeships can be

placed on an ethnographic continuum that ranges from grounded-theoretical models

(e.g. Pratt, 1992) through Renaissance models as (e.g. Moore, 1986) to traditional pre-

industrial models (e.g. Aronson 1989). Prescriptive apprenticeship reports seem to

cover practices based either on a dual system modeled after the German Dual System

(see, e.g. Hamilton, 1987; Sonntag & Frieling, 1983) or a modern rendition of some

other European practice (usually British or guild based - e.g. Rajan, 1966.) While the

practice of apprenticeship in British Columbia can be seen as a compendium of ideas

and activities spanning both classes, it remains to be seen whether the practice of

apprenticeship in British Columbia allows for generalizations across descriptive and

prescriptive models. In effect, it is not clear to what extent the beliefs, intentions, and

actions of the major players in the registered apprenticeship program in British Columbia are congruent. Given the commitment in time and effort that all of the protagonists invest in this method of learning and teaching, it is imperative that systematic collection of data begin in order to get the process of measuring the degree of congruency underway.

For example, how much of Pratt's (1992) grounded theoretical apprenticeship can be applied to the British Columbian apprenticeship program? Is apprenticeship one of five cross-cultural conceptions of teaching which can readily be recognized when talking to individuals about memorable teachers or when interviewing teachers themselves? Pratt (1992) aptly titles this conception the "Modeling Ways of Being" and sums up the dominant ideas in this conception of teaching as: (1) knowledge and wisdom transmitted from the master to the apprentice, (2) the master/teacher "embodiment of desired ways of knowing and acting" (Pratt 1992, p. 212), (3) the master as a role-model for the apprentice, (4) learning taking place within the practice of the trade/craft, and (5) the content of learning hardly amenable to instructional material design and development. How and to what degree are these five salient characteristics part of the practice of apprenticeship in British Columbia?

As well, to what extent does Moore's (1986) description of Renaissance-style apprenticeships - as seen in the short excerpt below - aptly describe the practice or the aspirations of apprentice-trainer dyads?

> Jacob's [the master] feedback to the apprentice was normally tacit. As
> long as Mike [the apprentice] made no mistakes, he said nothing; if he

goofed, Jacob said something -vigorously... Mike had to do it or suffer

the consequences. If his demands on Jacob's time had been too great,

or if he had committed costly errors in terms of time and materials, Mike's

utility as an apprentice might have been diminished. Under those

circumstances, Jacob had been known to throw apprentices out (Moore

1986, pp. 174-175).

Also, how does the dual system as defined and applied in Germany influence the

practice of apprenticeship in British Columbia? Is it as Sonntag and Frieling (1983, p.

230) state that "a characteristic sign of the Dual System until now was that, when job

and school education took place at the same time, emphasis was placed on the job". Is

apprenticeship in British Columbia "the entry point into a range of career opportunities,

not a narrow channel" similar to the German Dual System described by Hamilton (1987,

p. 317)? Furthermore, in British Columbia, how applicable or desirable is the concept of

Master-Craftsmen as described by Russell (1991, pp. 9-10): "In the organization of

production and commerce in Germany these 'MasterWorkers' are essential. They also

play the main role in training and are the basis for the workplace training system"

Therefore, the purpose of this study is to document the application of one of the

registered apprenticeships in British Columbia in order to place the practice of

apprenticeship within the descriptive and prescriptive models family while identifying

commonalties and differences between the delivery of apprenticeship in the field and

the prescribed registered apprenticeship program delivery.

Questions

Three questions will be answered by the research:

1) What are the characteristics of earls[1] restaurants cook apprenticeship program?

2) How does earls restaurants cook apprenticeship program compare with prescriptive and descriptive apprenticeship programs reported in the literature?

3) How does earls restaurants cook apprenticeship program compare with British Columbia's registered cook apprenticeship program?

Assumptions

As with any interpretative field work, assumptions may guide or mask either or both of the data collection and subsequent analysis. As the present work looks at a specific instance of an ancient and still well established teaching and learning practice, a word of caution seems warranted.

First, for the purpose of this research, it will taken as granted that all apprenticeships can be considered as equal. That is to mean that it is assumed that there is such a thing as apprenticeship which holds true for all occupations. In other words, what is true for weaver apprentices in Africa (see e.g. Aronson, 1989, Deafenbaugh, 1989, Dilley, 1989), or pottery apprentices in Japan (see e.g. Singleton, 1989) in terms of learning and teaching forms a coherent world unified by an overarching principle called "apprenticeship."

---

[1] earls is a trademark and is neither capitalized nor endowed with a possessive apostrophe

Germane to that idea, and perhaps pushing the assumption to its logical limit is the position of this researcher that, while social, economic, and political systems direct practices of apprenticeship, the core activity of apprenticeship, teaching and learning, remains the same across cultures. In effect, with apprenticeship, things learned from one environment have a bearing on and can serve to illuminate practices in British Columbia.

Following the last assumption, it would also seem profitable to accept that practices of apprenticeships covering a number of trades and occupations have the same apprenticeship essence in common. That is to say that core components of apprenticeship in, say furniture carving (e.g. Cooper 1980, 1989) or railroad engineering (e.g. Gamst, 1980,1989) are equal and transferable. At the very least, and for the purpose of providing this study with a direction for the future, this research will assume that within the trade that is being investigated, cooking, elements of importance to the practice of apprenticeship are transferable.

In effect what the assumptions listed above point at is that, in the view of this researcher, there is a global convergence in apprenticeship. Given the longevity of this method of teaching and learning across many cultures that may have nothing in common besides apprenticeship, it will be assumed that there exists an apprenticeship 'essence'. Such essence is assumed to be there regardless of exactly where on the experiential to vocational continuum a particular practice of apprenticeship happens to fall.

Also, as apprenticeship has been studied by scholars from many disciplines for myriad purposes, this study feels that it is required to order the dimensions that have been used in the literature. For example researchers such as Gitter (1994), Goody (1989), or Jacoby (1991) have reported on the economics of labor undergirding apprenticeship with little concerns to aesthetic concerns (e.g. Johnson, 1989) or religious undertones (e.g. Dow, 1989) of apprenticeships. For the purpose of this study, all dimensions besides those of teaching and learning (taken as an unbreakable unit) will be assumed to be of subordinate importance.

Finally, it seems appropriate to emphasize that documents and artifacts are embodiments of a set core of beliefs about apprenticeship. When an actor produces documents or artifacts to aid in the practice of apprenticeship it is reasonable to assume that these documents are a mirror of deeply held beliefs about apprenticeship for the people who have produced those documents.

Definitions

So far, a number of terms which have been used carry (a) popular connotation(s) that could affect ways in which the research is apprehended. It is important, I think, to define those terms which will have an impact on how the readers approach this report. Cunningham (1992. p 183) summarizes this point:

> Students may thereby discover that different theories view learners and the learning process in different ways, emphasize different factors and often lead to quite different conclusions. Students could investigate these differences by examining the autobiography of the theorist, the epistemological stance underlying the theory or the historical context in which the theory was developed.

Three terms in particular deserve closer scrutiny: teaching, learning, and apprenticeship.

For the purpose of this research definitions will follow Elias & Merriam's (1980) "Descriptive definitions answer the question What does the term generally mean in common usage" (Elias & Merriam 1980, p. 186) as descriptive definitions call for contextual relevance and linguistic application.

Teaching

As registered apprenticeships (those which will be the object of this study) are, at the most simple level of analysis, dichotomized teaching-learning situations, it stands to

reason to delimit teaching in both poles of apprenticeship. Indeed, apprentices are taught on the job for the most part but they must attend in-school training as well.

It is fairly easy to discuss the in-school part of apprenticeship as it blends in with the rest of the vocational educational system in British Columbia. And while apprentices spend less time at school than do full-time vocational students, the classes they attend are organized and controlled by the same educational administrators who look after the other programs. A brief look at vocational education will outline the focus of such enterprise and allow the reader to contrast the well-defined vocational education teaching practices (institution-based) and the teaching which takes place on the job.

More specifically, vocational education, as illustrated by some quotes, can be defined by a utilitarian slant to the 'pure' conventional model. For example, UNESCO (1979, p 70) states:

> [vocational education is] the provision of an introduction to technology and to the world of work [by means of] programs of technical and vocational education which prepare for employment in a specific occupational field, and to equip those leaving the school system at whatever point with attitudes and skills which render them better able to undertake training and to find work.

Hager (1990, p 13) is more direct when he limits the uses of vocational education to a single purpose, "It seems self-evident that vocational education is essentially directed at labour market preparation..." And Babich (1981, p 3) points out the single-mindedness of the use to which vocational education is customarily put:

[administrators] have stated that "vocational education includes preparation for employment in any occupation for which specialized education is required". This statement of purpose alludes to specific training, immediate employment, and training for economic gains.

The above examples are representative of all explicit or implicit definitions of vocational education in that the stated aims of vocational education always contain the following two factors : employment and economic benefits. Hence, for the purpose of this paper, vocational education can be defined as any organized effort to teach individuals skills which will allow them to gain, retain, or change jobs so that they can be part of the economic system.

Vocational education meets apprenticeship through definitional commonalties. As the Ministry of Advanced Education and Job Training states, [the apprenticeship program] involves the design, development, implementation, and administration of programs which influence and stimulate the provincial labour market and workforce (1986/87, p 40).

The backbone of vocational education, the praxis of teaching in that field, stems from and is steeped in the ideology of what has been termed "conventional education" by Finger :

Conventional education, was built from the perspective of what he [Lindeman] called 'the system of education' and therefore from the

perspective of the subject-matter. As a consequence, conventional

education was preoccupied with grades, certification, and credentials...

And this is the role of conventional education: the subject-person has to be

educated to the standards of modernity, i.e. normative standards which are

all laid out in philosophy and science...not only was conventional education

to promote a modern society through enlightening the citizens, but, in

addition, it was also to make the persons become technically and

professionally skilled and active participants in the process of modernization

(1990, 100-103).

In contrast, teaching on the job is left to a multitude of work-savvy people in myriad

venues. Those tradespeople would not define their interaction with apprentices on the

job as 'teaching'. For them, teaching is the stuff of institutions and professionals (e.g.

Delbos and Jorion, 1984).

Learning

It is not the purpose of this research to provide an exhaustive review of the extensive

literature on learning. Rather it is the goal of this brief section to outline the salient

points of what will be considered as learning. Clearly, for the researcher, the purpose of

the definition is to guide the research enterprise and for the reader, the purpose of

definitions is to get an idea of the researcher's beliefs about the subject being defined.

Learning is an internal mental process during which the learner is constructing

meaning. Such an internal process, while not directly observable, can be detected by

others through directional and somewhat permanent changes in the behavior of the individual.

Of course, particular words set a priori theoretical parameters on the definition. Therefore, it would be useful to discuss some of these terms now. First, let us look at 'changes in behavior'. This should, of course, mean that learning is somehow linked with SR associations in pure form - for example, Skinner's operant conditioning, or in more complex form where SR pairs are grouped and linked to form higher instances of learning - for example Gagné's systems, or Wingfield's chaining. But instead, by using behavior I mean that learning is purposeful in that it is undertaken by the learner for definite reasons which may not be apparent to the outsider until s/he detects changes in the activities or attitudes of the learner. Changes are, as Rogers (1979) suggests, purposeful adaptive tactics of individuals made possible by learning rather than simple mechanical externally caused reactions

In turn, 'internal mental process' acknowledges the assumption that the seat of thought is located in the brain and that activities are under the direct or indirect control of this organ. Hence, that whatever learning is happens within the learner (e.g. Dickinson, 1973; Gagne, 1977). But that does not rule out the importance of external factors or measuring learning against standards external to the individual proper.

Finally, in 'constructing meaning', I adopt Ausubel's definition of "meaning, first of all, refers to the articulated and differentiated cognitive content evoked by a particular symbol or set of symbols" (Ausubel, p.216), and Entwislte's (1984) rendition of constructing as an interpretation of new information in terms of "prior knowledge and

concepts" (p.8) for the purpose of "further learning and problem-solving" (McKeachie's 1984, viii; 1988).

I chose to define learning as a process rather than a product or state for several reasons. Unlike Smith (1982) who equates the distinction between process and product as the difference between the outcome and the rationale of the learning experience, I view process as a dynamic series of moves leading to the outcome. Learning outcomes are the conclusion of the learning experience. This is not to say that these conclusions are terminal and cannot serve as a starting point for another learning activity. For learning itself to be a product, one would have to turn to the option rejected above: that of strict SR learning, where learning is the outcome of the treatment regardless of the treatment itself.

It stands to reason that learning is also narrowly connected to the cultural milieu in which it takes place. If meaning is a symbol or sets of symbols (Ausubel, 1980) then for those to be relevant, they have to be shared by at least the sender and the receiver. Cultures are such assemblages of senders and receivers, most of whom agree on the correspondence between symbols and their physical entities (Bogdan & Biklen, 1992), or more simply "culture is a part of people's experience" (Horton 1990, p.13). Learning consists of the 'manipulation' of these symbols and sets of symbols mediated by both senders and receivers in order to accommodate some new experience. But as learning takes place in a cultural milieu, it is subjected to the pressures, needs, and demands of such a milieu or culture. Political, economic, and social infrastructure may affect the interpretations of new information, the potential solutions to new problems, or even the

acceptable uses learning can be put to (McLaren, 1990; Moyers, 1990; Rubenson, 1989).

Behaviorists, such as Gagné (1977), make a distinction between motor skills and reasoning ability learning. But cognitivists, radicals, and humanists like Ausubel, Freire, and Maslow for example, usually concentrate on verbal or conceptual learning. Could this lack of coverage be due to the fact that motor skills don't fit *in toto*? I would tend to believe that this is the case. When learning to make an omelet, conceptual understanding of heat transmission, colloidal substances, mechanical actions, and so on can only be used to the extent that they allow you to understand what you are doing in terms of what you have done, and later, what you might do. But there comes a time when you will have to break the eggs and get going. The whole set of events, from breaking the eggs to slipping the omelet on a hot plate will be ground-breaking, it will be a learning experience and it certainly will be experiential learning, the stuff of apprenticeship.

Apprenticeship

Regardless of the source, all definitions of apprenticeship revolve around two dimensions. First, and perhaps more than in most other training systems, definitions of apprenticeship always stress the length of time during which the apprentice is indentured. And second, arguably because apprenticeship learning and teaching takes place in the world of work, apprenticeship's economic impact is also always stressed. For example:

For many years "apprenticeship" has been associated in most people's minds with an indentureship involving the serving of a lengthy period of time with craftsmen. The word became generally accepted as meaning a time-serving process. Today, however, under the modern concept the word "apprenticeship" is becoming synonymous with "training". It is considered by advocates of this modern concept as meaning a period of organized supervised training. (Canada, Department of Labour 1956, p. 7)

Apprenticeship, unlike other trades training, allows students to earn a salary while learning a trade and results in certification as a journeyperson. (Stewart 1989 b, p. 28)

In western societies, while the indeterminate duration and harsh training conditions of yesteryear apprenticeships have been toned down, vestigial reminders of the system of old can still be found. However, these arduous learning conditions are usually mitigated by the use of formal schooling during the apprenticeship: The state has an interest in and an impact on the training of apprentices:

The word "apprentice" is used to denote young workers whose conditions of employment allowed them to attend a local technical college for academic study for at least one day per week. Most of them were paid an 'apprentice' or junior wage which was less than that paid to

comparable workers aged twenty-one and over. Thus, whether indentured or not, most of them 'served their time' for five years from sixteen to twenty-one before qualifying for adult status. (Venables 1974, preamble)

"apprenticeship" refers to training which combines theoretical in-school instruction with practical on-the-job training under the direction of a qualified tradesperson or practitioner. (British Columbia, Ministry of Advanced Education, Training and Technology 1991, glossary)

This last definition needs to be borne in mind because of the restricted sample used for this study (see 'Sampling', Chapter II, 2). All of the respondents for this research will be 'Registered Apprentices'. In British Columbia, one becomes a registered apprentice by entering into a three-party agreement; the apprentice and the employer agree to work together and the provincial government oversees the process.

The provincial government becomes the guarantor of the agreement between the trainer (the employer) and the trainee (the apprentice). The apprenticeship agreement (see Appendix 3) sets forth the conditions of employment, training, and school attendance in a formal, legal document.

Registered apprenticeships in British Columbia formalize (a) the proportional level of remuneration throughout the apprenticeship with respect to the employer's journeyperson's rate of pay; (b) the time to be served on the job; (c) the number, length, and type of formal, in-school, block-release technical training; (d) the ratio of

journeyperson to apprentice (usually 1 to 1 unless special dispensation is obtained); (e) the type and proficiency level of skills to be obtained on-the-job; and (f) the issuance, recognition, and adjudication of trade credentials.

In contrast, informal and/or unregistered apprenticeships would be described as periods of employment during which the worker learns job-related skills. This process is usually more of an ad-hoc training tactic than a skills development strategy.

Rationale for the Study

As personal experience as shown me, in the world of apprenticeship education, in the trenches where people make their living mainly with their hands, where people can truly be described as 'workers', the purpose of the experience is simple: learn by doing and watching. In cooking, for example, an aspiring chef will attempt to obtain an apprenticeship in a reputed restaurant or hotel kitchen, hoping that some of the knowledge, savvy, expertise, poise, fame, and money from the 'Great Chef' will rub off. After all, if one's résumé states that s/he has worked at Paul Bocuse's, Alain Chapel's, George Blanc's, the "William Tell", or the "Hotel Vancouver", most would be convinced that that graduate knew better than another worker who had apprenticed at a local restaurant or small town hotel.

This reputational dimension of apprenticeships seems to imply that, in people's minds, there are different levels of outcomes possible to a cooking apprenticeship. Moreover, it seems that the outcome is greatly independent of the learners and teachers' efforts during the apprenticeship. Hence, while individuals who have completed an

apprenticeship hold the same qualifications, their chances of obtaining similar employment subsequent to the apprenticeship has little to do with the teaching/learning processes that have occurred during the apprenticeship. This state of affairs should prompt one to seek some sort of answer(s) to this apparent differential outcome given the wide variety of venues and individuals involved in apprenticeship training activities in a particular trade.

In fact, does this mean that the beliefs, intentions and actions of apprentices and trainers are a function of the venue in which they learn and teach? Or do we find commonalties regardless of venue? Finally, are these differences culturally entrained?

Answers to these questions can be gained by documenting the practice of apprenticeship in the field, and by comparing the answers obtained from individuals actively involved in an apprenticeship with theories and models found in the literature as well as with the implied model of the British Columbia registered apprenticeship program.

Deepening our knowledge of apprenticeship will give us a better appreciation of its strengths and weaknesses as well as help placing this venerable way of teaching and learning on a more solid footing.

Implications of the Study

Theoretical implications

This research should help place the practice of apprenticeship on a grounded theoretical footing. As well, it should help focus the lengthy debate in the literature about the worth of different models of apprenticeship training (see, e.g. Cammock & Inkson, 1985; Dougherty, 1987; Perry, 1991; Russell, 1991).

But perhaps most importantly, this research should help negate that "the test of an idea is its agreement with some antecedent state of affairs" and instead shift the focus of future research from the "informative aspect[s]" to the "transformative" aspects, or to move "the process of verification [held by] traditional philosophers [from the] mainly reproductive" to the explanatory and discovery (Prawat, 1995, p.19).

Practical implications

At this level the research should help point out how the practice of apprenticeship in one trade in British Columbia matches successful practices elsewhere in other trades. This might allow program administrators a wider set of options as they try to make apprenticeship more relevant to participants.

In addition, a glimpse at the practice of apprenticeship in BC may help point out what parts or factors of the cook apprenticeship are taught redundantly and, consequently,

could be either removed from the technical training requirements or trusted in the hands of those who are already delivering the program in the field.

Finally, by comparing prescriptive and descriptive models from a number of social, cultural, and economic milieux with the BC praxis a number of suggestions for the revitalization of this venerable teaching-learning method may be developed.

CHAPTER 2

REVIEW OF THE LITERATURE

The purpose of this chapter is to selectively review writings about apprenticeship and order them so that they can be used in this research. In addition, many researchers from many disciplines have investigated and called a variety of socia, economic, and educational sysems apprenticeship because it is universal and ancient, because it involves the production of goods or services, because it consists in part of a number of teaching practices, because its practices are culturally entrained, and because the practice of it has evolved differently in different parts of the world. Some of these reports need to be examined in order to provide a literature-based scope to and definition for apprenticeship.

Two main streams of research are apparent though: (i) economic investigations and/or economic implications of apprenticeship research (e.g. Bailey 1991; Gustman and Steimeier, 1982) and, (ii) social practices associated with and/or social dimensions discernible in apprenticeship (e.g. Broom, Jones, McDonnell, and Williams, 1980; Buechler and Buechler, 1992; Willis, [1977] 1983). Again, within these two streams, two main approaches to research can be teased out of the rather disparate literature: one which uses second-hand reports of apprenticeship in order to assess the impact of apprenticeship (e.g. MacNeill, 1994; OECD 1979, 1994; Weiermair, 1984) and a second approach which focuses on gathering - and sometimes interpreting - field data (e.g. Delbos and Jorion, 1984; Goldschmidt, 1995; Hamilton, 1990).

The breadth of cultures, settings, and research focus ranges from the economic impacts of apprenticeship in pre-industrial societies in Western Africa to the rationalization of school-to-work transition in hyper-industrial societies of Europe. In addition, a small number of researchers have tried to compare the practice of apprenticeship in different societies, while other researchers have tackled straight-forward cost-benefit analyses of apprenticeship as a vocational training milieu. Earlier, I stated that three terms in particular deserved closer scrutiny: teaching, learning, and apprenticeship. In this selective review, apprenticeship especially is examined. However, the literature sadly lacks in either formal or informal studies of teaching and learning in apprenticeships except in passing. Lave and Wenger's (1991) work stands alone in this respect as they try to establish a new theory of learning by using apprenticeship as an example. The other papers reviewed herein take a glance at teaching and learning either in terms of structure (what is delivered, what is expected to be learned) or in terms of activities (what actions the master takes in a given situation.)

To make things clearer, this chapter has, at a first level, organized the literature into either descriptive or prescriptive models of apprenticeship. By prescriptive, I mean that the report focuses on a government-sanctioned practice such as that of the registered apprenticeships in British Columbia. And by descriptive, I mean the straight forward ethnology of apprenticeship in the field, the documentation of apprenticeship-as-it-happens in the greater sense of the word: learning by doing. Within each of these categories, I have tried to illustrate the main streams of research mentioned above.

Contexts

"...given the establishment that the apprentice is going through there are different things, that would, in my opinion, be important based on what's happening. So, in an institutional environment it would differ far from a restaurant as it would differ somewhat from a hotel." (Alfred M; 911-916)

It is not just Alfred who thinks that context is important. He recognizes that the milieu in which the apprenticeship is conducted influences the outcomes of apprenticeship. He also recognizes that due to the organizational, managerial, and production constraints inherent in each establishment, the experiences of the learner will be different.

Pratt (1992) also mentions the context as one of the important components of a teaching-learning environment. What this means is that we cannot view the learning process independently from the place in which it takes place just like we cannot think that there is such a thing as learning without having people, places, and practices involved in the process. In effect, when Hanks' (1991, p. 19) states "that certain participation frameworks may be 'dispositionally adapted' to producing learning, even if the participants are not attempting to acquire or inculcate identifiable skills", he recognizes that the setting, the people, and the activities form a synergistic whole that has to be contemplated as one.

But apprentices' tasks are more than just mastering trade-related skills. They have to familiarize themselves with the organization they have joined; they have to become part of a production team; and they have to recognize and seize opportunities to learn.

Organizational Socialization

Organizational socialization is the rather cumbersome term used by social scientists who attempt to identify factors helping or hindering newcomers fit in a new setting. While this work is usually not directly linked to apprenticeship, apprentices, by definition, are newcomers, at least for an initial, indefinite, period of time (Wanous (1976) for example talks about 40 hours, while Parkey, Currie and Rhodes (1992) talk about 3 years).

Being socialized implies that one has to fit in an existing social framework. That framework is often referred to as "organizational culture" (e.g. Caffarella and O'Donnell, 1987; Duncan, 1989). Briefly, this culture encompasses such things as "myth, symbols, and labels...rites and rituals" which are taken together and are "learned...shared...and...transmitted" (Duncan 1989, 229). This culture, this assemblage of values and beliefs, determines, in great part, the management style, business practices, regulations interpretation and, consequently, the expected employee behavior (Caffarella and O'Donnell, 1987).

Apprentices, as beginners, as they are socialized, are expected to resolve "initial confrontations with organizational reality", cope with "anxiety that accompanies reality shock", and deal with "role conflict [and] role clarity" (Louis, 1980; Wanous, 1976;

Wanous, 1977; Wanous, Reichers, and Malik 1987, 673). Although apprenticeship literature is quiet on these social activities, organizational theory has looked at the effects of supervisor relationship with newcomers. More specifically, all such relationships have been viewed as dyadic in nature (e.g. Dienesch and Linden, 1986). Since apprenticeship is traditionally taken to be a dyadic teaching-learning situation, that between the master and the apprentice, the teacher and the learner, it is interesting to note that this literature reports that job performance was directly proportional to the level of trust, interaction, support, and rewards exhibited by or forwarded to the dyad (Dienesch and Linden, 1986). Furthermore, Quick (1979) reports that within dyads setting clear and achievable goals enhanced performance, a fact supported by, among others, Jones (1986) and Louis, Posner and Powell (1983) in organization-wide terms - i.e. newcomers respond in a manner deemed appropriate by the organization, are rewarded, and perform better.

Blau (1988) takes organizational socialization a step beyond all others reviewed here for two reasons: first, he equates organizational socialization to apprenticeship based on the work of Wanous and Caplow (see p. 178), and second, he likens apprenticeship to mentorship as they "involve the same process" (p.179). For Blau, apprenticeship is first and foremost a way to bring newcomers to the fold. He recognizes that skills will be learned, but this is secondary to fitting in the context in which the work will be done. Blau, perhaps because he makes the direct connection between apprenticeship and mentorship also views this as a dyadic relationship albeit one for fresh recruits: "Apprenticeship is designed for newcomers" (p. 179).

In terms of context, then, organizational socialization focuses on dyadic relationships and the effect of these relationships on job performance. Indeed much of the literature on apprenticeship revolves around the concept of the master. It is perhaps even possible that, to most people, the dyadic relationship subsumes apprenticeship. Since Blau (1988) stated that apprenticeship and mentorship were similar - although the major beneficiary is purportedly different in each of the cases, and since the master plays such a key role in people's vision of apprenticeship, a brief look at mentorship would help delimitate or, better, sketch the image of the master.

Masters or mentors?

The term 'mentorship' according to many authors (e.g. Anderson and Shannon, 1988; Carden, 1990; Hardcastle, 1988) stems from the name of a character called 'Mentor' in Homer's "The Odyssey." Mentor's duty was to look after a king's young son during the king's absence. Being old and wise, Mentor was expected to be able to guide the lad in personal and business affairs so that he could flourish and become a king's son fit for succession. Whether this etymology is correct in fact is quite irrelevant in view of the processes which make use of this name as a root nowadays.

Whereas Mentor's role was to look after the total person, nowadays the process has been split in two distinct halves. On the one hand, some mentors are supposed to help their protégé(e)s on their career path, while others are supposed to help their mentee(s) on their intellectual and spiritual journey. Summative research such as that of Carden (1990), Daloz (1990), and Merriam (1983) never fails to make the distinction

between the "comprehensive emotional investment/psychosocial" (Carden 1990, 280) role of mentors on the one hand and the "instrumental praxis/career" (Carden 1990, 280) role of mentors on the other hand.

It is not surprising that this dichotomy, further dichotomized in mandated and uncompelled mentorships, is also reflected in the results of research about people who have experienced mentorship. Reports about individuals who experienced mentorships along the psychosocial dimensions will vaunt their positive effects on the protégé(e) (e.g. Daloz, 1987; Gehrke, 1988; Parkay, 1988; Yamamoto, 1988). Likewise, research about mentors as career helpers has focused on measuring the quality of the relationship in terms of mentee career progression or in economic terms for the companies in which such a system is used (e.g. Anderson and Shannon, 1988; Clawson, 1987; Noe, 1988).

Unfortunately, most of this research is descriptive, with little empirical evidence to back claims made. Indeed, few researchers even start their enquiries from well-established parameters, definitions, or clear concepts. Anderson and Shannon (1988), however, suggest an explanation for mentorship as a concept based on an extrapolation of the classical role. They propose that mentorships include the following: (i) a process of nurturing, (ii) a role model for the protégé(e), (iii) a focus on personal and professional development, (iv) an on-going caring relationship, and (v) a functional mentoring role consisting of teaching, sponsoring, encouraging, counseling and befriending. Based on these, mentors should have the following dispositions:

We offer three dispositions which we believe are essential to the concept of mentoring. First, mentors should have the disposition of opening themselves to their protégé by, for example allowing their protégé to observe them in action and conveying to them the reasons and purposes behind their decisions and performance. Second, mentors should have the disposition to lead their protégés incrementally over time. Third, mentors should have the disposition to express care and concern about the personal and professional welfare of their protégés. (Anderson and Shannon 1988, 41)

This seems, as would be expected, a modern version of Homer's classical mentor role. As such, it includes both of the dimensions of the mentorship, career and psychosocial, in a "conjunctive" (Anderson and Shannon 1988, 40) fashion.

It is quite clear from the above that acclimatization is a factor for all newcomers. It is also clear that this process can be helped if there is an individual who can smooth the way. If we accept that apprentices, as newcomers, have to adapt successfully to an existing milieu, then it is also necessary to consider the make-up of those milieus. Coy (1989, 1) states that "it is likely that this training [apprenticeship] is never totally without structure or specific instruction, rather, ..., this structure is often nested in the logic of production processes and in the articulation of the specialization with the social organization of society." Hence, there are three facets to the contextual aspects of apprenticeship: social (briefly alluded to above), economic (implied above and below), and political (as the history of apprenticeship below will show). Coy (1989, 1) sums up this complex whole:

"Apprenticeship is a complex and multi-faceted concept. It clearly

involves education, social relations, and economics, and it suggests an

ideology of life and work associated with a specialized role.

Apprenticeship involves at least two persons and probably many more

than two. The two principals are a person possessing specialized skills

and a person who wishes to acquire and develop those skills for

him/herself. Apprenticeship thus consists of a social relationship. And,

inasmuch as the specialized skills sought by the apprentice are often,

perhaps always, valuable, apprenticeship has an economic dimension."

Taken together, these dimensions form the web which supports both the legislation that

regulates the practice of registered apprenticeship (which I discuss below) and the

totality of activities that make up apprenticeship, the ethnography of apprenticeship

which I will consider now.

Descriptive Apprenticeships

As stated above, descriptive apprenticeships are those that consist of the straight

forward ethnology of apprenticeship in the field, the documentation of apprenticeship-

as-it-happens in the greater sense of the word: learning by doing. The exact limits of

apprenticeship can be argued about (as most things about apprenticeship), and the

literature reflects this state of affairs. For some, practicums, internships, or articling are

apprenticeships (a point made by e.g. Haas, 1989), whereas for others, these activities

are an experiential component to formal education. It is beyond the scope of this work

to consider the rich literature covering experiential learning. Instead, when an author

mentions apprenticeship by name, I will take it at face value; I will not argue the

propriety of such a label.

The Ethnographic Context

As stated earlier, the main belief which has guided the research and, hence the

literature review, is that there is a global convergence in apprenticeship, that there

exists an apprenticeship 'essence'. By looking at a number of non-government

sanctioned practices, arranged by continent for the purpose of placing these practices

on a societal continuum arguably ranging from the hyper-industrial to the proto-

industrial, a pattern should emerge.

However this portion of the literature is classified, and regardless of which stream

and/or approach, it remains that all of the research was conducted in typical

ethnographic fashion including in-depth interviews and lengthy periods of observation

where the researcher was, at times, both an outsider and a participant. All this in order

to document apprenticeship so that the results would show "the indivisible character of

learning and work practices" for the purpose of "mak[ing] obvious the social nature of

learning and knowing" (Lave and Wenger 1991, 61).

The European practices

Delbos and Jorion (1984) offer us an in-depth look at the world of sea-salt making, and

mollusk farming in Brittany (France). Theirs in an in-depth study of those traditional

occupations for which there exists no formal apprenticeship save for the passing on of knowledge within the family or, if the familial flow is interrupted, through a school-based vocational program. The focus here is on how what is needed in order to harvest salt or grow mussels is learned and on how people who have the knowledge view what they know.

The first, and seminal distinction Delbos and Jorion report is that people view sea-salt harvesting and shellfish farming as "'métiers qui ne 's'apprennent pas', pour autant que l'on donne au verbe apprendre un sens qui s'apparente à 'apprendre à l'école'" (occupations that cannot be learned if we assign to the verb learn a meaning of learning at school [my translation]) (p.9). This discovery leads them to make a distinction between two types of knowledge: procedural knowledge and prepositional knowledge. The former is that which is extracted from the observation of praxis; a researcher observes a practitioner at work and deduces that something has to be known in order for certain actions to be taken in a temporal continuum. The latter form of knowledge refers to that which has been codified and has been enshrined in schools, modeled on scientific or logico-positivistic fashion.

In terms of apprenticeship, as the bulk of learning happens on the jobsite, such a discovery is crucial to the manner in which people apprehend the reality of apprenticeship. Delbos and Jorion report that people view procedural knowledge as an on-going thing, whereas propositional knowledge reflects a discreet, if useless, time spent learning.

The second distinction of interest made by these authors is that which contrasts field experience credentials and school-based credentials. Experience credentials, according to their research, is the lowest form of recognition available: " A de l'experience...celui à qui on ne peut attribuer rien d'autre, ni réel savoir, ni réelle intelligence...à défaut d'une théorie, il dispose d'une pratique" (p.14) (one is granted experience... if one has nothing else to one's credit, no real knowledge, no real intelligence...for lack of theoretical knowledge s/he has practical knowledge [my translation].) Here again there are a number of interesting facets to this result. First, if experiential knowledge is diminished then so is the social and economic status of the individual. Second, if hands-on knowledge is debased, then the jobsite training is viewed as, at best, inferior, and at worst, just a time-serving device.

This French report stands alone in European research as many occupations have been identified and have become part of the formal (prescriptive) system of apprenticeship. For example, reports on apprenticeship in Germany and Austria focus on the famed "Dual System" as apprenticeship is highly structured - there are currently about 400 occupations which are formally apprenticeable down from roughly 600 only a few years ago (Hamilton, 1990). Likewise, Venables' (1974) well documented ethnology of British apprentices considers only those apprentices which are enrolled in a formal program. Irish apprentices (Moran, 1982), Swiss apprentices (Gendre, 1987; Clémence, Deschamps, and Roux, 1986), and Norwegian apprentices (Mjelde, 1990) that are considered are those that gain access to work and workplace-based training through school rather than an informal apprenticeship. As well, most of this research focuses on acquiring statistical data for a number of discreet variables pertaining to earnings,

retention, and achievement as a reflection of performance on scholastic achievement or social means tests.

Arguably, the paucity of documented practices of prescriptive apprenticeships in Europe is linked to both the nature of the hyper-industrial society coupled with the long history of formal apprenticeships in Europe.

The American practices

As the Americas were colonized by European nations, one would expect to find traces of this heritage in the practices and habits on these continents. Not surprisingly, the practice of apprenticeship is cleaved along economic lines; less developed countries, particularly in South and Central America have strong and well-documented practices of informal apprenticeship, while more affluent societies of North America have a well-defined, European-style approach to apprenticeship. It should be noted, however, that in the United States, many occupations are apprenticeable both formally and informally; that is to say both descriptive and prescriptive models can be found side-by-side.

The range of documented practices span small-scale manufacturing (e.g. Buechler, 1989), through midwifery (Jordan, 1989), to sorcery/'shamanry' (Dow 1986, 1989) in South and Central America, while in the North, butchers (Marshall, 1972), cabinet-makers (Moore, 1986), ironworkers (Haas, 1972), locomotive engineers (Gamst 1980, 1989, 1995), organizational development managers (Mainiero, 1986), and welders (Graves, 1958) have been studied. In addition there are a number of studies (e.g. Haas, 1989; Haas and Shaffir, 1987) that have focused on the apprenticeship -

internship - portion of professions such as medical doctors, lawyers, and aspiring university professors.

In Canada, relatively little attention has been paid to recent descriptive apprenticeships as the formal system is over 50 years old and strongly influenced by the European practices. In the United States, in comparison, the number of descriptive apprenticeable occupations that have been studied reflect a lack of structure due in part to a Smithian economic approach to training for work (Keane, 1988), to an on-going political struggle between unions and management for access to and retention of work (Gamst, 1995), and to job/work stratification based on scholastic achievement (Hamilton, 1990).

For example, Moore's (1986) description of a cabinet-making shop scene is apprenticeship with a strong social overlay: the apprentice is on a school-sponsored work placement. He is one of those who has been affected by the streaming process described by Hamilton (1990), he is learning the trade as part of his 'academic' courseload. This type of apprenticeship can be viewed as a partial apprenticeship as the economic or production dimension of apprenticeship is missing. In this case, the apprenticeship has joined the ranks of experiential learning or education.

Experiential education, renamed apprenticeship, as described by Mainiero (1986) for organizational development professionals or by Haas (1989) for medical doctors is also characterized by this abbreviated view. For, in these cases, the 'apprentices' are people who have undergone educational front-end loading. The learning is assumed to have been completed prior to showing up for the internship: "Rigorous processes of selection and preparation, initiation, testing, and threats of humiliation help sustain the

myth that the aspirant is undergoing important changes and/or demonstrating special qualities" (Haas 1989, p. 89 - emphasis mine). Indeed Haas refers to a "rite de passage" (p.87) as an apt description of the first phase of the apprenticeship in contrast to those apprenticeships where the "rite de passage" is when one sets up one's own shop or, in medieval and formal terms, becomes a journeyman (Graves, 1989). For Manierio (1986) this is also the case because "commonalties exist between the trials and tribulations of the first anthropological experience and the first field assignments" (p.3). For these types of apprenticeship. it would be fair to say that the hands-on portion of the training, the apprenticeship, is just a means of validating the 'real' learning, that which has taken place in school.

Closer to the traditional meaning of apprenticeship, that which defines apprenticeship as a training (read teaching-learning) method, and still in the United States, the meatcutters described by Marshall (1972) are apprentices in a semi-structured program. They are apprentices on a union wage scale, the result of a bargaining process, where management's demands for a less costly class of labourer and union's concerns for job security resulted in a formal agreement. And while the apprentice meatcutters are expected to attend some form of traditional training, they are, in effect, serving their time, building seniority. Skills transfer, level of proficiency, knowledge, are the not the concepts that characterize the situation. Just as in the case of the cabinet-maker above, the butcher is an apprentice in name and, just like any learner in a vocational education setting, trying to pick up motor skills in an industrial work environment.

This view of apprenticeship, and its attendant union connections, is supported by work done by Haas (1972, 1989) on ironworkers or high-steel workers and by Haas (1958, 1989) on welders working the pipeline. In this work, ironworkers and welders have a vision of apprenticeship based mainly on socialization of the apprentice only because "[i]n informal apprenticeships there is no precise way to know when training has ended...and judgment of the apprentice's expertise is based upon implicit and sometimes unclear standards" (Graves 1989, 51). Although there is acknowledgment that some skill transfer takes place, both Graves and Haas make it clear that the lack of formality in testing or assessing the apprentice, perhaps coupled with the fact that the setting for and the delivery of training are continuous rather than discreet variables, concurrent with life rather than outside of life, make apprenticeship a social event rather than a teaching-learning event with a social (among others) dimension: "Any kind of apprenticeship involves two sets of processes: the socialization and the social control of the apprentice" (Graves, 1989).

With railroaders, Gamst (1980, 1989) sets up the socialization exercise as a slow process which allows the apprentice to learn the "web of rules" from more experienced co-workers. This web of rules forms the central portion of the apprenticeship and while "[a] number of textbooks are used...the several rule books are the central ones [and]...on-the-job-experience, for the 'student' includes operating verbalizations and acts of others which may reinforce, add to, or contradict managerial rules" (Gamst 1989, pp.71-80). Indeed, Gamst focuses his attention on the competency gained by experience, but he sets this in a communist and communal light, "all of the experience and collectively held knowledge"(p.80). And in the end, only a long period of service, 11.9 years (Gamst 1980) will turn an apprentice into a railroader.

This lengthy period of indenture is a common theme in descriptive apprenticeship whether conducted in a semi-formal manner as explained above or totally informal manner as that examined by Dow (1986, 1989). In addition of the totally informal manner in which the apprenticeship takes place the occupation is also surprising: shaman. It is interesting to note the similarities in this apprenticeship and that of doctors' internship explored by Haas (e.g. 1989), namely the progressive assumption of a "cloak of competence" (Haas 1989, p.87). Dow's shamans are 'country doctors' in Mexico (and here we'll include Mexico in MesoAmerica on the basis of Gross Domestic Product). They practice a blend of common current physical medicine such as practiced in the industrialized countries and spiritual medicine or healing. Although Dow makes a distinction between a calling and a yearning/desire to become a shaman, his reading of the experience, and the fact that he stresses "a teacher-pupil relationship rather than a master-apprentice relationship " (Dow 1989, 200) seems to reflect prejudices attached to the healthcare occupation rather than the manner in which the apprenticeship is conducted. Regardless of semantics, the elements of apprenticeship outlined above can be found, and while money is not the driving force behind the course of study, it is nevertheless mentioned and acknowledged. But teaching and learning is not quite enough and, just as in the case of the locomotive engineer, one has to acquire this patina that time and true understanding provide. For shamans that time is when their"...healing power [has]been recognized over a period of many years" (Dow 1989, 200).

That common thread is also found in the apprenticeship of midwives (also a healthcare field) albeit in a less strict interpretation. While Dow was quite specific in stating that

there existed a teacher-pupil relationship, Jordan (1989, 932) views it "as way of, and in the course of, daily life." The interesting part of Jordan's view is that there exists a 'pre-apprenticeship' period, a period of a young girl/woman's life that centers around midwifery skills in an unstructured manner. The would-be apprentice is learning through family or kin association (as we will see below in African practices, this a common thread in informal or descriptive apprenticeships.) What is even more interesting is that it links up the practice of informal apprenticeships between the hyper-industrialized countries and the less industrialized countries. Indeed, in the case of salt-makers and shellfish growers of France, Delbos and Jorion (1984) start from the statement "l'experience est une socialisation" (p.34 - experience is a form of socialization [my translation]) to arrive at the conclusion that just 'hanging around' the grown-ups as they work is the 'pre-apprenticeship' step, that step during which the desire to continue in the trade or occupation is born.

Buechler (1989) and Buechler & Buechler (1992) also echo this learning within the family unit but they view this pre-apprenticeship period in a production light. For them, "one of the major variables that influences the acquisition of skills, [hence the practice of a craft for the purpose of becoming an independent producer,] is the extent to which they are related to skills learned within the average household" (1989, 38; 1992, 84). This is especially important in their view because "[the] place and nature of craft and craft-like production, and consequently the importance of particular skills and the manner of their transmission, must be viewed as a product of a long association of Third World countries with capitalist development" (1989, 35). And while family plays a role in starting someone in a trade, kin or strangers may as well, all this takes place

under the pervasive influence of the world-at-large. It is this world, the context in which

the apprenticeship takes place that is often ignored or dismissed:

> "Modes of learning are often treated in isolation from the socio-economic
>
> and political matrix in which they manifest themselves. Social scientists
>
> and development agents alike frequently attempt to isolate such
>
> phenomena as 'apprenticeship' (usually defined with reference to a
>
> specific archetype from pre-industrial Europe) and plot their presence in,
>
> or evaluate their appropriateness to, special societies." (Buechler 1989,
>
> 31)

Buechler's research can also be linked with some of Goody's (e.g. 1982 a, 1989)

writings about "proto-industrial cloth production" in Europe and current African practices

as she links division of labor and factory-based production, production outside of the

home. Apprenticeship, in her eyes is that teaching and learning method which allows

for the transmission of skills not available in the home setting because of the high

specialization resulting from the division of labour. In effect, apprenticeship straddles

the border between the organized and non-organized teaching of skills, the home-

based and capitalist economies, and the labour and management policies that animate

these activities.

The Asian practices

The division of labor is also one of the common themes through the literature. Although

I am not sure that the raw data from the research projects yielded such an

interpretation (just like I cast some doubts on Dow's master-apprentice Vs teacher-pupil

interpretation above), it is interesting to notice this theme in some apprenticeship writings about Asian practices. In this spirit, Cooper's (1980, 1989) work on the woodcarvers of Hong Kong is aptly sub-titled "Craft Production in the World Capitalist Periphery". Like the work of Buechler in Bolivia, for example, Cooper's work covers the context in which apprenticeship takes place both on the shop floor and in the society. His is an investigation which focuses on the economic impacts of apprenticeship. In contrast, the Japanese pottery apprentices described by Singleton (1989) are, at the same time, both producers and students of character. As they learn a trade/craft, they are growing into potters. This theme of growing into an occupation, of a personality apprenticeship, of a socialization process, (already touched upon with the apprentice shaman and the medical doctors among others) is the entire concern of Johnson's report (1989) on Japanese priest apprentices. In contrast, New Zealand, not unlike Canada and the United States, has inherited the British approach to apprenticeship and the focus on some of the research (e.g. Burleigh, 1988; Cammock and Inkson, 1985) looks at statistical measurements of apprentice learning, apprentice job satisfaction, and policies for the renewal of apprenticeship training. There, just as in Canada, the emphasis is on the prescriptive model of apprenticeship.

As was just stated, it is quite clear that a number of themes are discernible throughout the literature. Themes that fall under economic, social, and political considerations and context considerations which bind the whole together. The same themes can also be seen in some of the work done in Asia. Cooper (1989) reminisces about context in this manner:

"...while activity on the shop floor is remote from the macro-level forces impinging on production, the relevant categories of the macro-level can be identified and investigated later. Having become aware of the activities of different unions in the industry, the art-carved furniture merchant's association, the temple of the woodworker's patron saint and having determined the location of clusters of other factories and retail shops...[t]he enormous diversity in size and complexity of production and marketing units in the industry..." (pp. 146-7)

Nevertheless, as I observed above, Cooper's bias comes clearly through. His analysis is one that centers on the labor organization and control dimension of apprenticeship:

"Apprenticeship as the institutionalised means of labor force reproduction, governs both the quantity and the quality of labor power reproduced by establishing the rate at which new workers are turned out and the content of their training...[it] also governs the value of labor power reproduced. It has therefore been a strategic institution in the struggle between labor and capital for control of the quantity, quality and value of labor power as the institutions of craft production have developed and changed." (1980, p.23)

Hence in his version of apprenticeship, the transmission of skills and knowledge takes second place to the struggle of the working class and his analysis refers the reader back to the medieval model with the difference that the indenture has evolved from a single master, a person, to both a master and a social class.

As can be expected the examples from Japanese apprenticeships are also strongly colored with this medieval color. The notion of master is ever present, and if the master is not directly involved in teaching the apprentice, it is because the apprentice is not worthy of the 'sensei's' attention: "Learning in a workshop is...a cooperative experience among learners...senior apprentices...may take the responsibility for providing guidance to a junior apprentice. The master will occasionally communicate indirectly through a senior apprentice" (Singleton 1989, 27). As well, there is a social dimension but it is one based on 'giri' or duty. Apprenticeship contracts are based on societal norms, and these norms are expected to be known.

The African practices

Much work has been done on African apprenticeship and here, like in Central and South American report, the emphasis is on the social organization within which apprenticeship is nestled. For some researchers (e.g. Lave 1982) apprenticeship is an educational endeavour and the teaching-learning moments are looked at in context. For others (e.g. Goody 1982 a, 1982 b, 1989) apprenticeship is part of social reproduction and it is that aspect of family life and its evolution in an emerging division of labor climate that is investigated. Aronson (1989), for her part, looks at the structure of a traditional apprenticeship, one which is perhaps set up to control the market. And some other researchers (e.g. Deafenbaugh, 1989; Dilley 1989) simply document the practice of apprenticeship. Interestingly, many of the studies have zeroed in on those West-African apprenticeships which, arguably, once were part of domestic activities: weaving and clothes making.

In this part of the world, apprenticeship is more than just an economic activity. People place meaning on apprenticeship; it is not a simple contractual obligation (Dilley, 1989). That can be attributed to the fact that, just like other people undergoing apprenticeship, the 'graduate' of the 'program' will be whatever the occupation is. One is a weaver, a midwife, a doctor, a locomotive engineer and acts accordingly. The process of apprenticeship is one of slow transformation into a widely identifiable social image/role coupled with an economic role: "...members of occupational groups acquire not only a socially-allotted craft specialization, but also derive their social identities [from that craft]" (Dilley 1989, 182).

From the literature, it is hard to get a clear sense of just why people jealously guard their trade secrets. Doubtless more than a simple economic partition is at play because interlopers are cast a spell (Aronson, 1989). Unfortunately, the economic argument takes precedence when the reason behind the exclusivity is cast in historical terms rather than self-identity terms:

> "In retrospect, I see their exclusivity to be a reactionary mode of behavior, the ground rules of which were established when Akwete's weaving underwent aesthetic and technological changes in the late nineteenth century. [The weavers] eventually gained economic control of their improved craft by setting up rigid rules aimed at protecting their artistic domain, rules by which they continue to operate today." (Aronson 1989, 151)

This viewpoint is taken up by Deafenbaugh (1989) as she documents apprenticeship in Nigeria. Here the rationale behind strict entry rules to apprenticeship are couched in terms of defending market share, trade secrets, and/or manpower needs. Goody (1989) as well uses apprenticeship in West Africa as an exemplar of proto-industrial means of assuring division of labor.

More interesting, though, are Goody's (1982 b) ideas about social reproduction through apprenticeship. One is left with the impression that parents, extended families, kin groups, or villages use training in traditional occupations in order to preserve who they are albeit unconsciously. This allows the reader to make a connection between the informal apprenticeships of Europe such as those discussed above, and more formal apprenticeships in hyper-industrialized countries such as Norway (Mjelde, 1990), Australia (Broom, Jones, McDonnell, and Williams, 1980), or Britain (Willis, 1977).

Not only does the research just mentioned focus on social reproduction or the "inheritance of inequality" (Broom et al., 1980) but it links the division of labor with social appurtenance in a manner which is hard to refute. Indeed, most of the descriptive apprenticeships offer the same themes of economy, socialization, and policy-making, but they also document a repetition of parents' or masters' social roles, economic roles, and political roles across generations.

Prescriptive Apprenticeships

Evolution - From Europe to British Columbia

A look at the historical developments of apprenticeship legislation and funding practices in Canada and British Columbia will help us situate the current practice of apprenticeship in a politico-socio-economic context. Such an exercise is far from futile because it shapes the manner in which people conceptualize their activities, construct reality, interact in the world of work, and situate themselves with respect to others involved in similar activities. Doubtless these aspects are important in interpreting data about apprenticeship collected in this study.

Apprenticeship in Canada, and in British Columbia was used as a tool to attain economic, social, and political objectives at national and provincial levels. An examination of (a) the roots of apprenticeship before legislation was drawn, (b) the subsequent process of institutionalization of this form of vocational education from its revival in the depression years to the present, and of (c) the funding sources and their governing policies for this program indicate that it was set up and subsequently transformed primarily in order to meet the demands of industry, organized labour, and governments, with little thought to the educational worth of the relationship between the master craftsperson and the apprentice.

According to Weiermair (1984), two main factors affected the development of apprenticeship in Canada and the provinces. First, lobbying efforts by the three main players (labour, industry, and government) were aimed at making their socio-economic

views the accepted wisdom for policy-makers. And second, once lobbying efforts had culminated in some sort of tangible monetary commitment, the thrust of educational and training practices would automatically adapt to the subsidies' conditions regardless of original intents.

There seems to have been five periods during the evolution of apprenticeship: (1) a period when European traditions were applied; (2) a pre-organizational period lasting from 1889 and 1928, (3) an organizational phase lasting from 1928 to 1960; (4) a Federal term starting in 1960 and ending in 1986; and (5) a Provincial time from 1986 to the present. Throughout the five periods, government's concerns remained focused on solving social problems though the nature of these problems evolved over the years. Meanwhile industry's concerns were guided by the over-riding concern of securing cheap and qualified workers. While, labor's role was redefined from its explosive and revolutionary status at its inception through retrenchment during the economic boom times and present-day reinterpretation of its function and purpose.

The European inheritance

By the XIIIth Century, England had a fairly stable craft infrastructure within which the concept and practice of apprenticeship was nestled. Crafts were organized in a three-tiered hierarchy consisting of apprentices, freemen or journeymen, and masters overseen by Guilds' committees made up of influential masters (Leeson, 1979; Ruddell, 1970). Guilds were organized within city limits and craftsmen congregated in those cities. However, within each guild, masters organized a power hierarchy based on money generated by trading activities rather than by manufacturing abilities - hence the creation of liverymen, and yeomen. By the XVIIIth Century, the split between liverymen

(rich trading masters) and yeomen (poor manufacturing masters and journeymen) had been consummated through many years of practice and court cases debating the semantics of the 1563 "An Act touching Divers Orders for Artificers, Labourers, Servants of Husbandry and Apprentices" (Keane 1988; Leeson, 1979).

Within the confines of this law, the apprentices became pawns in the power struggle pitching liverymen against yeomen and journeymen. On the one hand, the apprentices were a source of cheap labor which could be used to maximize profits for the trading masters, while for the yeomen, the apprentices undermined the access to work of qualified journeyman and practicing small masters (Leeson, 1979). Moreover, governments used the apprenticeship system to deal with orphans. Indeed, these individuals were indentured by the authorities at a younger age than was the custom for apprentices, and this very fact justified, in the eyes of the liverymen, an even longer period of service than usual (Elwood, 1982; Ruggles 1977).

The 1563 Act standardized the length of indentured service at seven years for all sixty one crafts listed, and also prevented graduated apprentices from practicing on their own until they turned 24 (Keane, 1988; Leeson, 1979). Moreover, it established the social status of apprentices in terms of Master-Servant legislation. As such apprentices were supposed to obey their master as they would their own parents and the master had the right to treat apprentices much as he (or more rarely she) would their own children, beatings and all (Smith, 1981). Masters frequently abused the privileges allowed them under the law as a number of court cases demonstrate. It is perhaps telling that masters only lost these court cases when they exhibited undue cruelty such as breaking their apprentice's hip or beating a female apprentice with an ax handle

(Smith 1973, 1981). Finally, as apprentices received instruction, food, and shelter, they were expected to pay the master for these services both by working for free and by paying tuition prior to starting the apprenticeship.

The pre-organizational period

By the 1850's, as the number of small artisan shops employing just a few individuals quickly dwindled to be replaced by larger shops using machines (Elwood, 1982), master-craftsmen were becoming rarer at the expense of a ever-larger group of workers designated as apprentices by industry. Using this job classification manufacturers managed to employ non-traditional workers at low cost and without any obligations (Kealey, 1973; Peterson 1971, 1974 a). Indeed, as the 1889 Royal Commission on the Relations of Labor and Capital in Canada showed, apprentices had become untrained "boys", "women", or "children" who were often physically abused, poorly paid, and dismissed quickly when injured on the job or when there was a downturn in the economy (for example see Kealey, 1973, pp. 126-127, 129, 132). In fact, businessmen were cannily taking advantage of existing legislation in order to maximize profits and/or remain competitive. Indeed, both the 1799 "An Act for the Education and Support of Orphaned Children" and the 1893 "Act for the prevention of Cruelty to, and better Protection of Children" had been drawn to solve various social problems by indenturing social outcasts for lengthy periods (Craven, 1981; Peterson, 1974 a; Ruddell, 1970; Weiermair, 1984).

Not surprisingly, trades' organizations viewed this practice with a jaundiced eye because, while industry employed untrained individuals at a fraction of the wages paid to journeymen, qualified union members often could not find work:

There were good reasons for unions to be concerned about these types of training which often involved exploitive attitudes similar to those towards child and female labour at the time. Indeed, employers blatantly hired apprentices as a form of cheap labour into lengthy company programmes which, in fact, offered little real training (Weiermair 1984, pp 6-7).

Therefore, after the report of the 1889 Royal Commission, there was a general agreement in government and labour that the appalling conditions under which some of these 'apprentices' worked had to change. But by the late 1800's, proposed solutions for changes differed depending on the group making the suggestion. And while some unions, such as the International Typographers' Union, and a few large employers, like the Grand Trunk Railway, had successfully set up their own apprenticeship training programs (Peterson 1971, 1974 a; Weiermair, 1984), most Canadian employers pushed for the creation of technical schools.

The Federal "Royal Commission on Industrial Training and Technical Education" in its 1913 report agreed that formal schools would provide better technical and vocational education than on-the-job practical training. This trend of valuing in-school and academic education was based on a practice, as Hager (1990) and Lloyd (1984) note, which dated back to the ancient Greeks who had dichotomized education into a lower work stream and a higher education stream. This type of educational channeling stigmatized the work stream as inferior because individuals deemed not capable of school were, as a last resort, shunted on the labour-work branch (Weiermair, 1984).

Besides these social implications, this practice had important economical and political implications as it freed employers from training costs and responsibilities and placed those on the shoulders of government.

Following the wants of employers, in the 1919 "Technical Education Act" Ottawa committed $10,000,000 over 10 years on a "matching-funding" concept to stimulate the creation and the operation of vocational in-school programs in all of the provinces. And, in order to avoid jurisdictional conflict between the provinces and Ottawa, the Act defined technical education as

> education which is supplementary to and distinct from the general educational system of the province, and the controlling purpose of which is to fit young persons for useful employment in vocational, technical, or industrial pursuits or to improve the efficiency of those already employed in such pursuits (as quoted in Peterson, 1974 a, p 8).

As was the case with earlier legislation, this Act was used for social purposes in 1937 and 1939 when amendments allowed the release of funds for training unemployed youths and workers destined for the armed forces and/or some sort of war related industry.

However, in 1921 and 1923, the Association of Canadian Building and Construction Industries called for a national apprenticeship scheme for the building trades. And James M. Piggot, stated that the lack of qualified tradesmen and the birth of the trade unions in the construction industry was directly attributable to the abuses of the

apprenticeship system in the past. He rejected the usefulness of the school system as a provider of skilled tradesmen, but noted that it should provide apprentices with theoretical instruction during the industry's down-time in winter. This viewpoint was shared by J.T. Marsh, General Representative of the United Brotherhood of Carpenters and Joiners and by Joseph Hodgson of Hodgson, King, and Marble Construction in Vancouver, B.C. (Peterson, 1971).

The organizational period

In 1926, Hodgson's firm and other British Columbian building firms created the Vocational Apprenticeship Council (Selman, 1976). The reasons behind this private effort were to lower production costs by eliminating construction companies' reliance on too few, according to businessmen, expensive skilled immigrant workers and replacing them with numerous less expensive local individuals who, according to industry, were relegated to labourer's jobs because of lack of training. In order to achieve this goal, the council developed a technical training program taught in evening and Saturday classes to young men under the age of 21 who wanted to learn a trade in the construction industry while employed.

In 1935, British Columbia became the second Canadian province to legislate apprenticeship. Just as Ontario had in 1928, the British Columbian provincial government centered "An Act Respecting the Training of Apprentices" around a number of construction trades. Also like Ontario, British Columbia adopted the "Piggot Plan" as its administrative model. In short this model supported employer-financed, trades-regulated, and government-administered and enforced apprenticeship:

Ultimately the trade should stand the expense --- every trade controlling

the number of apprentices and being called upon to pay only its proper

share...We can employ apprentices on the building operations for seven

months: for the other five months these boys should receive their

technical training and general education in the school...by exactly the

same means as the Workmen's Compensation funds are collected in

Ontario (Piggot Plan as quoted in Peterson 1971, p 17).

Neither the 1937 "Unemployment and Agricultural Assistance Act" (also known as the

"Dominion-Provincial Youth Training Program" (Peterson, 1974 b)), nor the 1939 "Youth

Training Act" or the "Dominion-Provincial War Emergency Program" of 1941 contained

federal aid for apprentices financial or other. Instead, Ottawa chose to support the

provincial formal vocational school system for the training of unemployed 18-30 year-

olds (Selman, 1976; Selman & Dampier, 1991).

In an about-face, in 1942, the federal Department of Labour declared that "the training

of apprentices has been, and always will be, the backbone of any sound training in

industry" (Peterson 1974 b, p. 16) and offered any employer involved in a war-related

industry help with setting up an apprenticeship system. At the same time, Ottawa

replaced all federal vocational and technical education assistance programs with the

"Vocational Training Coordination Act". This act made available funds on a 'matching-

funding' concept for vocational training schemes aimed at unemployed individuals,

veterans, and apprentices but required that each province promulgate an

Apprenticeship Act in order to be eligible for those funds (Weiermair, 1984). And in

1944, the federal Minister of Labour signed an ten-year "Apprenticeship Agreement"

with the British Columbia Minister of Labour in which Ottawa promised to provide funds for the in-school component of apprenticeship programs.

For almost 10 years very little money was spent on capital expenditures. Most of the small sums drawn were spent on existing schools or on creating new trades training departments within existing establishments (Weiermair, 1984). Then, in 1955, when Victoria replaced the "Act Respecting the Training of Apprentices" with the "Apprenticeship and Tradesman's Qualification Act", Ottawa took on the funding of salaries and travel expenses of Apprenticeship Branch field supervisors, subsistence allowance and transportation costs for apprentices attending day classes, and the total cost of on-site apprenticeship training.

The 1955 act created two 'Schedules' for occupations. These schedules reflected organized labor's influence in having mandatory qualifications for some trades (the 'Schedule A' occupations), while 'Schedule B' trades' qualifications were offered as a means to access a trade or to credential experience (Reuben, 1984). In order to legitimize qualifications, the B.C. Ministry of Labour's Apprenticeship Branch created and administered trade certification exams to be taken or challenged by would-be journeymen at the conclusion of their training or after a number of years of documented practice. As well, the 1955 act made provisions for mandatory schooling during the formal indentureship either on a night-time basis for individuals living near schools or in day-release or block-release for individuals serving far from centers in which the schools were located. This arrangement served Victoria well as the in-school component was purchased with Ottawa's funds by the provincial Ministry of Labour

from the provincial Ministry of Education and was delivered in the city school systems of Nanaimo, Victoria, and Vancouver.

The Federal Wave

The introduction of mandatory schooling, certification, and formal examinations were just three of the driving forces which gave apprenticeship its modern appearance and which facilitated the development from 1958 onward of the "Red Seal" (interprovincial certification) program (Watson, 1983). Up to the early fifties, the concerns of the major players in the apprenticeship game had been fairly transparent: government wanted to solve social problems, industry wanted to secure a cheap and efficient workforce, and labour wanted to maintain membership privileges. But by the end of the decade, aggressive federal interior politics and the economic argument used by all three groups molded apprenticeship into a tool designed to serve the aims of the players. For example, at the "First Conference on Apprenticeship Training" held in Vancouver in 1962, E.P. O'Neal, a labor representative, stated:

> Adequate and suitable training of skilled and technical manpower is
> becoming more important each year both for the benefit of our
> expanding and changing economy and for the welfare and future
> security of young Canadians (British Columbia, Department of Labour,
> 1962, p38).

And at the same conference, R.B. McDonell, an industry representative said:

Either train, retrain and upgrade our working force through Canada, or

abdicate as an industrial nation...Any improvement in our apprenticeship

programme will reflect on the general economy of British Columbia, its

employees, and the welfare of all our citizens (British Columbia,

Department of Labour, 1962, pp 39, 44).

The 1960 Technical and Vocational Training Assistance Act (TVTA) marked Ottawa's

first aggressive attempt to stem the rise of unemployment in the late fifties by

encouraging a coordinated approach to vocational training. In their view, vocational

training was a means to gain entry or to maintain membership in the workforce (Selman

& Dampier, 1991). The impact of the TVTA was greater than any previous legislation

aimed at vocational training because of its comprehensiveness and because of the

sheer amount of funds provided for its application.

Unfortunately, as apprenticeship programs were not specifically described in the TVTA,

the bulk of provincial spending concentrated on existing schools and/or on the creation

of new provincial vocational institutions such as the B.C. Vocational School in Burnaby

(Kidd & Selman, 1978). However, funding policies were not solely responsible for

apprenticeship's slow growth. First, a vast majority of the population, including policy-

makers, still perceived this method of training as marginal at best and, second, society

as a whole perceived that the economic returns of an academic education were much

greater than those ensuing from practical training. Even as late as 1984, at the Ontario

conference on the Future of Apprenticeship, some teachers of academic subjects

asked whether apprenticeship was the answer to dealing with the "lower level student"

(p. 113) or as a catch-all program for the school drop-outs (Peterson, 1974 b;

Weiermair, 1984; Ontario, Ministry of Colleges and Universities, 1984).

By 1964, Training Advisory Committees (TACs), recommended eliminating day-release

and night-time classes for apprentices and switching to block-release daytime classes

instead. Along with this more intensive use of schools, TACs recommended that the in-

school component be made lengthier. But, in spite of massive funding, there was a

growing body of evidence which suggested that the TVTA had failed to bring about the

expected degree of economic prosperity it was meant to promote (Havlik, 1984;

Peterson, 1974, Weiermair, 1984).

By 1967, the failure of the TVTA was evident and Ottawa replaced it with the Adult

Occupational Training Act (AOTA). With the AOTA, federal initiatives became the

leading force in vocational education and apprenticeship. However, the AOTA changed

the thrust and the financing of programs. The AOTA canceled direct support for

vocational high school programs and replaced these with short-term training and re-

training programs lasting no more than a year. As well, the new programs were aimed

specifically at solving social problems, such as unemployment due to job obsolescence,

unemployment due to illiteracy, and immigrant unemployment due to a lack of fluency

in English (Selman & Dampier, 1991). Moreover, the federal government started

directly to purchase 'seats' in institutions which provided the instructional component

that these socially-oriented programs required. Finally, Ottawa canceled the cost-

sharing grant system and replaced it with alterations to the transfer payments to the

provinces. Weiermair (1984, p 23) summed up the AOTA spirit in the following terms :

"Longer-term structural reforms in education and education-to-work linkages were given

up in favour of more reactive and direct labour market interventions directed at those groups which revealed adjustment problems".

In British Columbia, the AOTA provided apprentices with a more generous training allowance and a wider eligibility window. But, contrary to what may have been expected, the more favorable AOTA financing guidelines for apprenticeship did not lead to a massive increase in enrollment. The two mild recessions of 1972 and 1977, the increase in the cost of living index, the extent of welfare programs, and the numerous baby-boomers flooding the labour market have been blamed for this fact (Granatstein, Abella, Bercuson, Brown, and Neatby, 1983).

1977 was a landmark year for apprenticeship in British Columbia as the 1955 "Apprenticeship and Tradesmen Qualification Act" was replaced by the "Apprenticeship and Training Development Act". The new act allowed the creation of a provincial executive 15-member Apprenticeship Board which would set and review provisions for trades' qualifications. As well, the act abolished 'designated trades' and retained mandatory licensing for only six trades. At the same time, the "Interdepartmental Evaluation Study" of the "Canada Manpower Training Programme" suggested that institutional vocational training was an irrelevant and inefficient method of procuring skilled workers as there were still reported shortages of skilled manpower in 'critical trades'. And there was a growing realization that AOTA programs, like TVTA programs earlier, had failed to decrease unemployment and/or increase productivity. Moreover, politicians realized that the extent and level of federal support for all sorts of training initiatives was not sustainable (Granatstein & al, 1983).

From then on, industrial interests became the driving force in the enduring quest for economic growth while labor's role was relegated to rearguard actions through the collective bargaining process. And Victoria, after abdicating its policy-making role to the Apprenticeship Board, was contented to assume that what was good for industry was good for all (Marchak, 1981)

The 1982 National Training Act (NTA) formalized Ottawa's determination to curb expenditures slated for in-school training and increase amounts earmarked for private sector job-placement programs (Selman & Dampier, 1991). A year later, for the first time, the federal government used the NTA to pull a B.C. listed trade (hairdressing) from the list of occupations approved for funding. With such signals becoming stronger, Victoria asked the Apprenticeship Board to study apprenticeship in the province and to make recommendations to improve and increase this educational practice.

In a 1984 report titled "The Future of Apprenticeship" the Board confirmed Victoria's view of apprenticeship as primarily an employment strategy albeit not for social reasons, and gave its approval to the current structure (for example, see British Columbia, Ministry of Labour Memorandum, 1982). By commissioning such a study Victoria gave an indication of a likely path should the federal disengagement in matters of vocational education continue.

In 1985 the "Canadian Job Strategy" (CJS), a system consisting of six federal programs tailored to labour market analysis, further emphasized the private sector's role as provider of training and as user of federal training funds. It also put more power in the hands of provinces.

The Provincial Wave

While Clause 19.0, "Training of Apprentices", of the Canada/British Columbia CJS agreement maintained Ottawa's right to directly purchase training seats in technical schools and promote on-the-job training schemes through fiscal years 1986-1988, the federal government declared that apprenticeship was an inefficient employment training method especially for women, natives, and disabled persons (Canada, Employment and Immigration, and British Columbia, Ministry of Advanced Education and Job Training, Report Summary, 1986).

Perhaps as an answer, Victoria moved the Apprenticeship Branch from the Ministry of Labour to the Ministry of Advanced Education and Job Training in 1986. While the government did not publish a rationale for such a move, it would appear that Victoria had several good reasons to move apprenticeship out of the Ministry of Labour such as, maximizing the use of the vocational school system built with TVTA and AOTA funds, delineating federal-provincial spheres of influence, or creating a utilitarian pall for higher education. Also, in the 1980s, neo-conservatism ideology required that educational efforts focus on work-oriented endeavours for the purpose of sustaining industry (Selman & Dampier, 1991). And, as industry had expressed satisfaction with the apprenticeship system both in terms of outcomes and inputs, Victoria had to encourage the practice so that the province could make use of the vocational/technical school system, while convincing young adults that apprenticeship was a worthwhile career path.

From then on, the number of registered apprentices in the province, as well as the

funds allocated slowly increase (British Columbia, Ministry of Advanced Education and

Job Training 1988; British Columbia, Ministry of Advanced Education and Job Training

1989; British Columbia, Ministry of Advanced, Training and Technology 1990).

In 1989, the B.C. Apprenticeship Act of was seriously amended. Perhaps most

important in this latest revision, was the removal of the sections concerning trade

schools. These Private Training Institutions which provide specific short-term training

programs to individuals on a for-profit basis and which were the main recipients of

federal funds (Seaman & McDivitt, 1989). By removing these schools from the

Apprenticeship Act, Victoria accomplished two goals: (a) it gave Canada Employment

and Immigration, the major purchaser of training for the federal government, the tacit

authorization to be involved in training for specific social reasons, and (b) it clearly

defined such training as non-educational, hence indicating Victoria's decision not to

make use of this system. In fact, such arrangements suited all parties: Ottawa had

carte-blanche in promoting specific social policies through training, Victoria had sole

jurisdiction on its school system while still profiting from seat purchase monies from

Ottawa, and industry and labor still had access to apprentices in much the same

manner as before.

Current trends

The story of apprenticeship in Canada and in British Columbia indicates that it was

used as a tool to attain economic, social, and political objectives at national and

provincial levels. The story also appears to indicate that governments' concerns have

remained focused on solving social problems, while industry's concerns have been

guided by the over-riding concern of securing cheap and qualified workers, and labor's role has remained focused on 'business unionism'.

If the economic concerns appeared to have driven the process before, little change can be expected in the future. For example, the Ministry of Advanced Education, Training and Technology, Skills Development Division, "Strategic Plan" for 1991-1992 stated that "the Division will assist British Columbians to be more skilled, enabling their employers to be more competitive, which in turn will strengthen the standard of living for all British Columbians (British Columbia, Ministry of Advanced Education, Training and Technology 1991, p. 6).

When the statement was made, the advisory, program planning and development, and field services for the registered apprenticeship program in British Columbia had been thoroughly physically and financially separated. Consequently, the powers of the Director of Apprenticeship as outlined in the Apprenticeship Act failed to extend to the practical aspects of the program. In addition, the advisory bodies (PAB and TACs) required by sections 11 and 12 of the Act were also divorced from the practicalities arising from their advice to the government. With the ascendency of socio-economic concerns, the Ministry of Advanced Education, Training & Technology was renamed the Ministry of Skills, Training and Labour in September 1993.

But this seeming stability did not last too long. And, as the call for for an interventionist approach to the training of people for direct employability gained momentum, apprenticeship, with its 60 year baggage of traditional practice, became the target of planners. Victoria created the Apprenticeship Initiative Branch in 1995 for the purpose

of ushering new ways to deliver apprenticeship and to facilitate the restructuring efforts deemed necessary. In effect, the focus was placed on realizing structural and managerial savings (required in part because of federal cutbacks) by placing training responsibility in industry's court.

In order to build a consensual view for such a system, including apprenticeship, Apprenticeship Initiatives, by-passing the legislated advisory structures, organized a series of forums around the province. The resulting contentious report (see Appendix 4) set the stage for the direction of registered apprenticeships in British Columbia. Perhaps due to the criticisms levelled at the report, and with an impending provincial election looming, responsibilities for apprenticeship were placed under the duties of a newly appointed minister of Labour, in a newly created Ministry of Labour in March 1996.

Following the elections, the government nominated a single minister to oversee both the Ministry of Labour and the Ministry of Education, Skills and Training. Announcements about decreasing funding allocations to and priorities for vocational programs and apprenticeship raised enough concerns within the organized labor movement to see an unanimous extraordinary motion passed unanimously at the BC Federation of Labour convention in the fall of 1996 (see Appendix 5) supporting apprenticeship structure and funding.

As a result, the Minister struck a committee including business, labor, PAB, and BC Labour Force Development Board to review and recommend models for the efficient

and cost effective delivery of vocational and apprenticeship programs. The final recommendation of the select committee suggests a corporate model (see Appendix 6).

The Industrial and Training Advisory Commission (ITAC) would be responsible for all aspects of training (and re-training) for the purpose of gaining employment. Given the precedent setting agreement between Alberta and the federal government for the transfer of funds and responsibility for all training and employability programs, it would appear that a BC body such as ITAC would be the ideal vehicle for Ottawa to finally divest itself of all obligations in matters of training, and for Victoria to gain access to funding for the purpose of training to solve or mitigate economic, social, and political problems.

Some Canadian Writings

The historical aspects of prescriptive apprenticeship in Canada (with a special focus on BC) have been reviewed above. But there is a rich, if disparate, body of literature that documents practices around the country, the extent and impact of the Red Seal program (InterProvincial endorsement), and means to harness apprenticeship for economic policies. As well there are critical pieces which, while not rigorously scholastic, can nevertheless serve as exemplars of the position taken by special interest groups with respect to apprenticeship policy changes.

A brief summary of some of these writings will serve to illuminate BC practices as apprenticeship is fairly homogeneous across Canada. Indeed, the differences are more matters of specific training structure, as, for example, the number of apprenticeable

occupations, the length of technical training, or the length of apprenticeship, than of

deep philosophical schisms between jurisdictions - I will remind the reader here that

apprenticeship, as an educational program, falls under provincial jurisdiction and as

such follows individual provincial apprenticeship acts or statutes.

As has been stated above, apprenticeship in BC (and in Canada) has become a full-

fledged member of the post-secondary educational stream. Its impact is judged on the

basis of providing industry with well-trained workers, its cost-effectiveness, its

educational relevancy, its relevancy in school-to-work transition, or its gender

friendliness just like any other educational program (see e.g. Anonymous, C.V.A. 1988;

Ashton and Lowe, 1991; Kilburn, 1980; McDougall, 1990; Stewart, 1989 a & b; Taylor

and Deane, 1984; Weiermair, 1984). In addition, reports on conferences on

apprenticeship also focused on issues of training and employability in a cost-benefit

reference framework (see e.g. British Columbia, First Conference on Apprenticeship

Training, 1962; The Future of Apprenticeship, 1978).

The gist of those writings can be placed in two categories. The first would support the

view that "apprenticeship training is an effective method of providing the labour market

with highly trained and skilled workers...[it] ensures a capacity for worker mobility which

is further refined through the Red Seal program establishment of nationally applicable

standards of skill acquisition" (Anonymous, C.V.A. 1988, 13). The second view, while

supportive of apprenticeship in general advocates a change in content rather than

nature because of problems such as " the length of training time, the expense involved

including hidden costs, the fact that many aspects of training are irrelevant. We are

preparing people...for a life that belongs to an earlier period and is not responsive to changes in industry" (Kidd and Selman 1978, p.116).

Germane to this body of literature are critical pieces which seek to undermine or minimize the negative assessments such as that just stated above. In effect, these articles reflect the belief that apprenticeship is a good system under attack for governmental cost-cutting reasons: "Under the euphemism of 'restraint' or a 'new reality', there have been major cuts and constant reorganization in the staffing and resources that used to be known as the 'Apprenticeship Branch'" (Darnell 1991, p.27). Also voiced in critical pieces are concerns about the dismantling of apprenticeship as a first step in the de-skilling process (see e.g. Anonymous, On The Level, 1996).

These concerns are usually voiced by organized labour. Indeed, one could venture to say that writings in Canadian apprenticeship follow one of two axes. First, writings can be placed on a labour to capitalist continuum and, second, writings are placed on a vocational education to on-the-job training continuum. Regardless of axis, Canadian writings can usually be subsumed in either attacks on the system or support for the system. Little in-depth study of apprenticeship has been documented.

The United States

The United States also carry a colonial baggage. However, they have evolved a particular apprenticeship system due, in part, to the fact that they became independent from Britain over 200 years ago with its attendant progressive loss of statutes regulating apprenticeship (Elbaum, 1989; Jacoby 1991); to the fact that immigration

both from without and from within played a greater role in the supply and demand of

trained workers (Elbaum, 1989); and to the use of non-traditional labourers such as

children and women (Jacoby, 1991.)

These trends are documented and argued by (e.g.) Elbaum (1989) and Jacoby (1991)

as they try to account for the difference in apprenticeship in the US as compared to

other industrialized nations (see e.g. Brodsky, 1989; Grabowski, 1983; Gitter, 1994;

New York Sate Department of labor, 1975; U.S. Bureau of labor Statistics, 1980).

Indeed, while the US lists approximately 800 apprenticeable occupations, about twice

the number in Germany, only about 0.3% of the working population is involved in

apprenticeship as opposed to 7.1% in Germany (Brodsky, 1989.)

Two approaches to this puzzle have been discussed in the literature. First, the search

for historical roots to the problem (e.g. Elbaum, 1989; Jacoby, 1991), and second, an

analysis of the societal make-up in the US as a justification to the preset state of affairs

from either a sociometric angle (e.g. Gitter 1994) or from a social humanistic angle (e.g.

Hamilton 1990).

The historical approach is interesting because it makes connections with the British

system and, by extension, the Canadian system. Indeed, the British practice of solving

social problems by means of lengthy apprenticeship indentures (e.g. see Elwood, 1982;

Ruggles 1977) also forms the starting point of apprenticeship in the US but erodes over

time due to high labour mobility. This assignment of blame on labour mobility is

interesting as it somehow justifies the lack of training provided by the employer as well

as the de-skilling of trades (Elbaum, 1989). Labour mobility, in Elbaum's view, is

interpreted in the light of contractual law as he links labour mobility with the nature of indentures, runaway apprentices, and the lack of enforcement procedures for those contractual obligations under the indenture: labour mobility is an euphemism for leaving one's master.

This lack of commitment, legal or otherwise from apprentices is also a reason advanced by Jacoby (1991) to justify the low number of apprentices in the US. In addition, he identifies the "mechanisms by which mutual assurances could be granted...[as] anathema to employers because they required either oversight by the state, control by associations of competing employers, or cooperation with unions" (p. 889). This approach to problems of enrollment in apprenticeship is unique to the literature as it almost champions the cause of employers in a laissez-faire economic environment. In short it the historical approach to the much vaunted 'market' economy of the 1990's: "It was not expenditure on training that made it so costly, it was the legal obligation to honor contracts when economic circumstances had become unfavorable" (Jacoby 1991, 890).

From there, Jacoby (1991) documents the rise of vocational schools in the US as a means for employers to shift the economic burden of training apprentices on government, as well as a way to compensate for the lack of training capability with the mass use of labor-saving machinery. Hence the shift from a workplace-based training system to a school-based vocational system is completed and some of the literature on apprenticeship focuses on the transition from school to work (e.g. Gitter, 1994; Hamilton, 1990).

Gitter (1994) conducts a straight-forward sociometric analysis of young people in order to predict who will enter into apprenticeship. Of interest in this research is the correlation between entry in apprenticeship and father's occupation. Gitter found that, in the UK contrary to the US (he compared US and UK statistics), the father's occupation was a strong predictor of the offspring's entry into apprenticeship maybe because "it represents British society's greater working class traditions and barriers to rising out of that class" (p. 42).

The sociometric approach is also evident in government publications about registered apprenticeships (e.g. New York Sate Department of labor, 1975; U.S. Bureau of labor Statistics, 1980) but more interestingly in Hattrup and Schmidt's (1990) paper on apprenticeship outcomes in the light of aptitude tests (it needs to be mentioned here because I believe that it summarizes the US approach to apprenticeship as a modified school-based vocational education stream for the academically less-gifted.) For them apprenticeship is an unidimensional path along a motor skill discreet continuum. As such it can be manipulated as one would any mechanical system.

European Practices

The German dual system

As one of the European countries, Germany has a long history and tradition of apprenticeship. Based on the sheer number of apprentices, estimated at 1.8 million in 1989 (Brodsky, 1989), many policy-makers have urged that formal or prescriptive apprenticeships be modeled on the German system. As well, the German

apprenticeship system is integrated in the schools system and provides apprentices
with a number of bridges and ladders in the public educational system (see Figure 1).

There is a federal statute (Berufsbildungsgesetz) that set the guidelines for
apprenticeship in Germany. However, it is at the Land (state) level that the
administration and most importantly the interpretation of the act takes place. There,
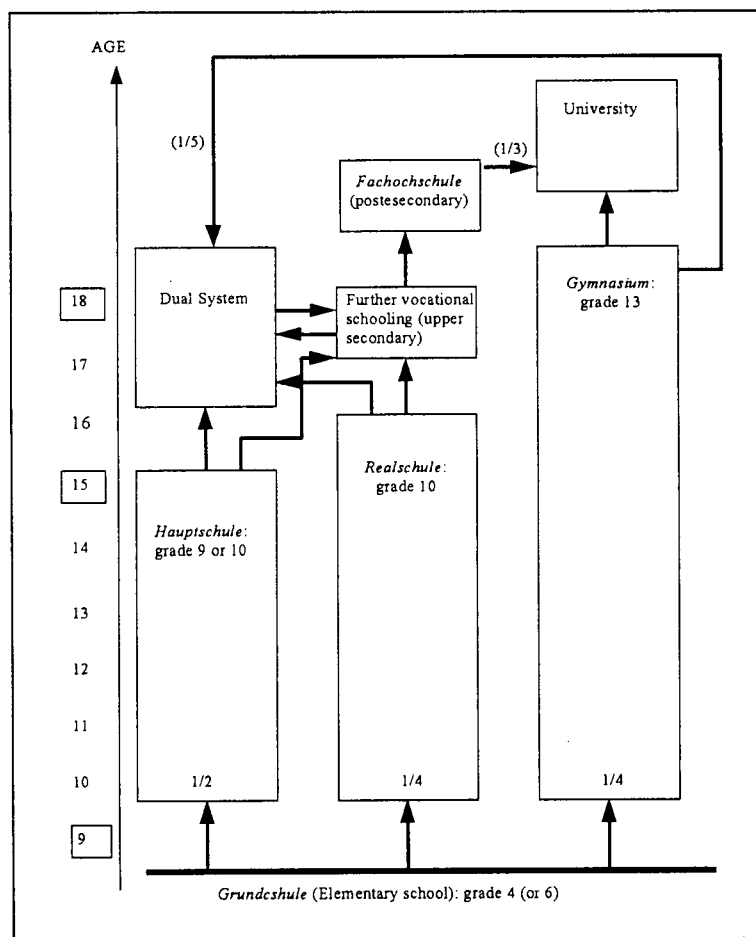

Figure 1. The German Dual System bridging and laddering after Hamilton (1990) - Fractions
indicate the number of students using that particular stream

Chamber of Commerce, as representatives of industry, and unions, as representatives of employees and apprentices, set the modalities of apprenticeships (Dougherty, 1987; Hamilton, 1990).

Depending on reports, the number of apprenticeable occupations, those for which there is a formal system and a formal credential, ranges from 450 to 600 (Brodsky, 1989; Hamilton 1990 - reported as 376 in 1990 by Lipsmeier (1994)) covering both traditionally apprenticeable occupations such as automobile mechanic and occupations which are rarely considered apprenticeable such as sales clerk or bank teller. Entry into the German Dual system is determined at a young age: streaming occurs in the primary grades (Grundschule) and the students are directed to an appropriate secondary school (Hauptschule or Realschule), one where vocational instruction reigns, and where whatever academic subjects there may be are applied (Hamilton, 1990; Perry, 1991).

While the system is well-integrated, there are two discernible types of apprenticeships. Those that are delivered at large, prestigious firms, and those that are delivered at small firms of craft shops. Large firms usually hold competitions; for example, the Heidelberg Press Company selects 1 out of 4 applicants by the means of exams and aptitude tests (Perry, 1991). One of the main advantages in being apprenticed at a large firm is that the emphasis is on the training (many of those firms have their own training department) and the apprentice's work experiences are scheduled in a manner most conducive to learning. Smaller firms and craft shops on the other hand offer an on-the-job training experience where the emphasis is on production and where training often takes second place to working (Dougherty, 1987; Hamilton, 1990).

On the shop floor, only workers who have attained the level of Meister are entitled to teach the apprentice. It is perhaps that feature of the system that has attracted the most attention and to which many writers (e.g. Russell, 1991) have attributed the success of the Dual System. But, as Dougherty (1987) points out,

> "the popular notion is that of a Meister, the possessor of an advanced qualification, breathing down the neck of the apprentice on-site and checking the cards recording progress and rotation. But the reality may be much more elaborate - many firms indeed have implemented virtually full-time vestibule training - but at the other extreme the training may amount to only a few hours of instruction per week with the Meister not being directly involved." (p. 196)

Regardless of shop floor training, all apprentices attend vocational school on (usually) a day-release model (Hamilton, 1990; Perry, 1991). The instruction provided there is traditional vocational education, a mix of classroom lecture and shop projects, in addition to basic academic subjects like language skills, math, and social studies.

It must be stressed that most writers do not broach the subject of wages, an indication of the productive status of the apprentice, except for Dougherty (1987) and Maurice & Sellier (1979). What is surprising is that, by European standards, German apprentices earn very little money - only about 40% of full wages in 3rd year - compared to British or French apprentices (Dougherty, 1987). Part of the reason for this is that uncredentialled workers in Germany have very little hope of gaining employment

(Hamilton 1990). Also, part of the reason is that unions and management negotiate wages on a Land by Land process for entire industrial sector - quite unlike the bargaining process in France or Britain where negotiations takes place at the firm/employer level (Maurice and Sellier, 1979), and that, during those negotiations, employers put forth the view that low wages represent a contribution in kind by apprentices toward the cost of training.

The picture most commonly painted in the literature on the German Dual system is that of an efficient training system which smoothly assures the transition of young people from school to work. In effect what has been investigated and documented is the structure of German apprenticeship, the nuts and bolts of the system. Little attention has been paid to the philosophy that undergirds the system. Admirers of the system, like Hamilton (1990), downplay the streaming and channeling by emphasizing the bridges and ladders within the German system. Others turn to the functional aspects of the system, the size of the enterprise, the number of trainees, and suggest overlaying it on existing training cultures (e.g. Perry 1991). The apprenticeship tradition in Germany, its social system, its society, its recent past, all come to play and all have had an influence on the system, yet those influences are ignored in the literature. Unlike research conducted in the case of descriptive apprenticeships, concerns with the political, economic, and social themes remain unexplored.

Other European jurisdictions

Next to the German Dual system, the British system has received attention from researchers. To a certain extent, Irish, Australian, and New Zealand apprenticeship systems share with the British system the same basic features as the Canadian system

does. Apprenticeship traditions explored above were imported by the British administration in the colonies and territories. Although they have slowly evolved, all of those jurisdictions have common points in apprenticeship.

Venables' (1974) description of British apprenticeship allows one to make comparisons with the German system. The common thread is that of vocational education. Both the British system and the German Dual system - as are many other prescriptive apprenticeship systems - are a combination of on-the-job training and school-based vocational training: "Apprenticeship training, which combines supervised on-the-job training with classroom instruction, has been shown to be an effective method for training workers." (Gitter 1994, 38) Differences are mainly matters of structure, such as what, who, when, and where training is delivered; matters of educational policy, such as who has jurisdictional say over the training content and delivery; matters of employment policy, such as pay scales and wages during school-release; matters of fiscal policy, such as funding for the training or wage supplements, subsidies, or tax-breaks for the apprenticing firms.

Knox (1986), however, tackles apprenticeship in the light of labour de-skilling. His is an analysis of past events based on the traditional view that apprentices are used by employers because they provide cheap labour (a common belief in UK-based researchers' reports in both descriptive and prescriptive apprenticeship), and apprentices use apprenticeship as a means to gain access to wages and social status. Linked to that argument is the common thesis, albeit unsupported by factual evidence, that the guilds and later the trade unions were created for the sole purpose of controlling access to work and/or the supply of labour. In this view, apprenticeship was

co-opted by management for the purpose of breaking this emerging labour monopoly. Of interest in this view of European apprenticeship is that similar patterns of trade secret and access to work protection have been identified in descriptive apprenticeship.

Germane to this view of apprenticeship is that which adheres to training as an investment in human capital (e.g. Elbaum, 1989; Levitan, Mangum, and Marshall, 1972). In this case apprenticeship is a tool in the hands of capitalists for the purpose of developing the raw human goods, the untrained worker. The preponderance of apprenticeship berths in any given society is, according to this view, directly proportional to labour mobility; the more mobile the workforce, the fewer the apprenticeships.

Not surprisingly, then, the bulk of research in apprenticeship systems spawned by the British inheritance, has focused on measurements of success in occupations (e.g. Ainley, and Clancy, 1983; Moran, 1982), retention and completion rates (e.g. Cammock and Inkson, 1985), training methodology (e.g. Burleigh, 1988) and the like. Instruments for such research have been surveys and achievement tests, thus placing apprenticeship on an equal footing with other forms of school-based vocational education research. What this indicates is that apprenticeship is viewed mainly as a form of vocational education, albeit with a work placement or a lengthier practicum than most other forms of such training.

Mjelde (1990) also takes this view when studying the apprenticeship program in Norway. The Norwegian system is explained as one which results from the streaming of those less able academically (not unlike the German system) into vocational education.

According to Mjelde it is there that social class takes over or asserts itself and where capitalist and labour forces combine to make sure that the worker remains a tool for business as his parents. This is a common theme in the British literature and, while Norwegian apprenticeship is different from others, it is also a matter of what, who, when, and where. Structural differences notwithstanding, this research can be placed squarely with that of Knox (1986).

Apprenticeship as a "dumping ground for school dropouts" (Brodsky 1989, 40) is perhaps a more extreme view of the streaming process. Brodsky sketches the efforts of the French government to change that image by allowing people to ladder into technical degrees much like one can get in Germany. But his quick overview is limited to providing the means by which French authorities aim to make apprenticeship a different form of credentialled education. Pillet's (1982) research on level of school attendance between boys and girls also views apprenticeship as formal education. In her research, she asks whether the difference in levels of school usage between the two sexes would disappear if one added apprenticeship in the equation. Part of her discussion concerns the social background of the "apprenti sous contrat" (a formally indentured apprentice). Pillet points out that the definition of social background fluctuates with time, and, in her own research, data collected from 3 national census provided the respondents with three different definitions of family. She points out that most research on social background focuses on the "chef" (head) of the family, neglecting the other people in the family, the social background as a whole, and the fact that a number of students are not part of a family as they have moved out.

There are two things to note from her research. First, factual data about apprenticeship which states that, in France, male apprentices outnumber female apprentices 4 to 1 and that apprenticeship is in decline - a fact confirmed by Brodsky (1989). Second that there is statistical evidence showing social reproduction: young people from working class parents are disproportionally represented in apprenticeship - a fact confirmed anecdotally by Delbos & Jorion (1982), Mjelde (1990), and Willis ([1973] 1983) among others.

Vaunaize and Cordier (1982) in their research on school to work transition make an interesting comment about this issue. Their survey data indicates that the main reason young people follow in their parents' footsteps is because they have received very little information from their parents about the world of work. Furthermore, this effect grows stronger as one's family's socio-economic background decreases. Does this mean that social reproduction is not based on a contest between capitalistic and labour forces as most researchers in Europe indicate? Then, is social reproduction the results of a lack of information about career choices and paths?

Clémence, Deschamps and Roux (1986) look at these questions as apprentices enter into apprenticeship. They focus their observations on apprentices from 4 industrial sectors in Switzerland: high technology, automotive, metal work, and construction. For them, there are two classes of apprentices, those who have decided to be apprentices and have selected a trade, and those who have become apprentices for lack of another conscious choice. According to Clémence & al. the difference is due to the scholastic and/or social investment made by the apprentice prior to the start of the apprenticeship and on the different social values placed on the trade, the prestige of the trade. Choice

is informed but only for those who are at or near the top of the hierarchy; the others have stumbled upon their trade. Interestingly, the authors make a connection with the scholastic level, the type of trade, the size of enterprise in which the apprenticeship takes place and the acceptance of social domination: low investment, low prestige equals docility. In Switzerland as well, these factors, especially the social and scholastic investment is a function of the socio-economic of the father.

Still in Switzerland, similar findings are reported by Gendre (1987) with the added precision of perceived degree of sex stereotyping for any trade. That is, some trades are considered to be more or less masculine or feminine and such considerations enter in the choice of trade, all other factors notwithstanding. Furthermore, Gendre explains that such perceptions are a function of level of schooling attained prior to entering in an apprenticeship. And, like Vaunaize & Cordier (1982), Gendre links these choices and attitudes to the parents and the level and amount of information given by the parents to their children about careers.

As the literature is both broad and deep, in order to delimit the scope of texts, as well as summarize the information contained therein, I have attempted to capture that information in "models". By models, I mean that either an explicit assemblage of relationship between stakeholders in and activities of apprenticeship have been systematized or that this assemblage is clearly delineated in research findings. Obviously, this task is slightly more involved and requires some interpretative work for descriptive apprenticeships as those are the ones that stem from ethnological studies of apprenticeship in the field. In the case of prescriptive apprenticeships, the model and

the practice are meant to overlap as the practice is mandated and based upon the model.

Summary - Words into Models

Both descriptive and prescriptive apprenticeships, as described in the literature, yield a structure which allows one to easily build prototypical models. Interestingly, these models all show a focus around which apprenticeship considerations are arranged. Moreover, a selective literature review, as that of this chapter, allows the reader to uncover some of the underlying focal factors that seem to run through the writings: considerations about teaching, learning, and social struggle or reproduction.

Below, I will look at descriptive models using these currents as a taxonomic tool. Then, I will look at the structure and/or the outline of apprenticeship programs such as those of prescriptive apprenticeships to attempt to put words into pictures.

Descriptive apprenticeship models

Static/Dyadic models

Perhaps the easiest model to consider first is that of Pratt (1992). Its main advantage is that it has been translated into a diagram that summarizes the salient parts of a teaching-learning environment (see Figure 2).

It would bear reminding the reader that Pratt (1992), when reporting on conceptions of teaching, titles the apprenticeship conception "Modeling Ways of Being". The dominant

ideas in this conception of teaching are: (1) transmission of knowledge and wisdom

from the master to the apprentice, (2) the "embodiment of desired ways of knowing and

acting" (Pratt 1992, p. 212) by the master/teacher, (3) role modeling by the master, (4)

learning taking place within the practice of the trade/craft, and (5) the content of

learning hardly amenable to instructional material design and development. In this

model, the content and the teacher are one and the "process of instruction [has] first

regard for the content which...[is] embodied in the practice and expertise of the

teacher"; "teaching [is] framed in terms of values and forms of knowing that [are] highly

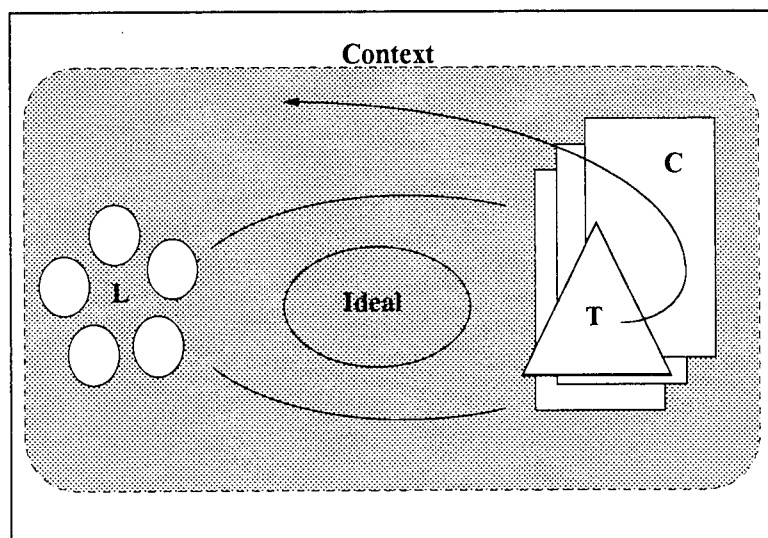contextual and assumed necessary for membership in a trade";

Figure 2. "Apprenticeship conception of Teaching" after Pratt

(1992) where "L" is for learner, "T" is for teacher, and "C" is for

content

and "[l]earning [is] understood to be contextual, that is, something that happen[s] within

the context of practice." (Pratt 1992)

This strong emphasis on the teacher as the embodiment of the 'ideal' tradesperson allows us to make parallels with the literature on organizational socialization and mentorship. Points in common are an emphasis on dyadic relationships, as laid out by e.g. Dienesch and Linden (1986) for organizational socialization and, e.g. Carden (1990) for mentorship. In addition, the embodiment of values, skills, knowledge, and behaviour in the teacher is also a component brought forward in this literature.

Evolutionary model

While learning in context is quite common to all descriptive models, few research reports clarify essential elements of apprenticeship in the manner described above. However, the high currency value placed on context is reflected in Jean Lave's seminal work "Cognition in Practice" (Lave, 1988), and especially in Lave and Wenger's (1991) theoretical model of apprenticeship: "legitimate peripheral participation".

Defined, legitimate peripheral participation

> "provides a way to speak about the relations between newcomers and old-timers, and about activities, identities, artifacts, and communities of knowledge and practice. It concerns the process by which the newcomers become part of a community of practice. A person's intentions to learn are engaged and the meaning of learning is configured through the process of becoming a full participant in a sociocultural practice. This social process includes, indeed it subsumes, the learning of knowledgeable skills" (Lave and Wenger 1991, 29)

In addition this model "provides a framework for bringing together theories of situated activity and theories about the production and the reproduction of social order" (Lave and Wenger 1991, p. 47). This is achieved through participation in the world, doing in the world. The activities draw the participant, the apprentice, progressively deeper in the world which s/he is joining. Bit by bit the individual is trusted with more complex activities and takes responsibility for her own action as well as those of newcomers. In this fashion apprentices move in a (at least) three-dimensional world consisting of time, activity (which subsumes learning and teaching), and context. Using Pratt's schematics, it is possible to represent this model of apprenticeship as a changing arrangement of parameters over time (see Figure 3).

Over time, apprentices/learners get more involved in the world of work which they are entering. In a first period (labeled 1 in figure 3 above), the apprentice (who may not even have consciously realized that s/he is apprenticing hence arguably within or without the context) is a bystander observing activities and people involved. The second step (labeled 2 in figure 3 above) is when the apprentice is gradually entering the world of work by tackling small yet necessary tasks for those involved in the world of work. As time goes on, the apprentice is recognized as a learner seeking to get full-time membership in the world of work (labeled 3 in figure 3 above) and is undertaking more complex tasks. With experience, the older apprentice is given responsibility for bringing in or initiating new entrants (labeled 4 in figure 3 above) while learning the trade. The final stage (labeled 5 in figure 3 above) is when the apprentice is recognized as an emergent master, when the apprentice becomes the master and thus assures cross-generational transmission of knowledge.
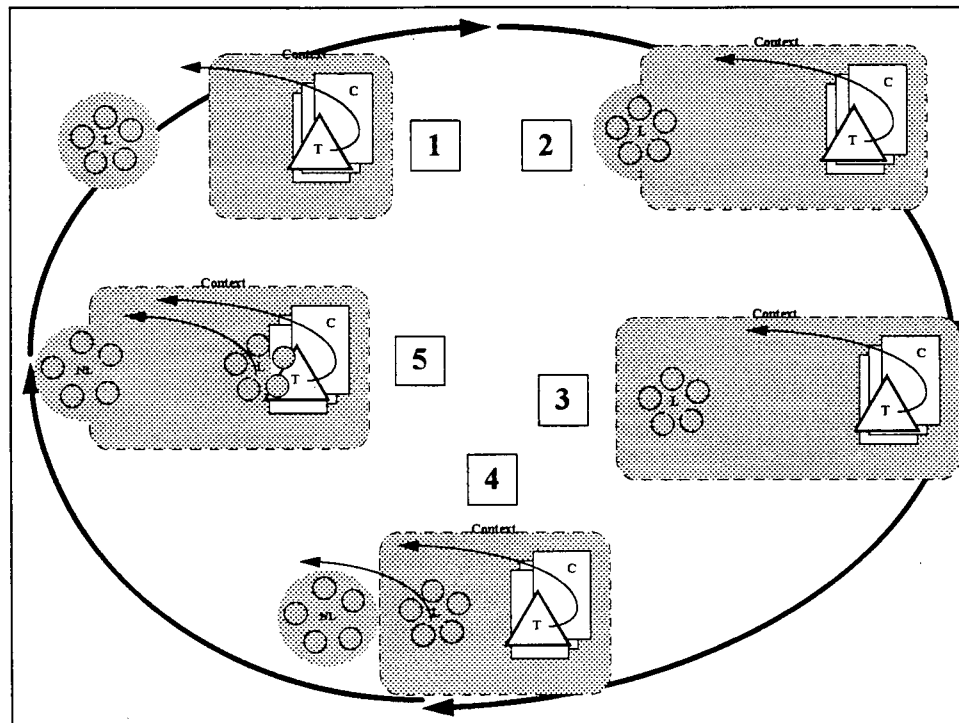
Figure 3. Evolutionary Model - Lave & Wenger's (1991) "legitimate peripheral participation" using Pratt's (1992) schematics, where "C" is content, "T" is teacher, "L" is learner, and "NL" is new learner.

While evolution is an integral part of all writings about apprenticeship, the manner in which it happens, when reported, is not common. Closest to Lave and Wenger's is work done by Delbos and Jorion. It remains, however, that the French researchers' field data fits best apprenticeships carried on within a family. This is in contrast to legitimate peripheral participation where access to knowledge and practice of work is not limited to kin. Indeed, when it comes to non-kin, Delbos and Jorion's work is best suited to another models (described below) as they report on power struggle for access to knowledge and the benefits derived from such access.

Also, the progressive, seamless path followed by apprentices in Lave and Wenger's model may not apply to any structured apprenticeships, even those they review (e.g. butchers or quartermasters). In fact it is hard to assess which structure is dominant in an apprenticeship. At its simplest, is it a natural evolution based on participants and the 'work-in-context' or is it the demands of the world of work, the production constraints (e.g. butchers) and/or the demands of a power structure, a hierarchy within the world of work (e.g. the quartermasters)?

Rule-based Model

This 'model', extrapolated from Gamst's (1995) "web of rules" originated with his recognition of 4 interrelated areas of learning in the locomotive engineer trade: manual skills, rules and guidelines, application of skills and rules on the job, and "learning...the code of etiquette" (1980, 44). Gamst (1989, 1995) collapsed these areas of learning into one comprehensive system where the specifics of the learning areas interact following complex, interrelated pathways based on formal and informal rules. The model transcends specific context, content, and actors in order to create a universal picture of labor and access to labor such as apprenticeship. This picture of labor holds true, according to Gamst's model, for all trades because it looks at two dimensions split into three components (see Figure 4, below).

Apprentices, slowly acclimatize to "formal codes and informal practices...[which] govern[] all aspects of their work" (Gamst 1989, 66). Apprenticeship, as a form of access to work and work ethics is totally controlled by this web because
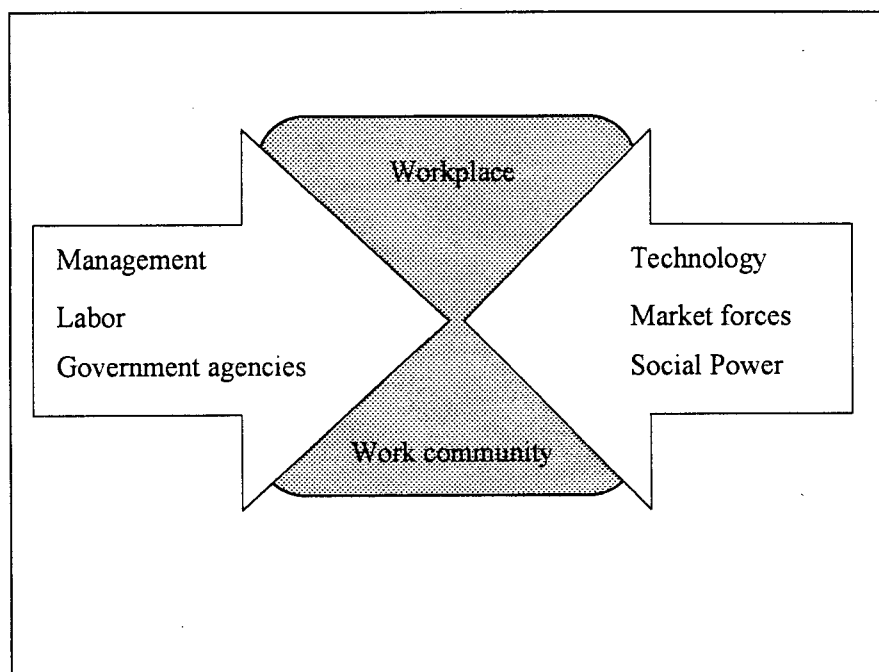
Figure 4. The Web of Rules - Actors and Environmental features of the
workplace and work community (Gamst 1989)

"[it] has a range of forms, or 'rules', including prescriptive regulations for

doing work and interrelated procedures for conducting the power

relations of work...The forms [though] are dynamic and fluctuate with the

abilities of the bodies of actors involved to exercise power. Necessarily,

the web is more than just formal regulations and logic; it is also the social

interactions of persons. The web fosters, among other things, 'norms of

output, pace, and performance'" (Gamst 1995, p.149).

Using Pratt's schematics, rule-based models could be viewed as in Figure 5. Gamst's

'model' can be used as an exemplar of those reports on apprenticeship which

emphasize labor relations and/or market considerations (e.g. McNeill, 1994).
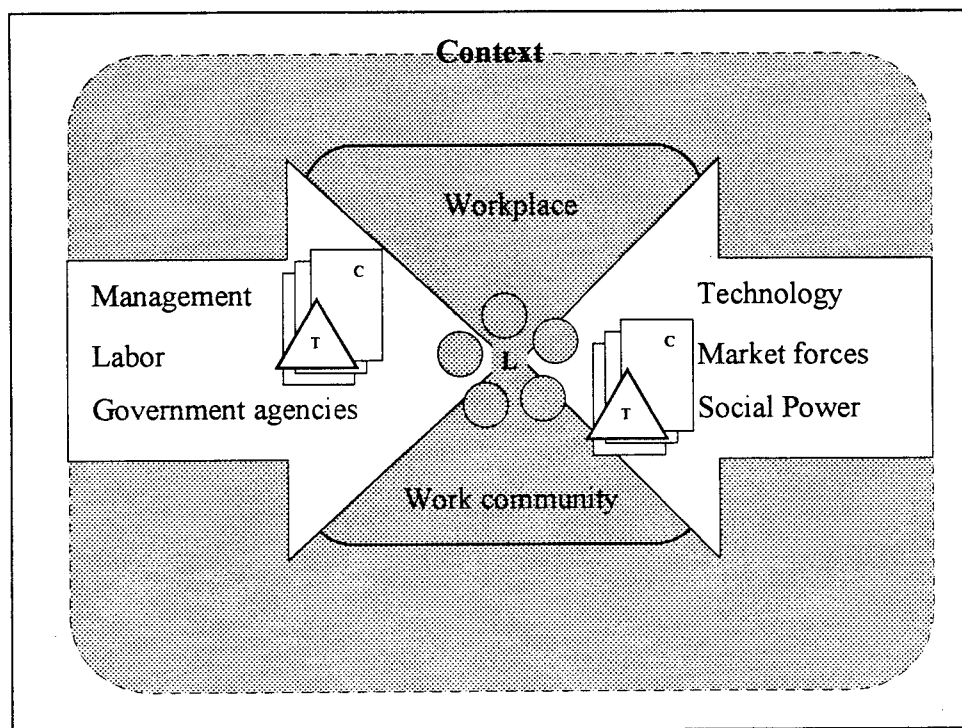
Figure 5. Rule-based Model - Gamst's (1995) "web of rules" apprenticeship using

Pratt's (1992) schematics

Family/social reproduction models

It is harder to characterize these models mainly because they include factors external
to apprenticeship to a greater degree than Gamst's prototypical model (as explained
above) does. The main consideration of these models is that the passing on of
knowledge and/or occupation follows a familial lineage (formally as opposed to Lave
and Wenger's informal system) or, at the very least, a formal kinship or wardship
arrangement for the passing on of skills. Goody (1982 a, 1982 b) provides copious
details about apprenticeship in the light of social/familial reproduction both across
trades in Western Africa and within a single trade (cloth making) globally. Hers is an

explanation that focuses on social role and labour pattern reproduction through apprenticeship. As with Gamst, apprenticeship is part of a greater picture, one in which it is a mechanism for

assuring family-based goods and services production and, as such, is affected by rules and regulations governing labour if there are formal exchanges of family-based products outside of the family. It should be pointed out that when it comes to the training activities proper, Goody (1982 a, 1982 b) and (e.g.) Buechler (1989, 1992) report that the familial lineage is becoming less important as time passes. Instead, the more traditional form of apprenticeship, one where the skills are acquired at the side of a stranger, is becoming more prevalent. Also, the trade entered by apprentices usually reflects the parents' occupation but that trend too is weakening as the economy becomes more commoditized. Goody (1982 a, 1982 b), for one, argues that because of production and labour organization constraints, it is becoming impossible for parents to train their children, thus the trainer's role is being seconded to individuals who could be placed on a continuum ranging from *in loco parentis* to impersonal institutions.

Using Pratt's (1992) schematics these models could be represented as in Figure 6 below.
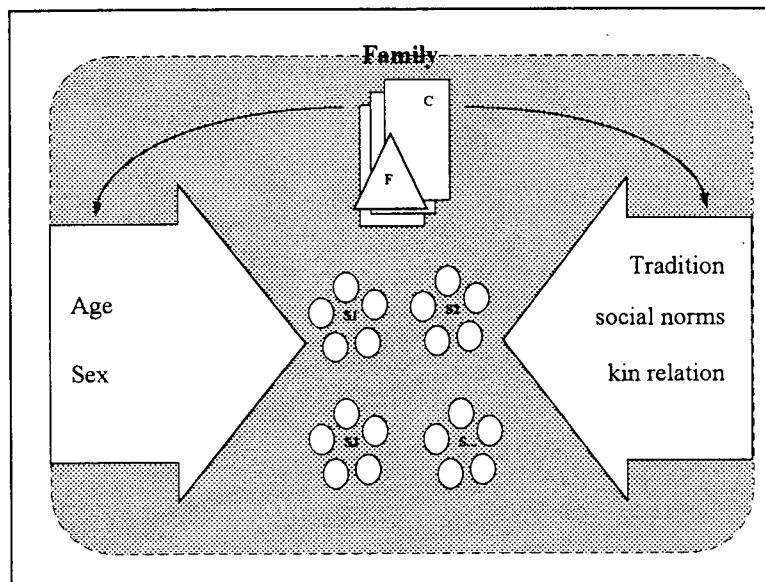
Figure 6. Family reproduction model using Pratt's (1992)

schematics, where "F" is father/parent, "S1, S2, S3, S..." are

siblings

As figure 6 above indicates, in the basic family reproduction model the passing on of

skills is for the sole use of the family. The goods and services, indeed the

apprenticeships served by the siblings, are based on age, sex, tradition, social norms

and kin relation (if one of the family is a ward). Likewise, the skills transmitted are for

the purpose of keeping the family unit going. As the family requires access to money in

order to purchase commodities, the mode of production is still family-based, the product

is still a household good, but the division of labour becomes more pronounced as

specific family members get assigned specific duties based on the factors shown in

figure 6. It is at that point that family reproduction yields to social reproduction (see

Figure 7, below). Over time, the linkage between the parent and the family in terms of

training becomes tenuous and is mediated by educational professionals. What remains

at that point is the parents' role model and its influence on the family environment and work values.
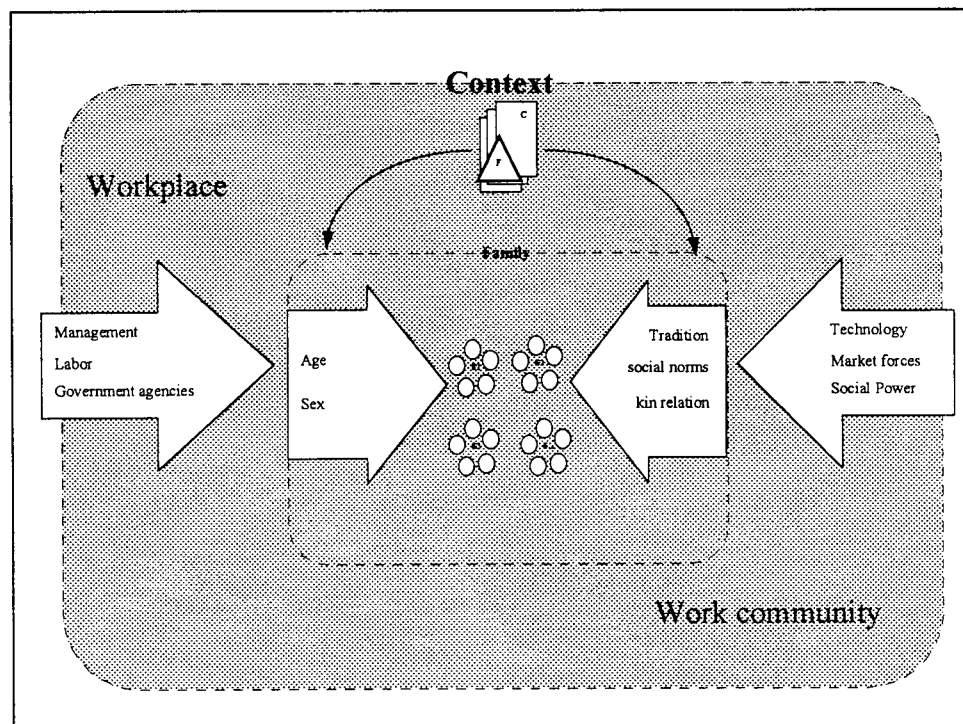
Figure 7. Social reproduction model using Pratt's (1992) schematics, where "F" is father/parent, "S1, S2, S3, S..." are siblings

Prescriptive apprenticeship models

In Chapter 2, some prescriptive apprenticeships were looked at jurisdiction by jurisdiction. While Canadian, American, German, British, French, Norwegian, and Swiss systems are different in terms of legislation, funding, control, selection practices, assessment, and bridging and laddering between different components of the educational system, all have a similar basic structure. In effect, all of these systems

show an on-the-job training component onto which is grafted a vocational education component.

The relative importance of both these components is one of the variables that sets apart one system from another - for example, in British Columbia cook apprentices attend technical training (vocational education) in a three-by-four 'block-release' format, whereas German apprentices attend school on a 'day-release' format. Another variable that sets prescriptive apprenticeship systems apart is the level or intensity of training provided by journeypersons under which the apprentice works. Another way of viewing this is to place on-the-job component of apprenticeship on a continuum ranging from production to education - for example German apprentices in large firms are primarily learners, whereas smaller firms (craft shops) use apprentices as production workers (Hamilton, 1991).

Looking at Figure 8 it is apparent that there are two teaching-learning systems which co-exist side-by-side and between which there should be a two-way flow of information. Moreover, this two way flow should be enlightened by the practice of the trade and at the same time support, rationalize, and organize the practice, i.e. putting the practice on a recognized teaching-learning footing. It is, however, apparent that the two teaching-learning systems are quite different.

Indeed, the vocational education system is build on a traditional delivery model, one which Pratt (1992) refers to as the "engineering conception - delivering content". In the traditional model the teacher interprets the material for the student; the student is a passive recipient of the material. The relationship is uni-directional, structured, and

relies on a hierarchy where the teacher stands at the top. Moreover, the materials, the

content delivered, have been designed by educational experts with delivery in mind.
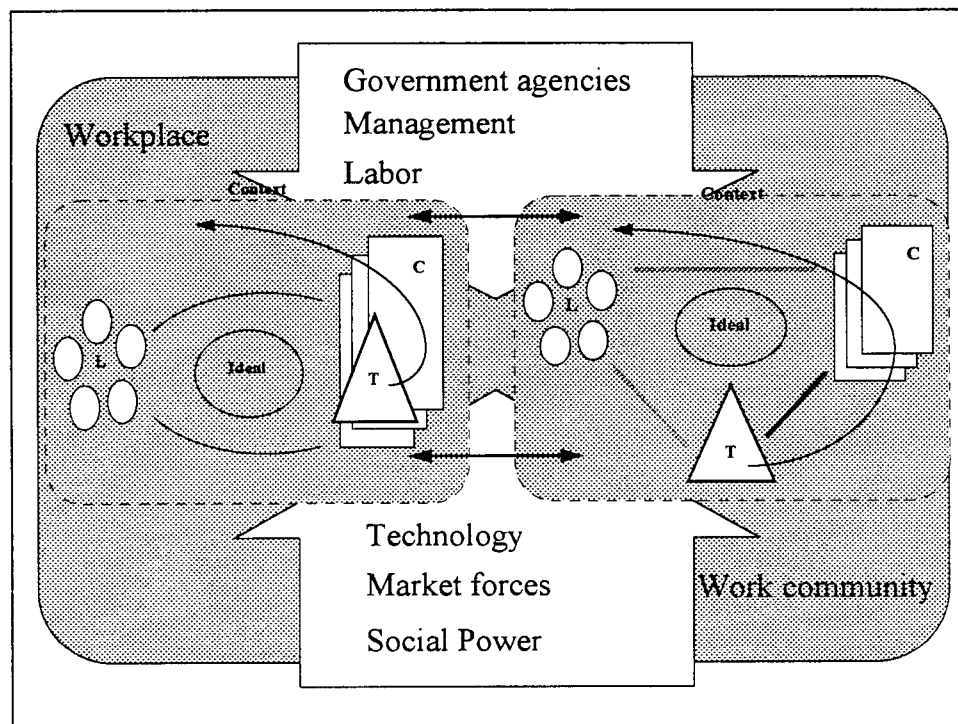
Figure 8. Prescriptive Apprenticeship Models using Pratt's (1992) schematics

It remains that both systems are influenced by the workplace, the work community,

government agencies, managers, labor, technology, market forces and social power

relationships. However, the degree to which the two systems are affected by the same

actors and factors differs quite markedly as both systems have a different set of

allegiances.

CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this chapter is to (1) explain the research method selected by locating it in and with respect to qualitative research methods, (2) establish the methodology attendant to this research method both in terms of data collection and analysis, (3) justify the choice of research method given the nature of the problem, the type of questions and the quality of answer that this research seeks to elucidate; and (4) establish criteria and methods which will ensure the readers that this study's findings are solidly grounded, repeatable, data-based, and have as wide an applicability as possible.

Methodology

Research paradigm

As the quantitative-qualitative debate still rages on in research circles (see e.g. Eisner, 1992; Erickson, 1992; Firestone, 1987; Howe & Eisenhart, 1990; Popkewitz, 1992; Reichardt & Cook, 1979; Schrag, 1992 a; Schrag, 1992 b; Smith & Heshusius, 1986), I believe it is useful to introduce the 'paradigm' of choice for this research- qualitative research - and explain the choice. However, the purpose here is not to side with either one of the sides of the debate but, instead, to situate this study within research paradigms at large. As well, while I recognize that some thinkers can precisely define and delimitate terms such as qualitative, relativism, interpretivism, and hermeneutics or

quantitative, positivism, objectivism, and scientifism, this study will use those terms interchangeably as they represent world-views which can arguably be dichotomized. Finally, this study will take for granted that the dichotomized methodological arguments discussed herein properly situate any research effort in a relevant, accessible, and understandable framework. That is to say that Martin & Sugarman (1993) arguments conflating the dichotomies mentioned above are not useful at this stage of research in apprenticeship; as a coherent and focused picture of apprenticeship research emerges in the future, separating research efforts which Martin & Sugarman describe as Aristotelian from those described as Galilean will be worthwhile.

Thomas Kuhn is usually recognized, if not as the father, then at least as the leading proponent of the term paradigm. For him, paradigms are a compendium of "law, theory, application, and instrumentation" (Kuhn 1970, p. 10) to which individuals have devoted energy, career, and allegiance. Adopting a paradigm means that certain features of reality are emphasized and others ignored depending on their agreement with the paradigm (Candy, 1987). Unfortunately, Kuhn's view of paradigm has been adopted rigidly in educational research. Paradigms have engendered dogma; paradigms have become starting point for research methodologies; and paradigms have forced investigators to ignore part of reality. Reichardt & Cook (1979, pp. 9-10) sum up the two polar paradigms as follows:

> In brief, the quantitative paradigm is said to have a positivistic, hypothetico-deductive, particularistic, objective, outcome-oriented, and natural science world view. In contrast, the qualitative paradigm is said

to subscribe to a phenomenological, inductive, holistic, subjective, process-oriented, and social anthropological view of the world.

Hence, because of this view, it is taken for granted that researchers who hold fundamentally different beliefs about the world must use different research methodologies.

However, this paradigm-methodological pairing is not automatic. Reichardt and Cook (1979), for example, state that "...the choice of methods should not be determined by allegiance to an arbitrary paradigm. This both because a paradigm is not inherently linked to a set of methods and because the characteristics of the specific research setting are equally as important as the attributes of a paradigm in choosing a method" (p.19). A point taken up by Cobb (1995) when he states that "our activity as researchers is then seen to be situated in that justifications for one perspective or the other would be made with respect to the problems and issues at hand" (p.25).

But, while such a pragmatic approach to research may allow one to conduct research diligently, it does not resolve whether the two paradigms dictate the method (or "logic of justification" (Smith & Heshusius 1986, p. 6)) or even have the same truth value (Firestone, 1987; Smith & Heshusius, 1986). This variable truth value can be attributed to the meaning attached to the research method's logic of justification. This meaning, different from that which equates methods with techniques, depends on the beliefs the researcher holds about the nature of social reality, the relationship between the researcher and the research ecological entity, and the definition of truth held by the researcher (Smith, 1995; Smith & Heshusius 1986, p. 8). Quantitative researchers

believe that they are uncovering parts of reality which exists outside of the actors in the world by rigorously applying research techniques; truth is a function of the skill with which those tools were used to establish a match between the researcher's thoughts and the external reality. On the other hand, qualitative researchers believe that reality is constructed by each individual and that facts and values are intimately linked; truth is agreeing with researchers' interpretations of the world. Research, then has to convey the sense that "truth telling not only required enough care and persistence to get the facts straight, but also enough self-awareness and self-disclosure to allow readers to see [the researcher's] point of view another term for bias and make their own judgment about it." (Brown 1992, p....)

Even in the qualitative camp there are those who maintain that doing research is what counts paradigmatic fights notwithstanding on the one hand, and there are those who maintain that the choice of paradigm is what drives the research process on the other hand. In the present study, while I sympathize with the hard-line paradigmatic approach, I will nonetheless adopt Howe and Eisenhart's (1990) more moderate approach. For them, the paradigmatic dichotomy is fallacious, couching the debate as one of positivism (typified as scientific reasoning) Vs relativism is misleading because

> ...philosophy of science has moved into a post- or non-positivistic era in which positivism is no longer a tenable epistemological position. Given this new philosophy of science, no social research (not even physics for that matter) is accurately portrayed by positivism, and thus positivism should not serve as the foil against which standards for qualitative research should be developed. (p. 3)

This point is argued and reinforced by Miller & Fredericks who add that "the major concepts in the new philosophy of science are, at best, only marginally relevant to the many issues studied by educational researchers" (1991, p. 2).

In the present study, the focus of the research has been stated clearly in terms of others. It is the mental constructs and the praxis of apprentices and masters within and without prescribed apprenticeships that are of interest, not whether or not those individuals hold a view of their apprenticeship experience which is somehow connected with an ethereal or Platonic definition of apprenticeship - the verificationist side of positivism or neo-positivism. Moreover, on the empirical front, the study is primarily concerned with documenting and hermeneutically establishing bridges, ladders, and links between the views and practices of apprenticeship held by those individuals involved in the process - the theoretical generative side of interpretivism. It goes without saying that while this type of research results are not obtainable from direct observation, they can be distilled from the hermeneutic treatment of the information gathered from the participants. As the information will be in the form of thoughts and reflections from the participants, field observations, and document analysis qualitative research methodology seems tailored to such an inquiry.

Constructivism

Regardless of the label affixed, all research methods rest on a number of philosophical underpinnings based on assumptions about concepts like learning, knowledge, and reality. Throughout this research it has been stated, directly and in quotes, that the

researcher accepted that learners 'constructed' their reality. Using words such as 'constructing' and 'construing' has not been done on an ad hoc basis but because their use can be linked to constructivism: a "cluster of perspectives united by underlying similarities in the world view" (Candy, 1987, p. 297). For users of these words it means "that knowledge cannot be taught, but must be constructed by learners", "that discourse about the world is not a reflection of the world, but...a social artifact" (Candy, pp. 297-298), and that "the mind does not 'process' information, it constructs it, based upon past experience and ongoing interactions in the world (Cunningham 1991, p.16). It has to be recognized that, as the idea of constructivism took hold and expanded, many flavors of this view on learning developed. While some may criticize the present research for using too coarse a brush to paint learning as a constructivist activity, a "descent into sectarianism, and the accompanying growth in distrust of non-believers" (Phillips, 1995, p. 5) would serve no clarificatory purpose. Broadly speaking using a word such as 'constructivism' can be linked to one of the worldviews that Byrnes (1992) called a "Meta-theoretical Belief Systems (MTBSs)" (p.310). It seems particularly useful to introduce the concept of MTBS here to indicate that one's worldview rests on interpretation of what reality really is; people's view of their environment is based on their on-board assumptions about the world. In educational research such assumptions or beliefs also animate the researcher, the process by which s/he collects, analyzes, and writes up the data.

For Byrnes (1992), MTBSs are "philosophies that theorists adhere to which (a) prompt them to investigate certain types of phenomena and avoid others...(b) specify the nature of knowledge..., and (c) specify the origin of knowledge" (p. 310). The usefulness of Byrnes' (1992) MTBSs, besides the fact that they help one categorize

his/her subjectivities, is that they are linked to one or all five of the characteristics of theories. Of particular interest in his study is that: "...theories make specific ontological distinctions...provide explanations for a set of phenomena...[and make the] differentiation between the theory's constructs, models, and beliefs and the evidence that can be used to support them" (Byrnes, 1992, pp. 313-315). About constructivism, Byrnes (1992, p. 327) says:

> The essence of constructivism is the belief that a given concept is neither innate nor immediately acquired through exposure to the world. Rather it is progressively created or invented by the individual. That is constructivists hold the view that closer approximations to the versions of conceptual relations found in adults are 'built up' out of component, precursor elements.

The progressive process of making sense of one's environment from precursor elements seems to fit well with the aims of this research: establishing links between the practice of apprenticeship, reports of such practices, and prescriptions for this practice. Each step, or waystation en route to a person's current apprehension of reality can be viewed as a temporary construct or conception that may or may not, eventually, be the permanently held belief. As such, the ordering, the sense-making capabilities of any person may help or hinder in that person's interaction with the world in which s/he evolves. Marton (1988) and Hegland and Andre (1992) have pointed out that in educational research conceptions are directly linked to learners' ability to perform in scholastic work and that conceptions held by learners could be ranked-ordered in terms of usefulness because "certain conceptualizations may be more functional in certain

contexts than others" (Marton, 1988, p. 196). This view is echoed by Byrnes (1992, p. 311) "there are many ways to categorize things and not all of the ways are as informative as others".

Constructivism is helpful because it offers more in common than a match between research results and theoretical tenets. Philosophically, it can be nestled in the phenomenological stream (Warren, 1990); in terms of research inclination, it can be said to belong to the qualitative paradigm or stream (Warren, 1990); and finally, "the model of person embraced...[is not] 'an information reception device equipped with a deductive logic machine'...[but rather] as 'scientist-psychologist', an active, meaning-giving, meaning-understanding creator who cannot be studied as an object (nor, for that matter, in terms of 'behavior' alone" (Hegland and Andre, 1992; Warren, 1990, p. 32).

These views arise from personal construct theory, as written by Kelly in the mid-fifties, which states that an individual

> ...through a system of constructs arising from reason, metaphor and myth, structures and evaluates our individual world. The world we create is a world of meaning. Everything we perceive has a meaning even if the meaning we give something is 'this thing has no meaning'. The fundamental attribute of human beings is that they create meaning. Not to do so is impossible, even when we know that there is no way that we can prove the truth of the meaning that we impose...

What is conveyed in personal construct psychology, then, is that the
meaning given to situations, events, and so on, is individual (though
consistency across *individual* constructs occurs and provides a basis for
social relations and role-playing), and is organised into a system...
(Warren, 1990, p. 34, italics in original)

Again, it seems profitable to use a constructivist perspective for this research both
because of philosophical and paradigmatic compatibility and because of the relational,
experiential, and content-oriented aspects of constructivism. Moreover, constructivists
admit that "...external descriptions of knowledge such as speech and writing...are at
best codes that represent attempts by one knower to produce a construction that may
guide another knower into constructing similar knowledge" (Hegland and Andre, 1992,
p. 224). And this view point matches that of Marton (1988, p.181) as he describes the
outcome of phenomenographic research: "once the categories have been found it
should be possible to reach a high degree of intersubjective agreement concerning
their presence or absence...", an important aspect of any research project.

It should also be pointed out that constructivism as an amalgam of views, opinions,
beliefs, models, and theories exhibits a number of variations. Pressley, Harris, and
Marks (1992) write that there are three stops on a constructivist continuum, a view that
matches that of Phillips (1995): the exogenous, endogenous, and dialectical
constructivism. In an educational framework, the three differ in the degree to which
they advocate teacher intervention, or to the degree to which they adhere to the "MIND
IS A CONTAINER" and "knowledge is an entity that can be transferred to the mind to fill

a void (a CONDUIT metaphor)" (Cunningham, 1992, p.178, capitals in original). Whereas endogenous constructivists believe that all learning and knowledge is self-constructed through exposure and rearrangement of known facts (the mind is not a container and there is no conduit), exogenous constructivists believe that construction can only take place when fully mediated (the mind is a container, albeit a constructed one, and there is a conduit). In between these two extremes lie dialectical constructivists which support the view that, depending on the circumstances, learners should be prompted in order to foster construction (see e.g. Spiro, Feltovich, Jacobson, and Coulson, 1991). In this research, I will take the view of dialectical constructivists. Given the nature of the research questions and the fact that instruction is nominally one-on-one, it seems appropriate to frame the questions and conduct the analysis in a more flexible framework.

In vocational education, or any type of systematic effort at teaching individuals the ins of a trade or craft, one's "theory of learning is implicit in [one's] design, and hence one can come to a reasonable understanding of [one's] beliefs about learning from an analysis of that instruction" (Duffy & Jonassen, 1991, p. 7). In this research, while all apprentices and masters supposedly follow a normative curriculum, it would be surprising to find that all place the same emphasis on the same aspects of the curriculum, apprenticeship environment notwithstanding. As Duffy and Jonassen (1991, p. 7) point out "the teacher will seek to supplement or replace content and strategies with approaches that he or she feels will lead to the appropriate 'understanding' of the subject matter by the students". It is probable that the apprenticeship masters also follow this pattern and that their views of apprenticeship are, in part at least, responsible for their approach to curriculum. Moreover, it is also

probable that the apprenticeship masters change their views, their constructs, of what an apprenticeship should be depending on the environment in which they teach (for example the apprentice they have, the place they work at, or the amount of work they have). As well, apprentices have their own constructs of what the apprenticeship was, is, and will be. In an apprenticeship, then, different constructs are probably at play, and the events that make up the apprenticeship influence subsequent constructs about the apprenticeship. And as individuals (apprentice and master, for example) negotiate meanings, "knowledge emerges in contexts to which it is relevant" (Cunningham, 1991, p. 14; Driver and Scotte, 1995). As this research will attempt to find out how apprentices and masters practice apprenticeship, and to what extent, if at all, they follow prescribed practices, constructivism and the ways in which people structure and give meaning to their worklife seems appropriate.

In addition, since this research will focus on apprentices and masters evolving in one 'community' (earls restaurants), constructs held by these people should exhibit a level of coherence that may not be found between two disparate communities (Cobb, 1995). In fact, "the collaborators, the consensus achievers, and, in more general terms, the agents who generate knowledge are communities and subcommunities, not individuals" (Nelson 1993, p.124). This is understandable as there is an economic or production dimension to apprenticeships that unifies practices (and consequently imposes knowledge structures) within a single business community.

Hence, it would be fair to say that the contextual references have an important impact on the outcomes of apprenticeship but also on the path that participants take to get to the outcome because "rules and criteria [for rational knowledge construction are]

constructed by social processes, and thus were influenced by power relations, partisan interests, and so forth" (Phillips, 1995, p.9). In addition, as apprenticeships take place in industry where there exists a power hierarchy, managers, because of business concerns, organize the workplace in such manners as to effectively limit or circumscribe the number and/or level of construct participants can generate within that system (Harding, 1993).

Indeed, one could say that apprenticeships are the perfect setting for establishing the validity of constructivism. Perkins (1991) and the Cognition and Technology Group at Vanderbilt (1991) use the example of apprenticeships as the embodiment of a constructivist way of teaching: "Apprenticeships settings...inherently present the learners with the very phenomena they are learning about...And they typically involve the construction of things abetted by modularity in the parts with which the learner is working" (Perkins, 1991, p. 20).

Research methodology in context

<u>The phenomenological context</u>

Phenomenology, the philosophical umbrella for interpretivism (Ihde, 1977), is a frame of mind which allows researchers to better attempt to understand the way that people assign meaning to events in their lives. Early this century, Martin Heidegger, a follower of phenomenology's founder Edmund Husserl stated that "*Only as phenomenology, is ontology possible.*" (quoted in Ihde 1977, p. 17, italics in original). Rather than trying to discover factual or causal relationships in people's behaviors, phenomenologists accept that people construct their own version of reality depending on their experiences.

Phenomenological researchers try to penetrate their participants' worlds by observing them in context and interpreting their actions in context (Bogdan & Biklen, 1992; Candy, 1987).

For interpretivists, researchers who have adopted the philosophical beliefs inherent in phenomenology, reality is agreed upon by the actors rather than discovered by the actors from a compendium of facts, causal links, and laws. In research, this viewpoint, diametrically opposed to positivism, brings with it problems associated with truth value. Truth is usually associated with the evidence presented to support that truth. But truth is just one of a multitude of explanations that are possible to rationalize an event. In phenomenological terms evidence "...must be 'intuitable', which means, in its proper context, that what is given or accepted as evidence must be actually experienceable within the limits of and related to the human experiencer." (Ihde 1977, p. 21).

Knee-jerk reactions from positivists, rationalists, and scientific empiricists forced phenomenologists to refine their definition of evidence and, at the same time, to distance themselves from a discredited nineteenth century introspective school. This was done by precising that :"Insofar as so-called introspective data are relevant to a comprehensive account of experience, they must be included. What cannot be admitted is that introspection is *the* method of phenomenology." (Ihde 1977, p.22, italics in original). And, as a final step, phenomenologists altogether abandoned the term "introspection" and replaced it with "reflexivity" (Ihde 1977, p. 23). In addition, phenomenologists also introduced the notion of extrospective data to account for the triggering mechanism of individuals' experience of the experience.

Extrospective data comprise all of the world's phenomena whether "images, percepts, moods, arithmetical phenomena or whatever" (Ihde 1977, p. 23). Moreover, introspective data is obtained by considering reflexively people's reactions to extrospective data. Finally, there is " a *structure* called 'intentionality', which correlates all things experienced with the mode of experience to which the experience is referred." (Ihde 1977, p. 23, italics in original). The four constituent parts of phenomenology introspective data, intentionality, extrospective data, and reflexivity allow this philosophical system to be exported successfully to a number of research fields and situations including that of social sciences where research has focused on "the rise, structure and constitution of a meaning structure, the socially noetic state of everyday life." (Ihde 1977, p. 145).

Phenomenological research in the social sciences will consist of and result in largely descriptive, interpreted data which may help build theory. Moreover, it will take place in the natural setting, emphasize process rather than outcome, analyze data inductively, and seek out meaning reflexively from participants' remarks, comments, activities, documents, or interviews. But if phenomenology is the underlying structure which supports much of the qualitative research enterprise (Bogdan & Biklen, 1992; Borg & Gall, 1989; McMillan & Schumacher, 1989; Merriam, 1988), a number of different methodologies - some would say labels - have been used.

The ethnographic context

Ethnography is used interchangeably with "fieldwork, case study, qualitative research, and so on" (Merriam 1988, p.23) and "educational anthropology, participant-observation, field research, and naturalistic inquiry" (McMillan and Schumacher 1989, p. 383). Clearly, a great number of research techniques are associated with ethnography and all of those have one thing in common: the notion of culture (Bogdan and Biklen 1992; Borg and Gall, 1989; McMillan and Schumacher, 1989; Merriam 1991).

While the main purpose of ethnography is to "describe culture or aspects of culture" (Bogdan and Biklen 1992, p.38), there are a number of competing definitions of culture animating ethnographic research: (1) "*culture* embraces what people do, what people know, and things that people make and use" (Bogdan and Biklen 1992, p.38, italics in original); (2) "Another definition of culture emphasizes semiotics, the study of signs in language, and maintains that there is a difference between knowing the behavior and lingo of a group of people and being able to do it oneself" (Bogdan and Biklen 1992, p.38); and (3) "[a] conceptual handle on culture is suggested...in terms of understanding...[which] is not some 'mysterious empathy' between people; rather it is a phenomenon of 'shared meaning'" (Bogdan and Biklen 1992, p.39).

Regardless of the debate on the exact meaning of culture all ethnographic studies have a common concern: that of an "in-depth analytical description of an intact cultural scene" (Borg and Gall 1989, p.387) from a sociocultural angle (Merriam, 1988). Depending on the researcher's definition of culture, the analysis will focus on shared

meanings, descriptive data (rich thick description), symbols and signs as negotiating tools, or "patterns of social interaction" (Merriam 1988, p.23). Regardless of the particular focus, ethnographic research also adheres to phenomenological philosophy as it is concerned with the "interaction between culture and the meanings people attribute to events" (Bogdan and Biklen 1992, p.38) and because it is "an intensive, holistic description and analysis of a social unit or phenomenon" (Merriam, 1988, p. 23). But it differs from strict phenomenological research because it is concerned "with the cultural context" (Merriam 1988, p.23) within which the research is conducted, researcher and researcher role within and impact upon the context included.

Context plays a great role in ethnographic studies and always has to be accounted for and justified in the analysis of the information whether the study took place in many locales over an extended period of time (anthropological ethnography) or in a room during a few seemingly informal conversations or interviews. Thus, it is important to keep in mind that methodological procedures and the context specificity are "relevant to the extent that [they]...limit...the variation obtained" (Marton 1988, p.196). Again, given the questions asked, research methods and/or tactics that seems suited to provide data to answer those questions should be used. If, for some particularly evanescent phenomenon of apprenticeship 'rich thick description' will provide the researcher and the reader with a better grasp of reality, then it must be used. Elsewhere in the research, and as a check for other data, interviews could be used.

The economic context

There are a number of economic considerations which have an impact on apprenticeship. While, registered apprenticeships, the focus of this study, are thought

to be immune from the simple production, supply and demand, and ownership of work as described in e.g. Buechler & Buechler's work (1992), Moore (1986), or Gamst (1995a, 1995 b), it remains that an economic value is placed both on the work performed by the apprentices and on the on-the-job training delivered by the employer.

This economic value and worth of apprenticeships is recognized in a number of ways. For example, apprenticeship agreements show a incremental wage scale (see Appendix V). This scale is a legislated level of remuneration based on the length of time the apprentice has been indentured is a recognition that the or the productivity level of, hence the value of the work performed by the apprentice as compared to the ideal, the journeyperson, slowly rises with time. The wage scale also seems to indicate that the employer can recoup some of the costs of training the apprentice through lower wages.

It is important to note that the wages paid the apprentice may not be equal for apprentices with the same level of experience. The wage scale stipulates a percentage of journeyperson's wages be paid to the apprentice. However, that journeyperson's rates varies greatly within trades and occupations and between trades and occupations. In other words there is no government-set wage for a given trade or occupation.

This fact affects the way apprentices from different companies, or research venues, may apprehend their apprenticeship. Likewise, depending on the wage rates in a given firm, a master may feel that the wages earned by a given apprentice are not truly reflective of the economic worth of the apprentice as a worker.

In addition, when apprentices attend technical training, that portion of formal, in-school training, they are most likely to discuss conditions of employment and wages. This sets a hierarchy based on earning power layered on a hierarchy based on the reputational worth of the place of employment. There may be trade-offs between these two hierarchies as apprentices justify to themselves and others their choice of training venue. An apprentice may, for example, state that she earns less money than another but that the breadth of training and complexity of menu makes up for the wage shortcomings.

The impact of this and other more nebulous economic impacts on apprentices and masters is perhaps impossible to isolate from the overall picture of apprenticeship. And, while it can be argued that it affects the beliefs, actions, and intentions of participants in apprenticeship, it remains that by participating in registered apprenticeship, both apprentices and masters indicate their commitment to the system.

The educational context

As mentioned above, apprentices will justify or rationalize the economic implications of their apprenticeship in terms of on-the-job training opportunities. Apprentices commonly attempt to validate this rationalization when they attend school based on a commonplace belief that "education can be a collective and individual pathway to prosperity" (Gaskell 1992, 16).

School for cook apprentices means one of three community colleges. It also means a unified curriculum, testing system, and practical exercises. Hence school is often

viewed as the field where choices about apprenticeship are validated both through scholastic achievement and through instructional staff approval (Acker 1992).

School has also a more subtle role in apprentices' self-perception: it justifies their choice of career. Doing well at school, or even being able to critique school experience from a worker's vantage point, allows apprentices to place a value on trades in general, and provides an answer to the perception that less talented people gravitate to trades (Acker, 1992). This is likely because schools embody "many of the common-sense, meritocratic beliefs of democratic, industrialized societies" and because citizens believe that "[t]hose who do well in school will get the good jobs, for the spheres of both school and work reward the same intellectual and social capacities."(Gaskell 1992, 18)

For masters, school is either a nuisance that disrupts the production schedule as they have to release their employees for four weeks, or a measure of how well they train on the job. But perhaps more interestingly it is also a promise of a better worker because "[m]ore educated workers have more skills and therefore are more productive workers" (Gaskell 1992, 19). This latter considerations fits in well with the common current ideology animated by the human capital theory (see, e.g. Becker, 1964) and in this way can be linked to and with the economic context.

Researcher's role

Perhaps the greatest threat to qualitative research is that of unstated assumptions. While most researchers are diligent in reporting underlying assumptions attendant to research methodologies, strategy, and tactics, as well as epistemological shortfalls,

they are less attentive to the assumptions they, as a research tool, personally bring to the research situation. These assumptions, taken as a whole, make up the researcher's subjectivity: "These qualities [which] have the capacity to filter, skew, shape, block, transform, construe, and misconstrue what transpires from the outset of a research project to its culmination in a written statement" (Peshkin 1988, p.17). Peshkin (1988) suggests that researchers maintain a "subjectivity audit" (p. 18), a type of warning system which alerts a researcher to be careful each time s/he overidentifies with a facet of the data. It is not so much to claim title to the distanced, independent researcher than to "create an illuminating, empowering personal statement that attunes me to where self and subject are intertwined...I do not thereby exorcise my subjectivity...I do...preclude it from being unwittingly burdensome...as I progress through collecting, analyzing, and writing up my data" (Peshkin 1988, p. 20).

The kitchen is not far

As was mentioned above, research ideology and assumptions will have an impact both on the data collected and the subsequent analysis of that data. For example, ethnographic research conducted as research-participant will help the researcher collect data that may not have been available to an outsider, but it will also affect the manner in which the data is explained, rationalized and placed in context.

For this project, cooking was not selected as a subject of study by chance. I spent nearly 20 years in kitchens. I have worked in small, exclusive restaurants where the number of covers served at any meal period equaled the number of staff working; I have also worked in large production kitchen where groups of employees never met

because of the sheer size of the kitchen and because the kitchen produced meals 24 hours a day.

During those 20 years, I worked as a "commis" (a junior cook), as a chef de partie (a section supervisor), a sous-chef, and a chef. During those 20 years, I rubbed elbows with other chef's apprentices and I trained my own apprentices.

This brief profile should help the reader situate the researcher within the research. In effect, for this research, I had no need to learn trade-specific jargon, to gain recognition, or to establish links with informants; all this were given because I have belonged and still belong to a fraternity/sorority based on a trade.

However, what may be obvious to me as a researcher in this situation may not be to those reading the research report. Moreover, practices that may seem mysterious to the novice practitioner in the research milieu or to the reader are perfectly understandable and justifiable for me as an experienced chef or for a researcher who belongs to that milieu. Indeed, in apprenticeship, the logic of production (apprentices are workers) is ever-present and may mask teaching and learning practices. Such instances make sense to me and may be glossed over because they fit in the business equation. Other researchers may stop at such instances and try to make sense of them as separate entities.

I've signed them up too

Besides working as a chef at times with apprentices, I also worked as an apprenticeship counsellor. Apprenticeship counselors are employees of the Ministry of

Skills, Training and Labour (since February 1996, the Ministry of Labour), Skills Development Division, who administer the registered apprenticeship program in British Columbia. Counselors are assigned to a geographic area within which they meet with employers and (prospective) apprentices, organized labour representatives, employers' associations, and training institution officials in order to ensure that registered apprentices are properly trained in one of the 207 trades and occupations that are currently apprenticeable in British Columbia.

While counselors perform myriad tasks to ensure smooth training on the job and seamless transition between school-based technical training and production line training, the salient factor is that they meet every single apprentice and 'master' in their area. As such, they have a localized view of the world of apprenticeship from an administrative perspective. They deal with prescriptions of what the apprenticeship should be and they rationalize discrepancies between the prescribed and the actual; more, they ensure that departures from the norm are smoothed over so that apprenticeship can take place.

As a counsellor I 'signed' (was the field representative of the Director of Apprenticeship) apprentices in trades ranging from arboriculturalist to welding, and, of course, cooks. As a counsellor, I also scheduled and assigned apprentices to technical training, I mediated conflicts between apprentice and employer, I checked the training dispensed and received on the job, and I certified apprentices (approved the issuance of Certificates of Apprenticeship, Certificates of Qualification, and InterProvincial endorsements).

Having played that role, a number of issues pertaining to the registered apprenticeship program in British Columbia seem obvious to me. The advantages for the current research project is the access to and familiarity with the administration of registered apprenticeships in BC I have gained. In my eyes, the Registered Apprenticeship Program, which may appear to be monolithic, inflexible, unresponsive, and archaic to the outsider, is a surprisingly flexible modern adaptation of the most ancient mode of teaching and learning.

Now I set their program

Following my work as an apprenticeship counsellor, I had the opportunity to remain with the Ministry as a program coordinator. Program coordinators are the government representatives at the Trade Advisory Committee (TAC) meetings. During those meetings, coordinators help TAC members structure their advice to the Provincial Apprenticeship Board (PAB) for matters pertaining to training and certification in their trade. TACs are involved in Program Outline development for apprentices and journeypersons requiring upgrading, exam content and structure, on-the-job and Technical Training competencies, and other items which may impact on the trade.

As well, coordinators develop or administer contracts for the development of DACUM sessions, skills profile charts, program outlines, technical training learning guides, and exams.

In addition, coordinators organize and attend articulation committee meetings where public and private institutions representatives providing Technical Training for

apprentices and would-be apprentices harmonize curriculum delivery, exams, and career paths to the trade.

Finally, coordinators stand at the interface of government (provincial and federal) and industry and serve as a conduit between the two in matters of policy for trades training, approval of training sites, development of new apprenticeships, recognition of new . trades or occupations, and regulations pertaining to access to or work in the trades.

Advantages and disadvantages

As mentioned above, conducting research in an area with which the researcher is familiar makes the task of gaining acceptance and access to sources of information much easier. Both direct access and candid, honest responses to queries are a result of belonging to the group under investigation. This should ensure that people will not try to outguess what answer the researcher is looking for, or that certain pieces of data are not made available as they are judged confidential or compromising.

It could, however, make a thorough collection of data problematic as familiarity with people, settings, and artifacts related to the study may be overlooked because they're so familiar that they are taken for granted. From the researcher's viewpoint, there could be a vested interest in depicting one's world in a favourable light, in over-reporting or overemphasizing practices, instruments, or people with whom the researcher has a special connection. Part of this is due to the fact that the researcher looking at his own world has unwittingly selected sites and people whose practices he agrees with.

Truth And Consequences

<u>Criteria for truth value</u>

Truth-value can be linked to research methodology, research techniques, and consensual opinion in the research community. These criteria are often judged paramount to truth-value in rationalistic research efforts (Guba, 1981). But in interpretive research truth-value is a matter of establishing "confidence in the truth of the findings for the subjects or informants and the context in which the study was undertaken" (Krefting 1991, p. 215). This viewpoint brings into play the many assumptions upon which the study is built. It is usually these assumptions which become the target of criticism in much qualitative work. But Guba (1981) notices that "The issue here is not which assumptions are "true" but which offer the best fit to the phenomena under study" (p. 77), and he specifies that "assumptions are definitively not 'self-evident truths'...but are, instead, statements taken for granted by agreement (or for the sake of the game)" (p.77). This means that the research results have to be credible, reasonable, and supported by the data. Truth-value in this light is best ensured by a number of research tactics such as, for example, conducting member-checks, a way to test "the data with members of the relevant human data source groups" (Guba 1981, 80; Krefting, 1991).

Truth-value is also linked with generalizabilty of results as many assume that generalizable results are, by definition, context-free, widely applicable truths. In this study, I will adopt Guba's (1981) contention that generalizability is equal to transferability when assessing qualitative research as it matches Marton's (1988) view that (phenomenographic) research outcomes should provide others with a tool which is

recognizable and useable in the situation for which it was developed. Additionally, Marton's (1988) view that research results do not have to be reproducible as they are creatively interpreted by the researcher but that they must be useable by others circumvents the problem of consistency/dependability. Krefting (1991, 216) concurs with this viewpoint when she states that "transferability is more the responsibility of the person wanting to transfer the findings to another situation or population than that of the researcher of the original study". This tactic can be supported because the results are data-driven, data supported, and because the basic assumptions underlying the research are explicit.

In summary, a piece of research's truth value depends both upon the worldview adopted by the researcher and its attendant research method and methodologies. Smith & Heshusius (1986, pp. 10-11) succinctly suggest:

> The essence of the issue is whether or not there is a firm foundation on which we can build our knowledge. Is there a way to describe nature in its own terms, or are we faced with various descriptions based on different sets of interests and purposes? ... The phrases 'research has shown...' and 'the results of research indicate...' are subject to different interpretations, given different paradigms. For quantitative inquiry, these phrases are claims to an accurate reflection of reality or the claim of certitude that one has discovered how some bit of the social or educational world really is. For qualitative inquiry, these phrases announce an interpretation that, to the extent that it finds agreement, becomes reality for those people as it is at any given time and place.

Such a pragmatic approach to research allows one to conduct research diligently, but it does not resolve whether the research paradigm(s) dictate the method (or "logic of justification" (Smith & Heshusius 1986, p. 6)) or even have the same truth value (Firestone, 1987; Smith & Heshusius, 1986). This variable truth value can be attributed to the meaning attached to the research method's logic of justification.

Trustworthiness, Dependability, and Transferability

As with all research, this present effort will be judged in terms of the match between its stated aims and it results. In effect, readers will ask themselves, 'Is this true?' That judgment may yield different answers depending on the approach to truth one takes. If, for example, one took truth to be the level at which the results of research matched a prediction made, then this research may well fail as true. But if one looks at the results of this research as a "qualitative confirmation of truth", as something that gives "texture and quality" to the "expectations about texture and quality of subsequent objects" (Prawat, 1995, p.19) as they were set in the questions, then this research will be true. Then, if truth cannot be defined as a single and unique viewpoint, we have to accept that "an analysis is imposed on the data" (Acker 1992, p.3) and that there is no right or true answer. "In fact, it has long been an open secret that data did not speak for themselves, that any given finding had alternative interpretations, that part of the pleasure of the sociological pastime was to find or construct an explanation sufficiently elegant and parsimonious that it evoked commitment and carried conviction" (Acker 1992, p.4).

In addition, when reading this report one should keep in mind that both facts and theories are plastic enough to be made to fit into each other (Prawat, 1995). One should also recognize that 'facts' are the raw material, the stuff upon which operations will be made to yield a coherent, and yes, true, picture. The role of the researcher is to be able to recognize "the regularity or continuity aspect of existence that sets the stage for the exercise of logic" (Prawat, 1995, p.20). And here also, just like in the study of apprenticeship, the context in which the research is apprehended will shape the interpretation. As Gaskell (1992) says, "[t]his [the trustworthiness of researchers] is because the social location of social scientists informs and constrains their interpretations. The state of the academic field at any point in time...and, most importantly, one's own biography and political commitments shape one's scholarship" (p.136) Moreover, the manner in which the field of research is itself conceptualized varies over time and context, just like the researcher's interpretation of the facts and discipline will because "her positioning in a biographical and cultural nexus influences the discourses available to her and her choices among them (Acker 1992, p.1)

Sampling

The study will use apprentices and masters as well as observation sites from one company: earls Restaurants. When the data was collected, the company had 12 indentured apprentices (indentured apprentices are, by this study's definitions, apprentices who have signed a government of British Columbia supervised apprenticeship agreement.)

In this study, earls restaurants were chosen for a number of reasons. First, the number of sites (cities and varied locations within same cities) allows for enough contextual variety to give the study some breadth, although product/menu homogeneity among earls restaurants tempers this to a certain extent.

At the same time, the fact that this study deals with the same company controls many variables which could seriously impact the study: wage differentials, labor climate (e.g. organized/unionized vs. unorganized/non-unionized), clientele differences due to menu and prices, and staff profile (earls restaurants staff selection process is quite rigorous) come to mind.

Moreover, earls restaurants Executive Chef, "Chief Chef" Chuck Currie, is committed to the formal apprenticeship process in British Columbia. He was the Chair of the Cook Trade Advisory Committee (TAC - the frontline industry advisory body to the ministry), sat on the Cook TAC trade exam standing subcommittee, and he was part of the team that just recently directed the development of the new Cook Apprenticeship Program Outline and Learning Guides for use in school during Technical Training and by schools for cook vocational training. As well, Mr. Currie has set as a goal to have all (InterProvincial) credentialled kitchen leaders (chefs) at the company's restaurants. Such a commitment to the apprenticeship program has, no doubt, created a positive and uniform climate within which cook apprenticeships occur at earls. It is my belief that such homogeneity has been useful in the study by narrowing the breadth of potential respondents' profiles; it has provided a modicum of control over the 'atmosphere' of the apprenticeship that seems to be a reflection of the apprentices' and

masters' beliefs and intentions about apprenticeship and how it fits in the day to day life of the business.

In addition, I have known both Mr. Currie and Mr. Stan Fuller (earls CEO) for a number of years and it is my belief that these relationships have allowed me freer and broader access to the respondents and their workplace. In effect, I did not have to gain confidence and/or credibility in the workplace due to my connections both to the trade and to the people who direct the apprenticeship program in the study's locations.

Data Collection

All respondents were interviewed (see Appendix 7 for apprentice schedule and Appendix 8 for master/trainer schedule). The interviews were audio-taped and transcribed in their entirety. Most interviews lasted at least 45 minutes (15 minutes for icebreaking and demographic information, 30 minutes for apprenticeship information.)

The interviews were structured for the demographic part and semi-structured for the apprenticeship part. In the semi-structured part, the questions asked attempted to elicit the interviewees' views of apprenticeship before, during, and after they got involved in the apprenticeship program.

The questions were arranged in order to provide answer along the analytical framework: actions, intentions, and beliefs. The demographic questions were aimed to illustrate roughly the role of gender and age as they have been shown to have impact in educational and life situations (see e.g. Belenky, Clinchy, Goldberger, and Tarule,

1986; Goulet and Kurtzman, 1987; Pillet, 1982). The questions covering socio-economic, scholastic, and access to apprenticeship aspects were aimed to provide a background canvas for the ethnographic and economic contexts within which the research and the literature is located. Researchers in those fields have shown that depending on the family's background along sociological dimensions, offsprings tended to be 'slotted' in roles similar to those of their parents (see, e.g. Ainley and Clancy, 1983; Broom, Jones, McDonnell, and Williams, 1980; Cammock and Inkson, 1985; Clemence, Deschamps, and Roux, 1986; Delbos & Jorion, 1984; Gendre, 1987; Mjelde, 1990; Vaunaize and Cordier, 1982). This aspect of the research is important as the background of the informants could affect answers to questions pertaining intentions and beliefs as well as their reasons for being involved in the program.

Each participant was interviewed after the previous participant's interview had been transcribed and tentatively analyzed so that the questions could be adapted to better match emerging themes. The apprentices and masters/trainers were interviewed separately in order to avoid data pollution or cross-categorization.

Following the interview, an on-site observation was conducted. I was allowed to attend sessions during which the master and the apprentices were discussing the upcoming technical training. In addition, I also had the opportunity to watch the masters and the apprentices at work during regular shift. I made notes from memory upon completion of these sessions based on what I considered to be the crucial or telltale incident during the observations.

Data Analysis

The interviews were transcribed verbatim and the transcripts were analyzed using a modified constant comparative method. First, and unlike the steps outlined in Bogdan & Biklen (1992), McMillan & Schumacher (1989), and Merriam (1988), where the first tape and transcript would have been analyzed and coded in order to identify emerging themes (categorizing), the transcripts were read in their entirety several times in order to extract pieces of the conversation that fit the analytic framework. This study, in effect, followed Marton's (1988) methodology where transcripts are examined in order to extract "utterances found to be of interest" (p. 198) - for example answers to the question "what did you think your role as a master/trainer was going to be like?". However, while utterances of interest were selected based on the analytic framework, they were also looked at as if they were 'emerging themes' and after interpretation in light of the context in which they were made. For ease of handling, the quotes were pasted in a database using the analytic framework categories as fields. Retrieving the quotes labeled, e.g. beliefs, allowed for a check on themes that emerged from the holistic readings.

Hence, in contrast to the constant comparative method where coding takes place, all of the utterances were lumped together in a given category and were sorted out later on the basis of the congruence between the meaning that could be attached to each quote and the emerging themes - meaning was established by analyzing the quotes back and forth between the contextualized (in the interview as a whole, as part of a sequence) and decontextualized (standing alone as supporting evidence for the themes) interpretative stance. The analytic framework guided the interpretation: under the

category "beliefs" I classified and interpreted data that hinted at a desired state of affairs and data that were critical of the current state of affairs - as it indicated that the participant(s) had a mental image of what ought to be; under the category "intentions" I classified and interpreted data that indicated a will to achieve or force a match between the current state of affairs for the participants and the desired state of affairs - a "plan" of some sort; and under the category "actions" I classified, interpreted, and corroborated data that clearly showed what the participants had implemented.

Following these steps, and using some of the rudimentary themes, the observation and the following interviews were conducted and subsequently analyzed. All subsequent interviews and observations were analyzed similarly.

Data analysis in this research differed mainly from the constant-comparative method in that the analytical framework is an a priori set of factors in the analysis rather than a derived set of categories taken from the data itself. The action-intention-belief triad serves as a backbone to the data collection as well as a primal means to order the data.

Given the third question of the research: "How does earls restaurants cook apprenticeship program compare with British Columbia's registered cook apprenticeship program?" it seemed profitable to import an analytical framework which had already been used (Pratt, 1992) and which was instrumental in identifying apprenticeship as one of the cross-cultural conception of teaching. The framework is diagrammed in Figure 9 below.

Data validation

Given the three questions for this research, using a number of different methods made it easier to gain insight in the participants views of apprenticeship at work but also to dilute the researcher's interpretation/bias in the contexts in which some of these data originated. Moreover, by using a number of data collection methods it is reasonable to assume that some triangulation of data was obtained.
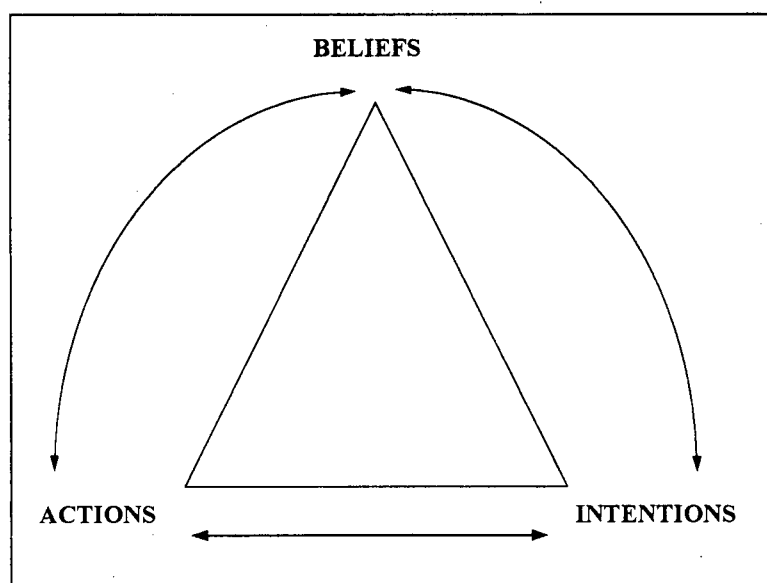
Figure 9. Analytical framework (after Pratt, 1992)

Using a number of methods and/or techniques also lent credibility to the research both in terms of data quality and in terms of research outcomes. However, simply adding more ways to get information does not necessarily mean that the information and the treatment of the information is a credible rendition of reality. Howe and Eisenhart (1990) point out that while standards for judging good research need be, by definition, vague, they nonetheless can be summed up under five headings: (1) the fit between

research questions and data collection techniques and analysis must be tight; (2) the techniques and analyses must be performed properly; (3) the background assumptions must be clearly stated and incorporated appropriately in the study; (4) the results should have some generally perceived worth and be accessible to those who can be utilize them; and (5) research ethics must be strictly adhered to. Observations, document analysis, and member checks will both be primary sources of information but were also a basis for comparing data collected through interviews and readings.

Observations

The participants interviewed were observed on site in order to document the practice of apprenticeship as well as validate the information received during the interviews. The interpretation of the interviews will be juxtaposed with the practice (the context-bound) of apprenticeship to provide depth and verification. This activity was also be undertaken in the light of the analytical framework listed above. The observations' aims were to compare intentions with actions. As well, interviews provided some data about the beliefs animating the participants and the observations buttressed some of the findings under this category.

Document Analysis

Both apprentices and trainers are given documents to keep, fill in, or work on for the duration of the indenture. Moreover, the Ministry of (Skills, Training and) Labour's apprenticeship counselors also have printed materials which help them determine the adequacy of particular sites for apprenticeships.

These documents were collected and their content were analyzed to provide a measure of the emphasis placed on certain aspects of the apprenticeship. By emphasis here is meant what seems to be of importance in the apprenticeship program because of its representation in the documents at the potential detriment of some other aspects of the apprenticeship process. For example, the overrepresentation of technical skills in a document paired with no representation of socialization practice might indicate that the people creating and using the document view apprenticeship as a transmission of pre-established factual knowledge rather than an holistic process designed to introduce an individual into a work milieu. Document contents were also be interpreted in terms of the analytical framework.

However, as these documents were taken to be a prescription for practice, the analysis paid greater attention to the meaning of those documents in terms of "actions" in the analytical framework. Moreover, official documents were taken as a ministerial statement of what ought to be - "intentions" - of the program as a whole in terms of specific events. Finally, the documents were examined to see whether some sort of embedded 'agenda' is present. This agenda was taken to represent the "beliefs" of those who wrote the documents and/or suggested they be used in the training program.

Document content were compared with the other data collected after interpretation. The purpose of the analysis was to establish a level of congruency between the practice of apprenticeship and its intended outcome and/or practice.

Member checks

Selective member checks were conducted in order to make the findings more credible

to the reader as well as "decrease the chances of misrepresentation" (Guba, 1981;

Krefting, 1991, p. 219). The aim of this step in research is to ensure "the ability of

informants to recognize their experience in the research findings" (Krefting, 1991, p.

219). This means that the researcher has appropriately interpreted the informants' data

but also that the interpretation is congruent with reality as they see it.

The interpretation of the interview materials as well as that of observations and

document analysis was presented to selected informants to check for accuracy,

veracity, and face validity. These informants were selected after they have been

interviewed and observed (at the end of the data collection process) so that the

examination of preliminary results did not contaminate subsequent answers (Krefting,

1991).

Triangulation

"Triangulation is the methodological equivalent to intersubjective agreement" (Mathison

1988, p.14). This prophetic judgment is the legacy of Denzin's (1970) views and

suggestions on triangulation as it applies to qualitative research. Denzin suggests four

types of triangulation, two of which are practical and relevant to this study: (1) data

triangulation, and (2) methodological triangulation.

Data triangulation involves getting data from more than one informant, at different

times, and in different locales. This study collected data from 10 individuals through

interviews at different sites and at different times. The methodological triangulation involves getting information by more than one means. In this case data were collected during interviews, observations, and by examining documents.

While this study included triangulation for the express purpose of establishing convergence in the data, it recognizes that triangulation may not establish convergence and may in fact produce divergent data. Mathison (1988) points out that equating triangulation with an assurance of quality is an as yet unfounded research assumption and that the main advantage of triangulation lies in the depth of data it provides. She adds that even divergent findings can be used to explain facets of the social phenomenon under study and that triangulation should be viewed as "a technique which provides more and better evidence from which researchers can construct meaningful propositions" (p.15).

CHAPTER 4

FINDINGS: SNAPSHOTS OF EARLS COOK APPRENTICESHIP

The purpose of this chapter is to present the research's findings. A number of different data collection techniques were used in this study: both masters and apprentices were interviewed in order to obtain a reflective viewpoint on the process of apprenticeship in the field; observations allowed me to gain familiarity with the different venues in which apprenticeship occurred as well as getting an insight in the way that training was delivered; finally, government and earls documents used in the apprenticeship were collected and examined. The diversity of data collection provides both depth and reliability to the results while allowing the reader to get a better impression of the areas of training that are convergent and those that are divergent.

The Setting And The People

First Theme: An appearance of sameness - No twin kitchens & restaurants

This theme did not emerge after painstaking interpretative work; it just jumped at me. Visits to different sites where the apprentices and the masters worked made it plain that all of the sites had a lot in common. However, using my background in the industry, I was able to notice subtle differences such as kitchen handedness (the location of a particular production site with respect to the rest of the kitchen), levels of staffing, production area, as well as other production parameters. In addition, respondents were quick to point out the concerns they had with achieving and maintaining standards regardless of venue. The respondents were quite clear in what made them the same

but, at the same time, outlined some challenges in attaining these standards in venues that were not all the same in terms of age, layout, equipment, staffing, and clientele. Of interest in this theme is the effort that respondents make in achieving this sameness, a sameness that is set by a central body. Indeed, there is a hierarchy at earls and the manner in which this hierarchy is structured is part of this theme.

There are approximately 60 earls restaurants in Canada but the majority of them are located in British Columbia and Alberta. While most of the "stores" (as they are called in the restaurant jargon) are company owned and operated, some are franchise operations. However, regardless of mode of management, all planning in terms of layout, decor, facilities, menus, and operation of the stores is developed and implemented centrally.

This is also the manner in which kitchens are planned and operated at earls. New menu items are usually developed and tested at the company's Head Office restaurant and, assuming the menu item fits the company's image and clientele, implemented chain-wide. Sometimes new menu items require new equipment, as for example pizzas cooked in a wood-burning oven. In that case, the restaurants that were built prior to the introduction of that particular menu item are "retro-fitted" with the new equipment.

As the chain expands, each new restaurant is built in order to maximize space utilization taking into account the production parameters dictated by the chain-wide menu in effect at the time. Not all kitchens are identical although all can produce the same menu items within the same stated production guidelines. However, all kitchens at earls are build on the "open-kitchen" concept. In effect, all kitchens are open to the

public; there are no walls between the apprentices, masters, and cooks and the customers. And while the "forno" (wood-burning oven) is prominently displayed and is in full view of the whole restaurant, the "line" (area where the stoves, ovens, fryers, grills, and melters are located) is somewhat obscured from view.

Regardless of exact layout, the simple fact that all people working in the kitchen are under patron scrutiny (they are part of the show, the dining experience) puts demands on the cooking staff. In the words of a master, they have to inspire confidence and project an image of the business that must be carried through:

> "I think that a very clean, good-looking uniform on, our environment tries
> to be crisp and clean, our food is all clean flavors, clean after-tastes, and
> the crisp, clean image of the chef, I think, is something that works
> together because [the] kitchen is very open. So the cleanliness and
> appearance of the cook and the kitchen are basically a merchandising
> vehicle for us. So, basically, we tell our managers that if you wouldn't
> hire someone to serve a table, don't hire them to be a cook" (Carl M,
> 273-281)

Another unifying factor across apprenticeship venues is that the space allotted to kitchen is carefully calculated. However, over the years, kitchens have become smaller and the distance cooks have to travel to perform any task has been reduced. The downsizing of kitchen has not affected the basic kitchen design, nor has it meant a reduction in the complexity of tasks and/or menus. The contrary is true: the menus and the tasks have become more elaborate and involved.

The "open kitchen" concept and the same-yet-different kitchen floor plans could have an implication for the apprentices as many of them will complete their apprenticeships in a number of different restaurants. earls moves apprentices around yet the master rarely does, and when she does she might not be moved to the same restaurant as her apprentice.

Second Theme: The earls journey - From Apprentice to Master

Apprentices and masters at earls are cut from the same cloth. In fact, apprentices are masters-in-the-making at earls just like masters were apprentices with earls at some point. That is not to say that all of the people who cook for earls will become apprentices and masters, it means that in order to be a master at earls, you have to have been an apprentice at earls.

In effect all people, including apprentices and masters, have gone through the earls training. Most if not all have started from the dish area and have worked through the ranks.

A brief outline of the process will help the reader realize that apprentices at earls have been working as cooks for quite a while. Indeed, perhaps the most surprising thing about earls apprentices is that they have been "coaches", that is they have trained entry-level recruits, before becoming registered apprentices themselves.

At earls people are recruited, they don't apply for a job. Most, if not all people who work for earls on a long term basis have been recommended by someone already working for earls in some responsible capacity. One of the qualities that earls looks for in their people is the ability to recruit people who will fit in the team both at the restaurant level and at the chain level.

> "And we hire them on the basis that basically we think that they're a team player. And we look at everybody that comes in the building as a potential later leader. So a terrific hiree you want to make sure you spend a lot of time with them so that the kitchen leader only is the only person that takes time with that person." (Carl M, 186-192)

If the person is hired, the interviewer will easily spend an hour or more with the new employee discussing work ethics and corporate beliefs, expectations, and career paths. Another feature of earls besides the in-depth interview for entry-level positions, is that recruits given an assignment even though they all start with, arguably, the restaurant's simplest task: dishwashing.

The giving of an assignment prior to the first shift holds true for all people working at earls when they start a new set of duties. The assignments are always similar regardless of the station - the area of the kitchen that one is working in, e.g. the pan-fry station, the "forno" (wood burning oven) station. Prior to the first shift, the recruit/worker is expected to know the use, location, stock level, and special requirements (i.e. handling chemicals in dishwashing) of all of the goods used on that particular station.

On the first shift, the senior person, either the "coach" or the kitchen "leader", will first test the recruit on the assignment.

> "The test would be what we do is we give them a crib sheet which is a very, very short description of each item that's cooked in their station. How long the cooking time is and say with the sauce accompaniment that it might be. So they would have to know the length of time that, say, an order of chicken wings and that it's tossed with a fluid ounce of hot sauce and plated with one and a half ounces of parmesan dressing and 4 sticks of celery." (Carl M, 209-216)

Then they will tour the restaurant with the person. The recruit is introduced to the "leaders" (i.e. managers/supervisors) and the other staff on shift, all areas of the restaurant are visited, uniform issued, all policies covering employment and emergencies are explained.

New cooks at earls start "on the line" at the appetizer station for dinner shifts. The reason for this, and it is quite different from most operations is that the work is pretty simple, quite repetitive, yet contains all the elements that make up cooking. In effect, the "apps" is the basal work station for earls restaurants. There the cook learns timing, dealing with pressure, cleanliness, teamwork, human relations, and cooking skills in a relatively pared-down work environment.

> "I found we had better success with people if they just learned line cooking first because line cooking is basically just doesn't require as

much food knowledge or understanding or feeling for food as

preparation does as sauces or the baking takes a lot more judgment."

(Carl M, 516-520)

Regardless of experience, all cooks at earls are trained from 2 to 4 days by a coach

when they arrive on a new station. Each training session consists of quizzing,

demonstration, side-by side working, and exhibition.

"...then you start getting bills in and slowly you work hands-on doing bills.

I try to do about 80% of the work when I'm training somebody for the first

time, for at least the first half of the shift. I try to do about 80% of the

work and they stand and watch, they watch me work, they watch how to

organize. And then the next day, or later that shift, it's more like 50-50 or

even 80-20 them to my 20. And then I would say, the 4th shift, if you get

to that 4 th training shift, it'll be 100% them, and I can watch them and

give them pointers." (Clive A, 167-176).

Then they work their way on the line at night, station by station, until they become night

coaches. By then, they have become an asset to the company and are offered "prep"

shifts. Prep shifts are those that accommodate both lunch customer service but also

are responsible for the preparation of fresh food products (earls manufactures products

in-house rather than purchasing ready-made products).

Somewhere along that training and working continuum, during that informal

apprenticeship, the cook may be offered a formal, registered apprenticeship at earls.

This, in effect, makes all apprentices at earls two time apprentices. First, they serve an informal, company-based apprenticeship, and then, they serve a registered apprenticeship where both earls and the apprentice make clear their understanding and engage to follow the government program for cooks. In a nutshell, one has to be a chef at earls to serve a formal cook apprenticeship; if one is a cook, one must follow the company apprenticeship.

Apprenticeship At Work

Third Theme: Know-how relay - Passing on the knowledge

At this point, a word of caution is necessary. Apprentices are tradespersons-in-the-making, that is to say that each day, whether that day has a conscious learning-teaching component or not, is a day of change. Results from interviews are like a photograph, perhaps the subject was smiling, perhaps the subject's mind was elsewhere. It is a near certainty, though, that the apprentice continued on his/her journey both during and following the interview.

The same holds true for the masters. While some have had many apprentices before, some have had none. While some of them have developed didactic tools to convey what it is to be a cook, some haven't and approach each teaching-learning situation as if it were new. But all masters seem to be keenly aware that every apprentice is a person and as such is wholly different from any other person the master may have taught at some other time.

Regardless of teaching and learning styles, masters and apprentices at earls engage in the registered apprenticeship process from a unified, standardized front. earls has an elaborate in-house training system that covers all tasks and all positions in the restaurants. All apprentices and masters have gone through that in-house training system. Each aspect of each cooking task, based on the menu items to be produced, has been analyzed by the company executive chefs and has been broken down in a series of steps. The progression inherent in the steps represents the motions or activities that a cook has to perform in order to produce a specific menu item. This "how-to" manual is supplemented with appropriate background (or theoretical) information so that it can become a training manual. A copy of the pertinent section of the training manual is kept on hand at each station in the kitchen. The training manual is the physical embodiment of the amount and level of knowledge required for that station as well as the approved path to achieve that stage.

As both masters and apprentices rely heavily on the in-house training manual and on the registered apprenticeship program's prescribed texts, the training and apprenticeship process becomes a matter of acquiring factual information and to make sense of that information.

> "We have standards, we have spec. books, they tell you everything you
> need to know. And there's a picture..."(Clive A, 425-427)

Sense-making is usually a matter of referencing to sources of factual authority such as a textbook or a company training book. Sense-making is explaining the 'whys' and the

'wheres' of procedures and/or products; it is situating the facts or procedures in a context which is familiar to the learner.

"...so you can bring out the book and it tells you a bit of history about clam chowder and you learn about why, you know you learn the whys behind it, not just how to do it. So the books help you understand what you're doing, so you're not just a sort of robot, you make a chowder you understand." (Dan, 509-514)

While the books provide the backbone, a sort of "bible", a seminal work whence all learning and teaching springs forth, both masters and apprentices recognize that it is people who make the whole process come alive. In fact, all of them constantly talk about passion. And their passion is that of making the book-based or book-referenced practices truly come alive.

"I'd say the number one thing has to be passion for food whether it's here or whether it's at home. People, not necessarily passion for food but a passion to want to get better, to never be complacent" (Dan, 455-458)

The teaching and learning, the passing on of knowledge is seen as an exchange from one who knows to one who knows less and it is characterized by an intense engagement with the matter at hand.

"...because he has unlimited knowledge and the reason I say unlimited is

because if he doesn't know something, he'll know it before I will.

Because he has such drive and such enthusiasm to know more that I

always know that he knows more than me." (Don, 586-590)

Passing on the knowledge: Beliefs about its nature

From the above, it should be clear that both masters and apprentices view knowledge

as a thing. It is something to be acquired, transmitted, exchanged, codified, worked on.

Both apprentices and masters speak of having more knowledge, getting more

knowledge, of strategies and tactics to get this entity. As well, people are measured as

to the amount of knowledge that they possess:

"when you get your Red Seal, you've attained a certain level of

knowledge, whether you've memorized it or whether you really

understand how to make a great bechamel or whether you've just

memorized what a great bechamel is. You've still attained a certain

level." (Don M, 234-238).

In effect, knowledge is a commodity and it is viewed as money is. It is banked, it is an

investment, it is something to be used to further one's own ends and for the purpose of

training: "...it'll help training. You know, when I'm training people" (Clive A, 81-82). A

commoditized view of apprenticeship that is more clearly stated by one of the

apprentices:

"...they're putting in an investment in this person, this young person who wants to become a chef and realize that that is an investment. If I'm John apprenticing me, then it's an investment for John to do so because it's going to pay off in the long run... Because if I find a good person working for me in my restaurant and they show interest in this as a career, then I'll put my investment into them at that point and say let's do this and hopefully, they'll stay with the company and invest that knowledge that they learned back in the company that way" (Earl A, 241-245, 305-310)

As well, as knowledge represents concrete procedures and products that are used or worked on, it establishes a sort of equivalency in the minds of the users of knowledge. Knowledge is something that allows you to better perform, to better interpret the instructions that have been put down on paper and that you are expected to know by heart.

"All of a sudden, chicken tenders, instead of something I had to do at 10:30 every day, it kind of turned on with character and I started caring a bit more about what I was doing, because I understood more what the product was. To understand about a product and what you're making makes all the difference in the quality of the food, in the quality of the stuff you cook in your line cooking, makes all the difference." (Dan A, 551-558)

Passing on the knowledge: Actions and intentions about teaching and learning

The transmission of knowledge at earls is congruent with the views of knowledge. As both masters and apprentices do not view knowledge as a dynamic thing, but rather as a concrete, solid thing, the giving of knowledge becomes a matter of providing access to the body of facts and procedures and then ensuring that this body has been absorbed.

"...if you don't know something and you want to know it, find out. And the system is set up where I can find out what I want to know. I don't have to go to [master's name] for every question I have. I'll try and find it out myself, in one of the manuals or in one of the cookbooks or something and then if I don't have it, I'll go to the kitchen leader or the restaurant manager and if they don't know, I'll go to [master's name] or one of the quality leaders in our region." (Dan A, 280-288)

While knowledge is transmitted in concrete ways though a set of documents and methods, both masters and apprentices realize that the current view of knowledge is transitory. It represents the state of affairs as it is now. For example, if and when the menu, equipment, or philosophy of earls were to change, then knowledge would change. The content of knowledge would change, but the nature of knowledge would not change. The reference texts and documents would have to be reviewed and staff may have to be trained in order to be able to deliver the new knowledge, but that is it. A state of punctuated equilibria is the norm.

Regardless of the state of knowledge at a given moment, the only way to assure that it has been acquired is by witnessing the outcomes. Through exposure, it is assumed that one has the necessary knowledge background. By doing, by showing that one can do, then truly one demonstrates that the knowledge has been both transmitted and retained successfully:

> "You can learn everything in the kitchen in 6 months but unless you do it, you won't have full knowledge what it's like to go through... You can learn the technical side, you can learn what's in the recipe books, you can learn all the recipes, you can memorize them, you can... But until you have functionally done it... So if you do it in a short period of time, you don't have that experience, you have the knowledge but without experience. I guess it goes back to experience is giving you depth, more depth than someone who just has the knowledge." (Earl A, 181-205)

Knowledge has been transmitted properly when the exit behavior, the products that the cook apprentice is putting out, matches the specifications. The manner in which this is done, the manner in which the exchange is mediated when both master and apprentice are involved in the process (rather than through books), is by emulation and repetition. The apprentice is shown and the apprentice repeats the procedures until they are satisfactorily demonstrated:

> "...he showed me how to do it once, and then I'd do it and he'd just stand right beside me for 8 hours for 3-4 days just going over and over and over things until I'd feel comfortable that I could do it without screwing things up or that I could do

it in the right amount of time sort of thing. But we went over everything from

holding a knife ... to how to cut properly, to position yourself so your arm doesn't

get tired, so your wrist doesn't get tired." (Dan A, 293-302)

So far, all that has been described would be viewed as part of the training process that

earls has set up for all employees. Masters and apprentices make a distinction between

this training, which they view as indispensable to the running of the business, and

teaching, something that is more formal, something that usually happens at school.

Fourth Theme: Beyond on the job training: the formal dimension

The registered cook apprentices, as was mentioned above, must attend 3 levels of

technical training (one each year of the apprenticeship) each lasting 4 weeks for a total

of 20 days per level. There are 3 community colleges in British Columbia which deliver

technical training for cook apprentices. Vancouver Community College, Camosun

College (near Victoria), and Okanagan University College (in Kelowna).

Regardless of technical training venue, all apprentices follow a provincial curriculum

outlined and approved by the Cook Trade Advisory Committee and developed by the

Apprenticeship Branch (Ministry of Labour). Technical Training consists of a 6 hour day

during which the apprentices attend class lectures and perform practical assignments in

a laboratory kitchen. Both lecture materials and practical assignments are found the

Learning Guides (for an example see Appendix 10) where they are either fully

developed or refer the apprentices to a single prescribed textbook.

Theory assessments of apprentices are conducted by the means of standardized examinations developed by the Apprenticeship Branch (for a sample page see Appendix 11). In addition the practical (laboratory kitchen) work is marked by the college instructors. These marks are reported to the Apprenticeship Branch and a School Report is issued to both the apprentice and the employer (see Appendix 12).

Below these documents will be assessed for the purpose of illustrating the delivery of cook registered apprenticeship in the field. At this point, the details provided above should help the reader realize that the technical training is the traditional portion of the training registered apprentices receive.

<u>The formal dimension: beliefs about the meaning of school</u>

Apprentices and masters have differing views of school. Apprentices see school as a testing ground. The place where they get to measure up against other apprentices. It is also the place where they get a tangible (arguably ingrained through the compulsory schooling they have all attended when growing up) measure of their worth as learners. The tests, the quizzes, and the practical assignments allow the apprentices to get marks and those marks taken as a reflection of their worth as practitioners of the trade. While practical assignments are also a means of showing what they can DO, the same assignments allow apprentices to gauge or assess the position they hold in the food business. The assignments are viewed as expressions of culinary fashion and as such can be called passé or old-fashioned regardless of the culinary principles they are meant to illustrate. In effect through this process, the apprentices judge the adequacy of the on-the-job training site and/or justify in their own eyes the training site they are in. In the class, apprentices that come from well-know, reputable, or high profile

establishments look down on apprentices that come from less well-know establishments. This makes technical training the site where a culinary "pecking order" for apprentices is either established or reinforced.

Masters view school in a different light. First, many, if not all, have also served an apprenticeship and are therefore supportive of schooling because they can see the long-range implications of the in-school training.

> "Well, lots of cooks will only go and work in a restaurant so that they can get their Red Seal. You know, that's one of the things they judge an employer by. So we want to be the visibly best employer, the best employer for availability for growth and learning." (Carl M, 800-804) (Note: The "Red Seal" is the interprovincial endorsement of the provincial Certificate of Qualification.)

> "but the people who are going to go through the apprenticeship program here are always going to finish at the top of the class and who are either gonna stay here and progress in the company or they're gonna go and they're going to be an asset to somebody" (Alfred M, 1218-1222)

In-school training provides depth to the practical, on-the-job training as well as exploring areas of the trade to which the apprentices are not or little exposed to on the job. Masters, then see school as the venue where apprentices can collect knowledge associated with aspects of the trade which are not practiced in their own kitchens.

"they want to know more about food. So we want to reward those people

by letting them in on a lot more details about food and trying to spur

them to be creative." (Carl M, 779-782)

Masters also appreciate technical training because, in their eyes, apprenticeship would

be somehow diminished if it were different for their own apprentices than it was for

them. Masters take enormous pride in how their apprentices perform at school. In a

way it vindicates their own establishment; it may be that the apprentice is from earls but

she can outperform an apprentice from a luxury hotel or a high-profile restaurant. The

apprentices, then seem to continue the masters' status fight that was started when the

master was an apprentice herself.

"You know, in the industry when they go for their second and third year

at the school, that nobody bursts out laughing when they're told, you

know, because that's the first thing that they want to know "Where do

you work? What do you do?"... And there's always people out there who

are getting better training than they are and a lot of people who are

getting much worse. And I make them aware of that, you know. I'm

happy when they go to school and come back and tell me "Oh yeah,

there's this guy from William Tell and he's just amazing" and I say "Well

how do you feel, where do you stand in the class?" "Actually, pretty

good, pretty good, I feel confident, I can hold my own in second and third

year". And that is more that I know that the system works." (Beatrice M,

330-345)

You know, when you go to school, people, they don't even question.

The teacher goes what?! You don't even look like you're trying and

you're blowing off all the stuff and Dede said well it's second nature, it's

what we do." (Alfred M, 1303-1308)

The formal dimension: beliefs about the worth of school

Apprentices are ambivalent about school. They know that it is useful to them, especially

at the beginning of the apprenticeship. School-based instruction's worth at that point

hinges on the reinforcement of what they have done at work; it anchors and validates

their practical knowledge.

"...you go to school, you get taught first year, you know you learn what

you learn in first year and you come back to a job, or you get a job, I

guess you have to have a job first. You learn the basics and you also

can tell if you want to do it, right. You learn the basics and usually it

clicks in your mind." (Ben A, 52-58)

But beyond the initial contact, the hands-on training, the job, takes ascendancy, and

school's worth is diminished. In some cases, the relevance of the curriculum is lost as it

has no direct bearing on the apprentice's everyday experience.

"The schooling part of it is nothing great, it's like I said, first year I learned

because you're pretty much green and you learn the basics, the 5

mother sauces and simple things. And then second year is, for me, it

was just a waste of time, like the schooling part of it, the one month.

And from what the guys tell me, the third year, what they teach you as

well has nothing to do with what you're doing anymore and I strongly

believe that they should upgrade the system. Like the actual, what they

teach in school, not what they, not what you learn hands-on, you know

the other 11 months. But what they teach you for that one month in

school, is, I think, outdated. But the opportunities, you have, like I said,

the attention spent towards you when you're working on your job

because you're an apprentice is excellent." (Ben A, 175-189)

Masters have definite feelings about the worth of technical training. The first concern is

that which recognizes, albeit tacitly, that in-school training represents only about 10% of

the total time an apprentice spends in apprenticeship. This in their eyes gives it a

veneer-like quality, a lack of depth when compared with the on-the-job training.

Sometimes even in, like, for instance the side by side training we do with

somebody is probably more detailed, more side-by-side than what you

get when you're at school." (Carl M, 178-181)

But by far the most common comment about the technical training is related to the

scheduling of classes. Perhaps because the masters have no input in when the classes

are held, nor any input in which of the classes their own apprentices will be placed, they

show frustration at having to divest themselves of valuable, productive staff when they

need them. But this is tempered by the perceived value-added of the training.

"I mean it's a real pain in the ass for the school thing too, right. They go,

when the school thing can fit them in, right. And instead of having ten

instructors that teach in January, February, and March, and saying, piss

on the rest of the year, they fucking put classes on in November and

October when you're getting buried in business and can't fit them in

January, February, or March. So I mean, there's lots of things that are

not easy about the apprenticeship program, but the rewards are, there's

no way that you can replace what you're gonna get." (Alfred M, 1260-

1268)

Links to the Fourth Theme: Registered Apprenticeships In The Field

In order to enter in an registered apprenticeship agreement in British Columbia, an

employer contacts the Field Services of the Ministry of Labour (until March 1996

Ministry of Skills, Training and Labour). An apprenticeship Counsellor will then visit the

'training site', meet with both the employer and the employee, assess the worksite for

training suitability, and have the employer and employee fill an Application to register

and Apprentice (see Appendix 9). The information on the application is entered in the

ministry's databank and an apprenticeship agreement is produced.

The apprenticeship agreement is a legal document produced under the legislative

authority of the Director of Apprenticeship as stated in the Apprenticeship Act. The

agreement (see Appendix 3) sets forth the conditions of apprenticeship in terms of

wages, obligations, and terms of apprenticeship. The agreement is signed by both the

employer, the employee (apprentice), and countersigned by the Apprenticeship Counsellor.

In effect, the agreement outlines the responsibilities of all three parties. The apprentice is expected to work for the employer and acquire the practical skills on the job and, in addition, to attend technical training as mandated. The employer is to provide learning opportunities to the apprentice, keep the apprentice working while there is work, and release the apprentice for her technical training. Finally, the government will provide technical training for the apprentice and will arrange for the certification of the apprentice once all requirements of the apprenticeship have been fulfilled. In addition, the government provides both the employer and the apprentice counseling services for matters such as educational assessment and upgrading, conflicts resolution, on-the-job training practices, as well as administrative support during the apprenticeship (e.g. notices to attend technical training, transfer of apprenticeship, see Appendix 13)

Until 1995 earls apprentices were registered on a restaurant by restaurant basis. Each kitchen leader (as the chefs are called at earls) would contact their local apprenticeship counsellor to register an apprentice and would follow the procedure outlined above. In the summer of 1995, earls decided to indenture all of earls apprentices through the Head Office in North Vancouver in order to deal with only one apprenticeship counsellor. While this procedure simplifies the paper flow, it means that the initial meeting between the trainer, the trainee, and the counsellor does not take place. The apprentice and the master are 'on their own' and are left to arrange for training as best they can relying on government generated documents, school curriculum, and conditions for the cook apprenticeship.

This method of handling apprenticeships provides earls with more freedom and flexibility (they can train the way they see fit), allows earls to standardize their training methods for their apprentices across the chain, and allows for better management of the apprentices for both the ministry and earls (e.g., timing of technical training). However, this lack of close relationship between a counsellor, an apprentice, and an employer means that the partnership between three people is non-existent and has been replaced with a documentary or administrative relationship, one in which the ties are weaker than they could be.

The amount of contact between the three parties to this agreement is, for all intents and purposes, non-existent. Indeed, the regional leader (chef) who signs the papers may not train the apprentice directly as this is done on a 'store' by 'store' basis. Further, the government representative, since government involvement makes this apprenticeship a prescribed apprenticeship, may never meet the apprentice. In this case, apprenticeship happens by proxy.

But the apprentices do attend technical training, are indentured for three years, study the prescribed materials, and pass the required examinations and, eventually, receive their credentials. As well, as will be described below, training happens on the job but as structured and dictated by the needs of the restaurant and the pressure of conducting business. It is apprenticeship by proxy between, in matrimonial terms, separated people.

Links to the Fourth Theme: Documentary Evidence

There are a number of documents used to support the registered cook apprenticeship. All of those are produced by the Ministry of Labour. They can be divided in three categories:

- Administrative

- Educational

- On the job training

Links to the Fourth Theme: Administrative documents

Documents in this category are those used by apprenticeship counselors for the purpose of satisfying tracking needs of the ministry. They include the application to register an apprentice and the apprenticeship agreement mentioned above, change in expiry form (a form to register the shortening or lengthening the duration of apprenticeship), employment enquiry form (indentured apprentices have to be employed to be in the program as the bulk of the training happens at work), transfer of apprenticeship form (apprentices are free to change employers but must record that change), and termination of apprenticeship form (see Appendix 14).

These documents represent the ministry's requirements in terms of file management. As the government is expected to schedule and pay for technical training, as well as certify apprentices, they need to be able to locate individuals physically and in the system of apprenticeship. Forms are essential to government so that a clear path is recorded on the apprentice's personal file. In fact, keeping files properly managed can

arguably be said to be one of the two main foci of people delivering the program in the field.

Links to the Fourth Theme: Educational documents

Under this category, there are two types of documents that need to be considered. First there are the inevitable file management and/or tracking documents like the notice to attend technical training, confirmation letter, failure to attend technical training, and failure of technical training (see Appendix 13). These documents are also administrative in intent and purpose but they pertain to the technical training portion of the apprenticeship. Also, this facet of the registered apprenticeship system, represents the second focus of the government representatives when interacting with apprentices and masters: making sure that the technical training sessions are assigned and that they are attended successfully.

The second type of educational documents concerns the technical training itself. For cooks, the Apprenticeship Branch, under advice from the Trade Advisory Committee, has developed and produced Program Outlines and Learning Guides (for a sample see Appendix 10). As well, the ministry collects the marks achieved during technical training and sends out a school report to both employer and apprentice (see Appendix 12). The marks achieved by the apprentice during technical training are kept in the database and paper file. As was mentioned above, there is a total divorce from training and teaching between the three parties in the registered apprenticeship program in British Columbia. The apprentice goes to school (one of 3 Community Colleges) where she is taken through a number of classroom and laboratory activities. There are a number of

assessments performed by the instructional staff (only the final exam is imposed by the ministry - for a sample see Appendix 11), the marks obtained on these assessments are recorded and sent forward so that each of the three parties have a copy. Only in the case of a failure, not achieving a mark of 70% will the parties meet to discuss and/or come up with ways to remedy the situation.

Also of interest is the fact that the documents used for the technical training portion of the apprenticeship are based on a Skills Profile Chart developed through the DACUM process. All of the skills are broken down in competencies and each one of those has a companion practical competency. The testing, including the InterProvincial examination at the end of the apprenticeship, mirrors this arrangement both physically and philosophically. Physically all of the test items are multiple choice, secondly, the number of test items for each 'line' is directly proportional to the number of hours devoted to teaching that 'line'. Philosophically, it can be argued that multiple choice items adequately test factual, discreet knowledge rather than higher level cognitive skills. As well, the exclusive use of multiple choice items creates the belief that the exam is objective as there are no items requiring human judgment: testing is believed to be impartial. Again, the documents and materials reflects an educational reality divorced from that of the work or real world reality. The range and scope of activities apprentices undertake in the workplace are not matched in the technical arena in either complexity or involvement.

Links to the Fourth Theme: On-the-job training documents

While earls has voluminous training materials, those are used for apprentices before they are indentured. As was mentioned before, apprentices at earls have already been

with the company for a number of years and they have the production side of the business down perfectly. The ministry, however, through the Apprenticeship Branch has developed a Training Record Book for apprentices (see Appendix 15). This Training Record Book contains a list of all practical and theoretical competencies following the model set forth in the Program Outline. In this case, the practical competencies are broken down in three tables that represents each of the apprenticeship. The tables are constructed so that a master can enter a competency rating (A, B, or C: ranging from can perform without supervision to needs constant supervision) for each of those competencies.

The Training Record Book is also an unrealistic picture of the world of work. On-the-job training takes place as a function of the demands of production. Training does not follow a pre-ordained plan but rather happens when the business demands meet the training demands. As such, the Training Record Book is so divorced from the reality of training that many apprentices and masters do not use it. In addition, most field counselors do not request that this document be turned in at any time for inspection (a practice that is part of the apprenticeship system in Alberta for example).

If the Training Record Book is a document aimed at the apprentices and Masters, then the Inspection report (see Appendix 16) is a tool used by field counselors to plan and record their site visits. During such visits both apprentices and masters are interviewed and their thoughts on the progression of the apprenticeship are recorded both in the hard file and in the electronic database. In the case of earls such visits are not possible as one counsellor is nominally in charge of apprentices who are outside of her geographical area (case loads are assigned by postal code). It can be said, then that

the document is practically worthless expect as a method of record-keeping for the purpose of tracking and eventually certifying apprentices.

In conclusion, it appears quite clearly, that the documents developed for apprenticeship fail to bridge the worlds of program administration, work, and technical training. The documents, on the other hand, reflect a vision of what apprenticeship ought to be, of what training should take place, and of what kind of journeypersons the apprentices will become at the end of the process.

Links to the Third and Fourth Themes: Observations

There are two types of occasions when the apprentices and the masters meet: when they are working and when they are preparing for or while attending technical training. Not all of the apprentices saw their master daily. This is because some of them had been promoted or transferred to another store. In that case, the interaction consisted of phone calls (once or twice a week) and face-to-face meetings on almost a daily basis before and during the technical training period. The face to face meeting provides the opportunity to review the material that will be covered at school. The material is reviewed in order to gain familiarity with the contents, link the contents with earls operation, and broaden some of the concepts and/or facts in the contents.

Links to the Fourth Theme: Meeting before school

The meetings are quite informal and take place either in the store in the afternoon or (at the head office store) in the office at the back. The master usually wears his "whites" (cook's uniform) and the apprentice, if he's come from another store, his street clothes.

The meeting is quite informal, both usually sip on coffee or soft drink while they talk. The meeting pace is leisurely but steady and the material to be covered guides the process. Below is a typical interaction between an apprentice and a master. The apprentice is about to attend Level 1 technical Training

There is a stack of Learning Guides on the desk, also a fat hardcover cookbook, which looks like Gisslen's "Professional Cooking", above the desk are some other cook books and plastic covered 3-ring binders. The desk is fairly cluttered and sits in the corner of a windowless room, a set of large red pipes run by the desk and whistle intermittently. [master is talking to a Level 1 apprentice]. "OK, you've read the section on cooking vegetables, let's take potatoes, is there anything there that you've seen or rather not seen?" "Yes, the baking section mentions only potatoes in their skin or in a casserole, that doesn't match our forno products", "OK, anything else?"..."What about the purchase specs?" "Oh yeah, skimpy on the quality control and also little on nuggets and other varieties that you talked about the other day, you know when we were sampling stuff?...

Links to the Third Theme: Meeting during work

The second type of interaction occurs when both apprentice and master meet in the kitchen. The focus here is rarely on simple techniques or on producing menu items. More often the meeting is concerned with a new product or technique being assessed. In those cases the master treats the apprentice as an equal. It is one professional seeking another's opinion. For example, below is a partial description of a session during which master and apprentice were assessing the quality of top sirloin steaks, a new menu item.

There's a crowd around the work table, earls purchaser is there, so is [master], the grill cook, kitchen leader, night coach, and the apprentice. Only [master] is not sporting a chef's hat, only the purchaser is in street clothes. All are staring intently at a large plastic bin filled with steaks. many of those are of a different shape, some are of uneven thickness, an example of each is spread on the work bench. [master] asks that 4 steaks be cooked following the standard time [the specs] with no seasonings, he also queries as to the proportion of steaks in any delivery that is two-lobed, apprentice ventures a figure, grabs some of the vacuum-packed steaks and starts opening packages and sorting steaks. [master] agrees with figure, asks what apprentice's thoughts are on the steaks. apprentice rank-order steaks using those on the table. Grill cook returns with cooked steaks and apprentice slices pieces off and supports his opinion with steak evidence. [master] listens intently and nods approval...

Hands-on training is of special nature at earls because all apprentices have been with the company for a while and many of them are either 'chefs' or 'sous-chefs' (they run the kitchen or are second in command). Unlike apprenticeships in other venues where the apprentice is someone new to the industry, earls has apprentices who have already been trained. In effect, the registered apprenticeship is the second apprenticeship they are serving. The first apprenticeship was their climb through earls hierarchy. It is during that first, informal apprenticeship that hand skills, specific to the company, were ingrained in the apprentice. By the time, the apprentice reaches the formal stage under investigation, they are, as technicians within the company, equal or almost equal to the masters. This makes the registered apprenticeship more a "polishing off" process than

it would otherwise be, a fact that is borne when observing the interaction between the apprentices and the masters as well as the content of their discussions.

Getting A Coherent Picture From The Data

Given the three questions asked for this research, namely:

1) What are the characteristics of earls restaurants cook apprenticeship program?

2) How does earls restaurants cook apprenticeship program compare with prescriptive and descriptive apprenticeship programs reported in the literature?

3) How does earls restaurants cook apprenticeship program compare with British Columbia's registered cook apprenticeship program?

it seems paramount to try to organize the data in some sort of framework.

Quite clearly, there are two types of data. First, hard, documentary evidence where, using Pratt's (1992) actions-intentions-beliefs triad, the intentions and actions, as evidenced in the requirements set forth, require little interpretative work. For example, the Training record Book requesting that masters judge the competency/performance of the apprentice in a particular area of the trade sends to signals to the researcher: (i) that this is an important or key element to the training process, and (ii) that this competency must be taught on the job. Those signals, in turn allows the classification of such data under questions concerned with prescriptive apprenticeships as well as questions pertaining to comparisons between intended outcomes of the apprenticeship program and the practice of apprenticeship.

The second type of data is that collected by interviewing and observing people. Here again the analytical framework of Pratt's is adequate but requires that the researcher and readers keep in mind that the data themselves have been interpreted at a number of different levels. First, when interviewing people, the choice and ordering of questions in a semi-structured interview are affected by the researcher's interest. Second, still when interviewing, the answers people give to a given question may be the ideal or the desired state of affairs rather than a depiction of reality (taking into account that each person's reality may be different). Third, when observing people, items in the environment that are selected by the researcher reflect the researcher's interest even when that interest lies outside of the research area. For example, when observing apprentice and master discuss a new product, details about the product were recorded because the researcher identified with the problem at hand, neglecting to observe body language. Then, the type of data and the nature of the data collected through interviews and observations can only help in attempting to answer questions about the descriptive practices of apprenticeship both as found in the literature and in the field.

Therefore the data was considered mainly in terms of intentions and actions both for hard and 'soft' data. In addition, beliefs about the apprenticeship system were tentatively identified heuristically when analyzing the data.

CHAPTER 5

DISCUSSION - APPRENTICESHIP: ONE NAME, ONE CONCEPT, ONE PRACTICE?

The purpose of this chapter is to review the findings and match them with the questions that this research aimed to answer. The examination of the questions will be guided by some of the considerations covered in Chapters 1 and 2 such as teaching, learning, and prescriptive and descriptive apprenticeships. In addition, themes extracted from the analysis of the registered cook apprenticeship at earls will be compared to the synoptic models of apprenticeship developed in Chapter 2. This should allow the reader to assess the validity of some of the assumptions regarding apprenticeship that were stated in Chapter 1. The hope is that either a single text or writing or a very small set of writings can be used as an example of what apprenticeship (albeit in this case a specific instance of apprenticeship) is. The immediate fallout of this would be to help apprenticeship researchers and practitioners refine and focus their activities.

Practice, Questions, and Models

For ease of referencing findings to the discussion that follows, I will use the same structure below as that used to present the findings in Chapter 4. That is to say that each of the four themes will be discussed and compared to the literature, models, and teaching-learning implications. First, I will look at the context within which the registered cook apprenticeship at earls takes place. I will compare this context with those reported in the literature and I will questions the validity of using a single name (concept?) to

describe the environment of apprenticeship. I will question this unity, exemplified in the models by the surrounding 'context' field, as it appears that the milieu is of paramount importance in the delivery of apprenticeship.

Next, I will compare earls' apprentices' journey in the light of other journeys described in the literature. I will try to represent this journey pictorially using elements of the models developed in Chapter 2. However, I need to point out that, while the term 'journey' has traditionally been linked with travel undertaken by a graduated apprentice, I view the process of growing into the role of a tradesperson as a journey, albeit a personal one, mediated by all of the actors and the context within which the journey takes place. I will contrast earls' apprentices with those depicted in the literature as I will contrast the apprentceship at earls with that subsumed in the BC registered apprenticeship model.

Third, I will examine the metaphors for knowledge expressed by the people at earls and I will link them with those described in the literature and with some of the assumptions and definitions presented in Chapter 1. It will become clear that, in apprenticeship as well, views of knowledge have a direct impact on the practice of teaching and learning as some of the snapshots of the practice will make clear.

Lastly, I will briefly examine the formal aspect of the apprenticehip as it is central to (i) the government's concerns about expenditures, (ii) the apprentices' sense of self-worth as practitioners, (iii) the focus of the documentary evidence, (iv) the links between the world of work and that of instruction, and (v) the arena within which advisory results are felt and implemented.

From these considerations, a picture of the reality, backlit by specific parts of models and literature should emerge. All models have a number of parts in common, i.e. learners, teachers, content, context. In our case, it is not so much the parts themselves that are important but the relationships between the parts. It is recognized that no constituent part is perfectly homogeneous across contexts and time but the manner in which it interacts with other constituent parts can be directly observed, interpreted, and commented upon. Musings about the impact of minute differences in constituent parts are best left to truly experimental research.

The setting and the people

An appearance of sameness

Uniformity of setting impacts on the possibilities within the setting's confines. The setting also equals or embodies the logic or necessity of production. The setting is a place of business, therefore the freedom of masters and apprentices is, in fact, limited by the setting's (context) high structural level.

I have said earlier that the kitchens and the restaurants in which earls' apprentices work are similar yet different. Indeed, it would be trivial to argue that any two stores were identical as the location, the clientele, and the staff, to name but a few of the variables, differ from store to store. Revenue and sales mix are directly related to the clientele and the location and, to a certain extent to the serving staff. Apprenticeship, that portion which happens on the job, is enslaved to the logic of production, and the apprentice who, theoretically, learns by doing gets to practice that which is required by

the customers. Even at earls, with its highly uniform menu offering and sophisticated sales anlysis, the opportunities vary. In some cases, as was reported in Chapter IV, a store may not have been retro-fitted with equipment required for a number of menu offerings and, consequently, the apprentice may not get exposed to that area of practice and may not learn what there is to learn from those practices.

Menu offerings are also centrally planned. It can be argued that a given menu item, embodied in a recipe (a list of ingredients, amounts, and procedures), represents a cooking teaching quantum. But menus are planned to follow eating trends and fashion not because they may offer a better means to teach a specific cooking principle or procedure. Hence an apprentice may or may not "cover" a part of the curriculum because her establishment does not offer a vehicle to teach it.

That production regulates the content of apprenticeships is fairly well documented in descriptive apprenticeships. For example Buechler's (1989) and Buechler & Buechler (1992) clearly link the learning process in apprenticeship with product requirement in South America. The skills taught and learned are those required to produce or repair goods, not those that some higher authority has compiled in a list for the purpose of examination or certification. Similar instances have been reported with African tailors (e.g. Aronson, 1989) or Asian furniture carvers (e.g. Cooper, 1980, 1989). It almost seems as if the context and the people were the apprenticeship, where apprenticeship is an amorphous thing with no unity and no particular focus. Those apprenticeships are more a "growing up" model than a training system and, although training does take place, it is more incidental to the milieu and the relationships within the milieu than to a set of required or desired skills.

Based on the context's impact on apprenticeship, it would be fair to say that the training received by apprentices vary wildly between apprenticeship sites. This issue was mentioned earlier in this paper and seems to be supported on the logic of production argument. But in prescriptive apprenticeships, the introduction of a formal curriculum with well-defined competencies, examinations, and even schooling, the effect is deemed negligible. In effect, one could argue, as many would, that the formal part "makes up" for the lack of or low level of hands-on training in specific areas of the trade. While this is a good argument at the macro level, it does not seem to hold at the micro level. As the evidence has shown, even within a given chain, presumably more homogeneous than two totally divorced entities, there are differences that impact on the type and amount of training.

It remains that the high level of similarity within a chain ensures a similar level of training, once personal differences have been accounted for. Predicting apprenticeship outcomes is rather easier as are the potential deficiencies in training due to training site differences. For example, the corporate image of the clean, crisp, efficient cook in n open kitchen that earls' actively promotes embodies a number of practices and outcomes of training that may not be of paramount importance in another more closed setting. Likewise the space allocated to kitchen at earls' must impact on the way in which work is conducted and a cook working in a much more spacious environment may not, for example, develop economy of movement, speed and efficiency.

British Columbia's registered cook apprenticeship is centered around a list of competencies which, once mastered, make up a fully trained cook. Training on the job

is assumed to be of equivalent worth provided an employer/site can provide exposure to the apprentice in those skill areas listed in the (e.g.) Training Record Book. Theoretical examination of those skills and practical assignments at school provide assurance that an acceptable level of competence has been achieved.

But it remains that both macro and micro differences between apprenticeship venues influence both what is learned and practiced on the job and how what is learned is practiced. It seems unreasonable, then, to expect any training system to provide equivalent access to training to its users, precisely because the training system depends on training sites without its control. Does this mean that outcomes can only be measured by asking one to produce a masterpiece just like in the Middle Ages? If yes, who, what, and how is a masterpiece defined? Alternatively. credentialled cooks could collect menus and job descriptions from their apprenticeship and let the reader judge from the implied activities.

Regardless of implications for testing and proving competency in a trade, it seems profitable to emphasize the importance of the context in any study of apprenticeship. Even if a researcher were using a model that summarize the environment as 'context', one should be able to get a full picture of the context as possible. Context is more than a boundary, artificial or not, it is a defining factor of apprenticeship.

Earlier, I mentioned that descriptive apprenticeships seem to be focussed on people, indeed dictated by people. I could even propose that, in prescriptive apprenticeships, people are de-emphasized and the curriculum over-emphasized. It would remain that the setting and the people are inextricably linked and that one can be defined by the

other or that, at the very least, only a certain type of people evolves comfortably in a given setting. This is the case at earls.

The earls journey

We have seen that people are recruited at earls'. That implies that the company is looking for people with a certain 'profile', people who will fit in the organization. There are a number of reasons for this practice based on production and personality criteria such as the ability to produce the menu items in very high numbers, the ability to work in full public view, and the ability to fit in the corporate culture. Clearly, people cannot be expected to come in off the street with all of the attributes required to fit in, people grow into that role. This is true of cook apprentices at earls' albeit with a twist of its own.

Apprentices at earls' are masters in the making. What that means is that they have been selected by their organization to be masters: none of them will remain at the journeyperson level. In effect, the registered cook apprenticeship at earls' is a finishing school for kitchen leaders. earls' apprentices start where most leave off: they are chefs for earls' before they can become apprentices at earls'. This is in marked contrast to most, if not all prescriptive apprenticeships reported in the literature and certainly to the intent of the British Columbia program.

Likewise, the bulk of descriptive apprenticeships stress the learning of entry-level skills to a competency level necessary to ensure economic survival. It is possible to find, however, reports that offer slightly different view on apprenticeship. For example, papers on Japanese pottery (e.g. Singleton, 1989) and spiritual apprenticeships (e.g. Johnson, 1989) differ somewhat from the common utilitarian current. Perhaps it is

because, as there is no state-sponsored registered apprenticeship in Japan, learning a trade, an art, or following a calling depends on securing a place in a master's home, studio, or temple. Securing that place is a matter of fitting in the environment and convincing the master that there exists a deep commitment to the trade, art or calling. Given the level of commitment expected from apprentices in Japan, it may be fair to say that the goal is to become a master (sensei) even though many will not attain that lofty goal by their own account. It remains that apprentices there, as in other parts of the world, are expected to be novice learners, not, as is the case at earls', qualified supervisors.

Being a qualified supervisor also makes earl's apprentices different from those described in the literature. Apprentices in formal and informal apprenticeships are beginners. Not only do they have little or no trade-specific skills but they also are not expected to know how to get information out of the work activities they are engaged in. The literature shows descriptive apprenticeships often as a series of unstructured activities (in the sense of continuity) that may make little or no sense to the apprentice. Moreover, these activities and their sequencing may be transmitted from generation to generation of masters with little change and little critical review (see e.g. Deafenbaugh, 1989; Dilley, 1989; Goody 1982a, 1982b). Often, the apprentice is left to fend for herself and draw conclusions based on an outcomes comparison (see e.g. Delbos & Jorion, 1984).

This situation is slightly mitigated in prescriptive apprenticeships as part of the learning activities are school-centered, a familiar enough environment to most apprentices. But it is probably fair to assume that, on the job in those apprenticeships as well, a

journeyperson involved in training apprentices has no better teaching skills than a master involved in descriptive apprenticeships and that the apprentice is equally inexperienced in extracting information from the tasks performed. It is an underlying assumption in those apprenticeships (including that or regsitered cook apprentices in British Columbia) that workplace practice will reinforce the in-school (technical) components of the training. Moreover, it is also assumed that there are effective andragogic/pedagogic principles applied on the job in such a way as to anchor knowldege through practice. In comparison, the registered cook apprentices at earls' have been apprentices. They have gone through the company's training program station by station, shift by shift. Moreover, at each step of the way, the activities have been highly structured and the consequences of the performance of those activities explained·and analyzed in terms of the context (i.e. the production parameters.) This contrasts earls' apprentices with those described elsewhere, the latter are newcomers and the former are experienced learners.

Indeed it could be said that workers at earls' evolve in a learning culture and that the apprentices are those who have wholeheartedly adopted that attitude. Before moving to a new station or set of duties at earls', requests for assignments and the expectation to study on one's own are commonplace. As well, questions about new duties and related subjects are expected and encouraged. In effect, apprenticeship at earls' is super-imposed on their regular teaching-learning activities, it is supplementary to the training that goes on at any time. Most of the literature, on the other hand stresses apprenticeship as the structural component of the teaching-learning activities. It rules the process of acquiring skills. Once again, it seems reasonable to expect an experienced learner immersed in a learning environment to be able to take more fully

advantage of the training opportunities offered. And, in terms of outcomes of apprenticeship, it stands to reason that those experienced learners will come closer to the theoretical mark than others.

But there is more to being an experienced learner in the case of earls' apprentices. In order to and while moving through the restaurant's stations, they have had to master cooking skills that form an integral if not major part of the apprenticeship program. And by the time they are indentured, they can better hone those basic skills, but, more importantly, they can focus on higher-level skills that will be directly beneficial to them as cooks and to the company as supervisors. In fact, at earl's the apprenticeship curriculum is the backbone of the training material developed in house for each station.

Comparing this practice with that of other apprenticeships such as locomotive engineers (Gamst 1980, 1989) emphasizes the differences. For example, interpreting information - that is adapting it to current circumstances - while actively trying to absorb that information is a taxing and ultimately time-consuming aspect of the engineers' apprenticeship, especially as the new recruit is attempting to fit in this new world. Unlike other apprentices earls' apprentices do not have to go through a socialization period at the same time as they have to learn new skills and show that they are an asset to their employer. earls' apprentices have gone through the socialization process and they have already proved their worth to their employer and that is why they are apprentices.

The unstated trust implied in the registering of apprentices at earls' is the embodiment of the training philosophy there. As we saw in Chapter 4, while the training follows rigid production parameter, the training regimen or scheduling, is based around the person.

What has to be mastered is a known quantity as is to what performance level the mastery has to be demonstrated. But there is no unified time-based approach to the training. One moves from one set of duties to another set of duties when the first set has been mastered (within cost/productions parameters.) This makes earls' training philosophy a close relative of descriptive apprenticeships where the learner is moved from one set of duties to another when the first set has been mastered. What sets earls' apart is the sheer number of trainees undergoing the process at the same place at the same time. In contrast, most prescriptive apprenticeships are time-based. There is a belief that the curriculum has been designed in such a way that given a specific amount of time, one has mastered the material. Moreover, the level of competency is assessed by means of paper-based examinations.

earls' journey and models

Most of the models presented in Chapter 2 have elements that apply to the earls' journey. And perhaps the operative word in this case is "journey". Apprenticeship at earls, as we just discussed, is a process that changes over time, it is not a static state of affairs. It would be unfair to pick a model and paste it over the practice.

It is fairly obvious that the static/dyadic model is ppropriate to some of the activities at earls'. But the model applies only in a very limited sense both in terms of time and in terms of place. As discussed, there is a 'one-on-one' training period for each new station. At that time, and for a period of a few days only, there is a master who mediates and demonstrates the knowledege required to an apprentice. But, in contrast to the model, the master does not demonstrate a way of being (perhaps because

contact time is so compressed); the master demonstrates the product and the means of producing that product.

Later, once the apprentice is registered, earls' apprentices will have a master/mentor. The leader who recommends an individual for an apprenticeship at earls' usually fills that role. The apprentice will go to her master for advice on occasion. As well, there is n understaning that the master will help further once career within the company. But these dimensions are tempered by the fact that the apprentice is not a neophyte and has fairly important duties and responsibilites already. The need for the master is not as accute as it is in many of the cases reported in the literature.

Just like the static/dyadic model applied to earls' apprenticeships, the evolutionary model also has a part which is germane to the subject. The evolutionary model takes into account the practice of having apprentices who are further along their apprenticeship teach the lementary parts of the trade. Among descriptive apprenticehips reports, Singleton (1989) is one researcher who describes the practice of having an older apprentice teach a neophyte apprentice. Interestingly, this practice takes place in Japan and seems to fit the popular image of learning in Far Eastern cultures. Here, this aspect of learning in the trades is glossed over and it is assumed that a journeyperson is guiding the apprentice until there is no more to be learned. Then there is a rite of passage (usually an examination) and the apprentice emerges as a tradesperson.

That is the basic assumption underlying the rule-based and the prescriptive apprenticeship models. While there is no doubt that earls' apprentices have to abide by

rules and regulations set forth in any government program, rules are de-emphasized and are followed because of statutory requirements, not as opposed to Gamst reports, because they are an integral part of the learning process. Indeed, one could say that when rules govern an apprenticeship, conflictual situations are unavoidable. Arguably, conflict is not conducive to learning and growing. This is well documented in kin-based apprenticehips which are also rule-based, albeit on a different level. There, access to parts of the trade are dependent on how closely related one is to the master.

Given the above considerations, earls' journey could be represented as in Figure 10.
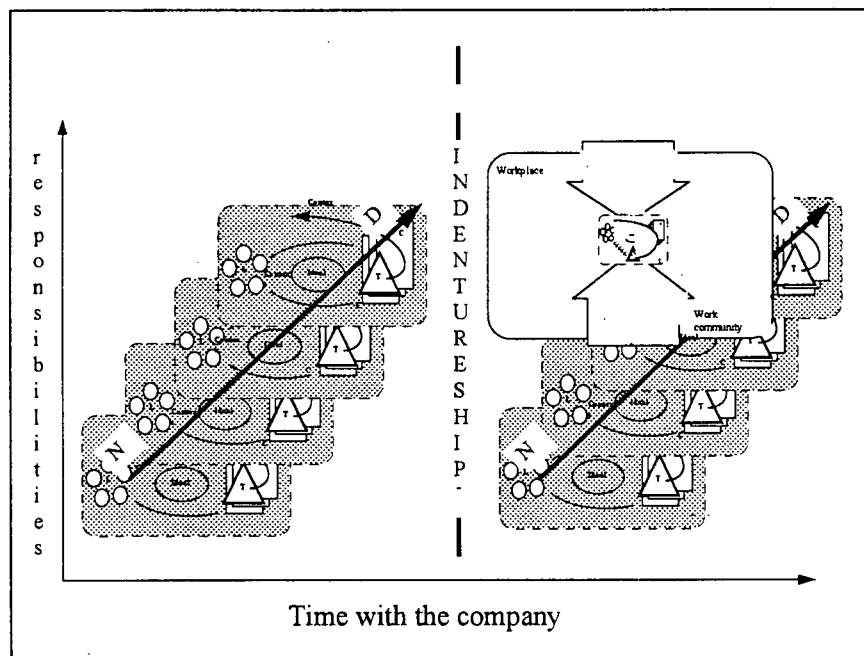
Figure 10. The earls' journey. Using Pratt's (1992) schematics. Where "N" and "D" represent day and night respectively - the time of day during which the apprentice is working.

Apprenticeship at Work

<u>Passing on the knowledge - Beliefs about its nature</u>

There is to be little doubt that, at earls', both masters and apprentices view knowledge as primarily prepositional - in the sense of Delbos and Jorion (1984) codified following logico-positivistic or quasi-scientific mapping. Codified knowledge becomes quantifiable, both in terms of amount, as in the thickness of a book or the length of instructions for a particular menu item, and in terms of complexity, as in the number of sub-routines a piece of information requires or the amount of experience required to tackle the task if it involves judgement calls. It is this view of knowledge that makes both apprentices and masters refer to "amount of knowledge". Consequently, repositories of knowledge such as books and procedural manuals are assigned a knowledge value based on a dichotomous scale of size and complexity.

One could argue that such an epistemology is a consequence of the environment. High production requirements in a highly structured hierarchy demand that the knowledge base be systematized in discreet, quick, step-by-step sets of instructions. In addition, once culinary procedures are codified, the ability to learn and blindly apply those procedures by workers yields a commodity which can be offered for sale on the labour market: the goal of any formal vocational training whether work-based or school-based. And it is a person's ability to tackle the procedure in a maner that is least costly to the employer that determines the market value of that individual. The human element, the worker, and the value of that work are brought down to the level where it is the agent linking the codified steps in the procedure. It is clear that such a view of knowledge and the activities of people with and within a knowledge base is quite different from the

organic view of knowldge offered by (e.g.) Lave and Wenger, Dow, or Singleton who see the person as a sense-making, constructing being ordering the world around. For those researchers, the people make the knowledge, a view of knowledge that Delbos & Jorion refer to as procedural - that is knowledge that is learned through a praxis and observation: an apt description for apprenticeship.

Another interesting facet of the view of knowledge at earls is the absolute nature of it. It is a world in black and white, right and wrong. There is only one way to perform, e.g. chicken tenders or Caesar salad, the earls way. Any other way is not right. Conversations with apprentices and masters always make reference to "spec. books" which tell one "everything you need to know". It would be easy to link this right/wrong dichotomy to the prepositional view of knowledge discussed above. Right could be defined as any procedure that has been listed and is practiced, whereas wrong would be defined by the rest of the corpus of knowldge. In a way, this is an acceptable interpretation because the people at earls are carefully chosen and must fit in the greater team to be able to advance - a fact that is certainly true of apprentices. But there is another important influence at play here: context. By context, I refer to both the kitchen in which the apprentices and masters work, in a particular restaurant, in a particualr city, but also to the "chain". As dicussed previously, earls has many restaurants in many locations, and part of the marketing strategy for all of the stores is brand recognition. Customers travelling, for example, may choose earls because it is familiar. And it must be familiar: it must be just like the one from the customer's hometown. Given that greater context (and including other restaurant concepts that are part of the company which owns and operates earls) knowldege must be dichotomized. Departure for the norm could be costly so all must do the same and this can be

achieved by setting one standard, imposing it, and enforcing it. So much the better if people agree that the standard is true.

At this point, the reader may have a harsh opinion of knowledge as it is apprehended at earls. But it is not without a human touch, one which is considered indispensible to really make that formalized structure come alive. Both masters and apprentices refer to "passion", an ill-defined word, at least verbally, but one which clearly shows through actions. High interest level, inquisitive minds, gregarious personalities, respectful discussions, tact, and high performance level are some of the charcateristics of this passion. Of course, it is passion for cooking, but also passion for the milieu in which this cooking takes place that is judged. And it is more than just a hastily added on characteristic of cooking epistemology at earls as masters and apprentices make it clear that the 'gospel' in a book or in the "specs." comes alive through people and through an appreciation of what people have done with this knowledge over time (to that effect all recipes or procdures in earls manual that have been developed by staff members bear their name.) The process by which knowledge becomes organic is simple: it is applied or practiced. This has two immediate advantages: first, it allows the person to get better through repetition, and secondly, it anchors the dogmatic methodology in a praxis. It is the willingness and the acceptance of this process that marks the truly initiated from the rest at earls.

The bridge to training is made at this point also. It is by training that one gains expertise as a trainer. The process is simple, just follow the procedure listed in the books as you know them while the trainee is watching, explain what you are doing. At the entry-level of training, knowledge is content, facts and figures link knowledge to the performance

expectations. Rules, regulations,and procedures are blindly applied as they are, at this point, the whole pedagogical arsenal at the disposition of the trainer. This works because training consists in showing people what to do and referring them to a source of authority if there are any doubts. Like renaissance-type apprenticeships described by (e.g.) Moore, it is watch and do the same. It seems probable that the underlying belief is one that see the trainee as a receptacle waiting to be filled; a view not incompatible with a quantic view of knowledge.

The categorical view of knowledge also helps understand the apprentices' and masters' unwitting use of a banking metaphor. For them knowledge is acquired when someone is "investing" in someone else in the hope that there will be a return on that investment. Also interesting is that the interest gained from that investment has tangible outcomes such as help the company grow but more particularly recruit people that will make the company grow. Each teaching moment then becomes a transaction that can be characterized by speed, amount, and value: another way to commoditize training. It is not surprising that such a view makes the ultimate reward (an apprenticeship at earls) such a sought after commodity. Yet again, the value placed on the training, the know-how relay fits in with the formal aspect of registered apprenticeship, where collecting time and theory credits allows apprentices to reach the Red Seal goal (the interprovincial certification.)

There is an important point that needs to be raised here. Training at earls comes in two flavors and two categories. There is training that is mandatry for all workers as they evolve from one station to another and there is training that is vailable to those who make it to the apprenticeship. As well, mandatory training is required for new workers

as they need to be fluent on their station, and for experienced workers as they need to upgrade their skills when menu items change. It is for the latter type of training that there exists what I referred to earlier as punctuated equilibria. What I meant is that there is a point when each worker, exclusive of apprentices, has reached a station in which they will stay and until production parameters dictate a change in routine, no training needs to take place. Knowledge is static and does not evolve in those times of equilibrium. When a new menu item or a seasonal list of offerings is introduced in the restaurants, knowledge is plastic. Reaching staticity is seen as a matter of practice and, for apprentices, passion (which includes the ability to visualize required time and motion elements of praxis.)

Equilibrium is reached when practice has allowed one to exhibit exit behaviors required by earls specifications. In fact, the specs are a comprehensive, detailed list of production and product quality parameters that need to be performed within tight time limits. This defines earls products and image throughout the chain. From a production viewpoint, it makes sense to organize knowledge in a physical, hierarchical series of steps and to put all people through the process systematically. The goal of the training then becomes to ensure that the prepositional knowledge overlaps what, to an outsider, would seems to be procedural knowledge. In other words, when the praxis matches the specs, then learning has occured and transmission is complete.

There is little dissonance between earls' view of knowledge and the registered apprenticeship's view of knowledge. Just like at earls, the knowldge is broken down in discreet competencies (both workplace-based and school-based) that are delivered in a systematic fashion. Even a cursory look at the program outline, the training record

book, or the school report will support this claim. It could be argued that the knowledge base has been broken down to follow the DACUM chart that is the seminal document for all apprenticeable trades in British Columbia for which there is a technical training program. However, whatever the trigger is (or are) for such compartmentalization and fracturing of knowldge, it seems that it is dependent on the context within which the technical training delivery takes place, the reporting requirements and accountability issues to bodies such as those Gamst mentioned (and as outlined in Figure 8).

Apprenticeship at Work

Beyond on the job training: the formal dimension

As was mentioned above, the 60 days of technical training provided to registered cook apprentices in British Columbia are the formal, traditional, school-based vocational education portion of the apprenticeship. I also pointed out that this training represents, in term of hours, about 15% of the total duration of the apprenticeship. Yet, from the government's side (this includes advisory, planning, and executive bodies) it is all-important. Interestingly, it is also very important for the apprentices and the masters albeit for different reasons. Briefly, it could be said that government's concerns are centered around activities that require public funding and activities that can be easily monitored. In contrast, for apprentices and masters concerns about technical training have more to do with validation and affirmation of knowledge. Whatever the reasons for placing what I would consider inordinate importance on the formal aspects of apprenticeship, the participants come to a tacit agreement. It is this particular issue that is interesting in this theme.

For example, formal assessment tools such as quizzes, examinations, and practical projects marks are used by the schools to provide industry and government a measure of their activities, a proof that the prescribed curriculum has been followed, and that contractual obligations have been fulfilled. For apprentices they are used as a measure of self-worth to a small extent, and as a comparative tool with other practitioners to a large extent; they are a personal challenge. For masters, marks obtained by the use of these tools in part reinforce or weaken the decision they have made in selecting a particular individual as an apprentice, and in part allows them as committed tradespeople to gain a measure of what they have done for the trade in general.

In this light it is hard to gauge what the intent of such scholastic tools as test, marks and reports is. It is probable that, as they have been traditionally used in education, they are accepted at face value because they are so familiar and because they allow people who have elected to work in a predominantly manual occupation (as opposed to an intellectual occupation) to bridge the social gap between white and blue collar jobs. The way they are used, however, is highly personal and ranges from the dismissive to the aggressively interventionist.

Regardless of attitudes, for masters school is not the ground where the job-based dogma gets reinforced. Rather it is the venue where people get "added-value" instruction. This instruction, in their mind, ought to focus either on practices not carried on on the job but listed in the provincial curriculum, or provide a springboard for more personal involvement in trade practices. It should be added that masters' views of formal training derives, to a certain extent, from their experience as apprentices or learners. For those who have gone through a registered apprenticeship, formal training

is unquestionnably beneficial and necessary, whereas for those who became masters from without the registered apprenticeship system, formal training provides depth, meaning, and motivation to the apprentice.

There is one area of agreement in this diparate inventory of uses for formal training and the tools used during the training. Masters and apprentices agree that school is the place where comparative ranking, norm-referenced self-assessment, can take place. Masters do so vicariously, by looking at the apprentice's marks and by interviewing the apprentice after their school assignment. Apprentices do it during practical sessions and during the paper-based testing provided by the schools. It would be easy to dimiss this facet of the formal training as mere competitive urge on the part of the participants, but that would fail to underline the tenuous grasp formal education has on apprenticeship.

Earlier, I had mentioned the "reputational dimension" of apprenticeships and explained that what was meant was the perceived worth of the on-the-job training received by apprentices. This is interesting because the reputation of a restaurant or food establishment is not set by the profession itself but by outsiders: customers, food writers, journalists, and the public at large. The unspoken assumption is that if a restaurant is well-rated, then it is taken for granted that the quality of training (in terms of depth, breadth, and results) is superior to training obtained by working at a less prestigious establishment. This leads to some dissonance in terms of curriculum content and formal training delivery because restaurant ratings follow trends that are not necessarily incorporated in the provincial curriculum. In addition, it could be argued that trade outsiders rate restaurants on the basis of entertainment provided for money

paid, not for the pedagogical worth of experiential education taking place within the kitchen. Perceptually highly rated products may require only simple techniques on pre-packaged goods, whereas some other less well rated products may involve a highly complex procedure on raw goods.

The dissonance is reflected by some of the dismissive comments made by apprentices with regards to the curriculum taught at school. It is hard, without further data, to assess whether the negative comments are made on the basis of poor performance in the school environment or because the curriculum fails to reflect the training obtained on the job, especially when one considers that the training on the job is directly reflective of public trends and hence of ratings. It is also possible that some apprentices a view of knowledge solely based on content. Hence if the products discussed and prepared at school do not match those from work, school learning is irrelevant. On the other hand, for those apprentices who have reached a level at which they identify knowledge as a more organic, historical set of procedures, school can, and probably does, anchor praxis in an intellectual framework.

The dissonance is also noticeable when one observes teaching moments on the job (in this case I am referring to teaching that is not included on the station by station training.) When apprentice and master meet to discuss school-related training, they sit down with prescribed textbook and learning guides and review them in a systematic, rote-like manner. The materials is to be mastered, that is absorbed and placed in the proper, assigned place within the curriculum. Questions that arise are based on those materials only and questions asked mirror those that will be asked on the materials. In contrast, teaching moments that fit in the flow of work involve much more critical

thoughts. The questions asked have no pre-defined answers and master and apprentice are working together on an answer that will not only satisfy production parameters, but also their understanding of the trade. In addition the complexity of issues tackled during these teaching moments require that both master and apprentice synthesize vast areas of experience and formal knowledge. For example, the observation mentioned in Chapter IV required knowledge of purchasing procedures, loss management, dry heat cooking methods, customer purchasing statistics, beef primal cuts, portioning statistics, and good taste. It is also clear that everyday practice requires that apprentices at earls be able to tackle such problems. In comparison, school-based problem addressing a single issue such as internal temperature of roasts, or nomenclature of mother sauces appear trivial.

Not surprisingly, it is always the job that comes to the front. It is repeatedly stressed that the job can and does teach and does so better and in greater depth than any schooling can. Both apprentices and masters are ambivalent about school as they, on the one hand, recognize that it is important for self-worth assessment and as a supplementary, regimented training ground, while, on the other hand, giving the training received on the job the lion's share of credit in terms of training. Unfortunately, the data does not allow one to establish whether the belief about the higher worth of the job is due to the fact that apprentices have a crucial economic role to play in their workplace, or because school attempts to condense in a very few hours the knowledge base of a fairly diverse industry in a homogeneous package.

However, masters repeatedly make mention of the lack of synchronicity between school life and industry. This comes through as they mention scheduling conflicts (or

when apprentices are nonplussed about some of the material delivered when it has been thoroughly explored at work.) In that it is clear that the formal and the informal portions of the registered apprenticeship form an unlikely couple, one in which similarities allows the union to last, but dissimilarities are a constant irritant. Here as well, data does not allow for any conclusion to be drawn with respect to content and delivery dissonance. It would be simple to point out the diversity of establishment where cook apprentices work (even in such a homogeneous environment as earls) and assign dissonance on a lack of a close match between a general curriculum (one which is a composite picture of all cooks) and a highly specialized portion of the industry.

Curriculum content dissonance is just one of the consequences of the format of the cook regsitered apprenticeship. As we have seen, the governement's, the third party to all registered apprenticeships, main focus is on administrative matters: tracking apprentices, sending apprentices to school, reporting on the progress of apprentices, and certifying apprentices. While there is one document that addresses issues of on-the-job training, it seems to be used fairly inconsistently and seems to suffer from the same content dissonance as the school materials (not surprisingly as it is based on those materials.) It could be proposed that apprentices and masters place emphasis on the workplace-based training because the government does not. It also could be said that the administrative load of the system as exemplified by the documents precludes a more tailored approach to training in school, one which would address current training needs rather than trying to deliver a body of knowledge artificially delimited and defined as complete.

The questions

<u>Characteristics of earls cooking apprenticeships</u>

First and foremost, they are not standard. Assuming a standard apprenticeship is a journey from novice to master, then earls sends masters into the apprenticeship program. Indeed, the individuals who get indentured by earls are usually kitcehn leaders, they are responsible for the operation of a busy production centre.

Second, earls apprentices are selected. Personality, aptitude, and commitment are pre-requisites to be an apprentice at earls. In contrast to other cook apprentices in British Columbia, earls apprentices are in a field and occupation in which they will stay; for them apprenticeship is not a trial ground. That is not to say that other apprentices have no or little personality, aptitude, or commitment, but that apprenticeship is perceived as one of many options on a wide educational and training menu, all of which are equally accessible. For earls employees, apprenticeship is a 'reward' rather than an option.

Third, earls apprentices are learners and trainers. earls restaurants has developed an elaborate, complete, and comprehensive in-house training system through which all cooks travel. One literally cannot work at earls without being constantly challenged to learn new things and do new things, to ask questions and provide answers. Briefly, it could be said that at earls, production parameters ignored, a training culture exists. Moreover, that training culture is seen as the foundational reason for success in the marketplace.

And fourth, earls people seem to hold fairly homogeous conceptual beliefs about knowledge, training, work, and people. This in marked contrast to the numerous reports in the literature.

earls apprenticeship and the literature

As mentioned above, the literature is so diverse that parts of practices in any report can be found at work at earls. There are more common areas in prescriptive apprenticeships as most of those involve the formal educational system, government and legal contractual obligations. Yet here also, earls apprenticeships depart from the norm because the formal apprenticeship system is super-imposed over the earls system (by super-imposed I do not mean to say that one is superior to the other, rather that the two are working in concert, yet separately.) Interestingly, earls makes use of the prepositional knowledge embodied in the printed support materials to supplement their own training.

The heavy use of formal educational tools is probably the main difference between earls apprenticeships and those descriptive apprenticehips. Descriptive apprenticeships place the human, economic, or social dimension to the forefront, while minimizing factors or activities that are reminescent of formal schooling. At earls, people make use of the formal system, but the human element is there as the person who suggest an apprenticeship to an earls employee is *de facto* that person's mentor. In effect, earls apprenticeships could be likened to high-tech., surrealist descriptive apprenticeships. All the elements are there but they are so modern in appearance that those descriptive

apprenticeships appear to be something re-enacted for the benefit of tourists in a historical amusement park.

A comparison with BC's system

As mentioned above, earls' apprentices are quite different from the rest: they are never entry-level people, they are fully trained in all basic culinary skills, they are quite well versed in more advanced culinary and management skills, they are capable of sustaining high production levels, they are capable of maintaining economic standards, and they are capable human resources managers. In effect, entry-level earls' registered cook apprentices are the purported graduates of the registered cook apprenticeship program.

It could be easily argued that earls' in-house program is an apprenticeship. One without the administrative load that the registered apprenticeships live under.

Directions for the Future

Apprenticeship at Work - What is it?

It is quite clear from the literature, be it about descriptive or prescriptive apprenticeships that most people view apprenticeship as a one-on-one type of activity in which an older mentor-like figure guides, educates, protects, and promotes the inexperienced ward. Singleton's (1989) work with Japanese apprentice potters reflects that viewpoint, although his data indicates that the process is not smooth and continuous. Likewise, Johnson's (1989) work with Japanese monks is also imbued with this vision of apprenticeship. Indeed, it would appear that either because the researcher is looking

for this dimension (as is popularly depicted in the case of Asian cultures), it is found. By contrast, in African and South American reports on apprenticeships, although this mentorship dimension is also reported, the literature makes it seem based less on a philosophical viewpoint shared by the apprentice and the master (as in Asian reports), than on the logic of production in (e.g. Buechler's) proto-industrial economies and (e.g. Goody 1982a, 1982b) family or social reproduction. In the latter cases, the guidance follows the personal growth path much less than the economic growth path but it is the ends that are different rather than the means: the older, more mature worker will help the young, unexperienced, naive learner into the world of 'adults'.

Arguably success in apprenticeship, that is the measure to which it accomplishes what each participant (master and apprentice alike) seeks in the case of descriptive or informal apprenticeships, or what the master, apprentice, and government agency seek in the case of prescriptive or formal apprenticeships, can be attributed to the fact that there is a honour-bound or contractual obligation binding both sides. While some societies have honor-based, kin-based, or some other social diktat ruling the relationship between apprentice and master as well as the content of apprenticeship, our society has clearly identifiable and defensible obligations - hence rights and duties binding the participants. Pratt's (1984) advice about teaching adults echo this contractual obligation whether it is based in law or in practice:

> It is through the development of a contract that individuals find enough
> structure and freedom to propose activities, confront another, and
> change the ways in which they will use their time together. It is by virtue
> of such a contract that some activities can be declared inappropriate and

people can begin to take responsibility for their own learning. The contract defines the social reality against which any demand, request, or proposal may be held up for scrutiny to determine whether or not it is appropriate. (p.28)

And perhaps that contractual sense, regardless of its quality is what unites diverse apprenticeships together. As well, apprenticeships all make reference to a learning continuum - from novice to master - negotiated experientially. These two main currents, easily seen in the literature could be said to be the 'essence' of apprenticeship or, at the very least, that which allows people to equate physicians' internships apprenticeship and compare them with the training an electrician might get.

Where apprenticeships differ is in the manner in which the teaching-learning is approached; three reference points on a delivery continuum could be (i) as the circumstances warrant - informally (e.g. Dow, 1986); (ii) as the economy dictates - informally compelled (e.g. Buechler & Buechler, 1992); and (iii) as the mandated curriculum requires - compelled (e.g. cook registered apprenticeship). It is probable, then, that the amount of support materials available to the masters is a direct consequence of the learning-teaching methodology (if there is one). Likewise, it would seem fair to propose that only those occupations which are amenable to a prepositional knowledge treatment will be found under the compelled category.

Although hard to tease from the literature, it would seem that the less compelled the teaching-learning, the more the commitment to the occupation both by the masters and the apprentices. In terms of apprentices, the notion of 'calling' comes to mind (and is

well documented by Lave & Wenger (1991)) as opposed to that of credentialling. In support for such a statement one could point out the large volume of statistical evidence gathered in Europe and North America about the drop-out rates and change of career for apprentices. In terms of teachers or masters an increase in compelling factors seem to hinge upon both ever more stringent economic arguments for training, and the (perhaps subsequent) requirement for formal teaching credentials. There is an assumption in these cases that content expertise is not sufficient to allow one to pass on the knowledge.

In effect, the disembodiment of knowledge, a dichotomized epistemology may indicate a distrust in a constructivist, organic, and holistic worldview. One can be something quite separate from what one does for a living as opposed to being what one does. It would be possible to argue that the separation of knowledge from the person applying that knowledge is a capitalist answer to ownership of work: the person is not important and can be replaced with another providing they both know the same things. This view, of course, would be anathema to the master potter, the Japanese monk, the Shaman, or the Meso-American midwife.

So while most people would agree that they know exactly what apprenticeship is or means, it would appear that it is rather like saying that one would like pie at lunch. The kinds of fillings, crusts, covers, and accompaniment, among other things, vary so widely that it is impossible to say with any precision what it is that one is referring to. It is easy, on the other hand to have an image of what it is based on one's own preferences.

In terms of research

Apprenticeship as a field of study stands at the confluence of sociological, anthropological, economic, and educational studies. Researchers focus on one aspect or facet of apprenticeship and document that facet thoroughly and, in the process, cannot help but document other aspects or facets of apprenticeship. It is at interpretation, however, that the bias becomes apparent as the researcher's field of study will guide the interpretation. Likewise, policy reforms attempting to change the practice of prescriptive apprenticeships will be directed, even imposed upon, by one of these fields. Hence, an economic research and praxis agenda would stress the economic implications of skills acquired, just like anthropological practices would tend to overemphasize the milieu and the actors (i.e. the context, teacher, learner, and relationships.)

As mentioned earlier, the study of apprenticeship and its attendant reports suffers from the lack of precision in what apprenticeship is: there is no discreet entity out there that can unequivocally be attached to that name. Moreover, the name seems to be used indiscriminately as a conceptual handle on any sort of education, teaching, training or learning that comprises an experiential component with the exception of the mandatory school system (e.g. K-12). Likewise, in the 'white-collar' professions, experiential learning is not called apprenticeship save for some anthropologist or ethnologists trying to make sense of a diversity of practices.

It is quite clear from this research, that even in a restricted environment many variables exist that make that environment unique. For example, in the case of this research, apprenticeship had a narrowly (legally) defined sense, was examined in a fairly

homogeneous set of venues, and gathered information from an externally selected group of respondents (most of whom fit a personality profile deemed desirable by the company.) Yet, in spite of the similarities, differences emerged which were based on more than simple personal differences. Expectations, motivation, beliefs, and intentions varied.

As a first suggestion, it would seem profitable then to continue classifying research reports and on-going research using, for example, the models developed in Chapter II. This would have the added benefits of providing a tiered definition of apprenticeship to guide both readers and researchers.

Second, it would be interesting to find out whether the North-South divide is a driving force in the practice of apprenticeship. In effect, researchers could explore correlational relationships between types and sizes of national economies and the prevalence and practice of apprenticeship.

Closer to this study, outcomes-based research could focus on the efficacy of apprenticeship as opposed to vocational training. As well studies exploring failed apprenticeship relationship could explore the underlying reasons for such failures. For example conceptual dissonance between masters, apprentices, and government could lead to failure.

Finally, cross-trade research should be conducted. Are findings valid for all trades? Are they clustered in occupational, industrial, or social sectors?

In terms of praxis

Under this heading are general considerations about the conduct of registered apprenticeships in British Columbia. At the consultative level, TACs, PAB (or whatever structure comes to replace this body) and the Ministry of Labour need to assess their roles in the practice of apprenticeship. For example, are regional differences important enough to invalidate the effort to standardize apprenticeships trade by trade provincially and nationally? What are the implications of any recommendation and how can they be resolved?. How does the consultative translate in the executive? Are there any losses between these two processes?

For many people registered apprenticeships are synonymous with technical training. As seen above, the focus of the cook apprenticeship program is on technical training. The relevance, length, efficacy, and access to this training has to be juxtaposed with the benefits derived from such effort. Who is the training benefiting most? Are forecasted changes to apprenticeship in terms of funding and income support going to affect the worth of technical training.

Is apprenticeship properly structured to train workers to a level of proficiency that ensures them portability of skills regardless of industry sector, while giving them the opportunity to get additional training for skills that should make them more competitive in their chosen specialty?.

What apprenticeship avenue (if any) exist to resolve the perceived paucity of training avenues available to specialized workers in the current model. Is it possible to develop a model of apprenticeship which, rather than 'pigeon-holing' workers in a narrow sector

of the industry, will ensure that workers have acquired all the skills necessary to remain employed while keeping open avenues for further training should labour demand shift?

Those are broad questions that touch upon the concept of apprenticeship and, consequently, its materialization. That is not to say that micro-level changes are unimportant. Since public funds are allocated to apprenticeship training, one could argue that non-completion or change of field is a loss to the system. Would it make sense then to deliver apprenticeship training to those people who have exhibited commitment and who have reasonable prospects of success in their field. But if that were the case would it not undermine the unifying, most common tenet of apprenticeship that of a journey from novice to master?

BIBLIOGRAPHY

Acker, S. (1992). Critical Introduction: Travel and Travail in *Gender Matters From School to Work* (1-15), Jane Gaskell (author), OISE Press.

Ainley, J. and Clancy, J. (1983). Entry to the Skilled Trades in Australia: the Role of family background and School Achievement. *Research in Science & Technological Education* 1, (2), 145-159.

Anderson, E.M. and Shannon, A.L. (1988). Toward a Conceptualization of Mentoring. *Journal of Teacher Education* 39, (1), 38-42.

Anonymous, (1988). The Canada /Manitoba Apprenticeship Training Study, *C.V.A. (Canadian Vocational Association)Journal* 24, (3), 13-15.

Anonymous, (1996). Regional Forums Threaten Trade Qualifications, *On The Level* 32, (2), 1 and 4.

Aronson, L. (1989). To Weave or not to Weave: Apprenticeship Rules among the Akwete Igbo of Nigeria and the Baule of the Ivory Coast. *Apprenticeship: From Theory to Method and Back Again*, Michael W. Coy (ed.), 149-162.

Ashton, D. and Lowe, G. (1991). School-to-work Transitions in Britain and Canada: a comparative perspective. In *Making Their Way: Education, training and the labour market in Canada and Britain*. David Ashton and Graham Lowe (eds.). Milton Keynes (Open University Press).

Ausubel, D.P. (1980). A Cognitive Structure Theory of School Learning in Learner Behavior (207-257), in *Theory and Problems of Child Development*, D.P.Ausubel, E.V. Sullivan and S.W. Ives (eds.), Grune & Stratton, Toronto & New York.

Babich, B.M. (1988). Toward a Liberating Interpretation of Philosophy for Vocational Education, *Viewpoints in Teaching and Learning* 57, (4), 1-6.

Bailey, T. (1991). Jobs of the Future and the Education they will Require: Evidence from Occupational Forecasts, *Educational Researcher* 20, (2), 11-20.

Becker, H (1964). *Human Capital Theory.* New York: Columbia University Press

Belenky, M.F., Clichy, B.M., Goldberger, N.R., and Tarule, J.M. (1986). *Women's Way of Knowing; the Development of Self, Voice, and Mind.* New York, Basic Books.

Blau, G. (1988). An Investigation of the Apprenticeship Organizational Socialization Strategy. *Journal of Vocational Behavior*, 32, 176-195.

Bogdan, R.C. & Biklen, S.R. (1992). *Qualitative Research for Education.* Allyn and Bacon, Boston

Borg, W.R. & Gall, M.D. (1989). *Educational Research an introduction* (5th edition. New York & London, Longman.

British Columbia, Department of Labour, (1962). *Proceedings, First Conference on Apprenticeship Training.*

British Columbia, Ministry of Advanced Education and Job Training (1988). *Annual Report for the Period April 1986-March 31, 1987*, 3-45 Queen's Printer for British Columbia, Victoria

British Columbia, Ministry of Advanced Education and Job Training (1989). *Annual Report for the Period April 1987-March 31, 1988*, 26-48 Queen's Printer for British Columbia, Victoria

British Columbia, Ministry of Advanced Education, Training and Technology (1990). *Annual Report for the Period April 1989-March 31, 1990*, Queen's Printer for British Columbia, Victoria

British Columbia, Ministry of Advanced Education, Training and Technology, Skills Development Division, (1991). *Strategic Plan 1991/92*

British Columbia, Ministry of Advanced Education, Training and Technology, (1991). Discussion Paper, *Forces of Change Influencing Education and Training*

British Columbia, Ministry of Labour, (1982). *Memorandum*

British Columbia, Ministry of Labour, (1986). *Annual Report 1985-1986*,
14-31

British Columbia, Provincial Apprenticeship Board, Ministry of Labour, (1984). *The Future of Apprenticeship*.

Brodsky, M. (1989). International Developments in Apprenticeship, *Monthly Labor Review* 112, (7), 40-41.

Broom, L., Jones, F.L., McDonnell, P., and Williams, T. (1980). *The inheritance of inequality*. London, Routledge & Kegan Paul.

Brown, K. (1992). Writing About 'the Other'. Chronicle of Higher Education

Buechler, H. (1989). Apprenticeship and Transmission of Knowledge in La Paz, Bolivia in *Apprenticeship: From Theory to Method and Back Again*, (31-50), Michael W. Coy (ed.), S.U.N.Y. Press, Albany.

Buechler, H. C. and Buechler, J.-M. (1992). *Manufacturing Against the Odds; Small Scale Producers in an Andean City*, Westview Press, Boulder, San Francisco, Oxford

Burleigh, A. (1988). New Zealand Updates Apprenticeship, *Vocational Education Journal* 63, (3), 36-38

Byrnes, J.P. (1992). Categorizing and Combining Theories of Cognitive Development and Learning. *Educational Psychology Review* 4, (3), 309-343.

Caffarella, R.S. and O'Donnell, J.M. (1987). The Culture of Adult Education Institutions. *Lifelong Learning: An omnibus of practice and research*, 11, (1), 4-7.

Cammock, P. & Innkson, K. (1985). The Aspirations of Trade Apprentices and their Implications for Apprenticeship. *Journal of Occupational Psychology*, 58 (4) 49-55.

Canada, Department of Labour (1956). *A Modern Concept of Apprenticeship*, Information Branch for the Vocational Training Branch, Department of Labour Bulletin No. 2

Canada, Employment and Immigration, Training Branch (1985). *The Ellis Comparative Chart of Apprentice Training Programmes.*

Canada, Employment and Immigration, Employment Services (1990). *Ellis Chart, Comparative chart of Apprentice Training Programmes.*

Canada, Employment and Immigration, and British Columbia, Ministry of Advanced Education and Job Training, (1986). Joint Canada/British Columbia Study on Apprenticeship, *Report summary*

Candy, P. (1987). *Constructivist Research into Self-Direction.* Unpublished Doctoral Thesis, University of British Columbia.

Carden, A.D. (1990). Mentoring and Adult Career Development: The Evolution of a Theory. *The Counseling Psychologist*, 18, (2), 275-299.

Clawson, J.G. (1987). Is Mentoring Necessary? *Training and Development Journal*, 39 (4), 36-39.

Clémence, A., Deschamps, J.-C., and Roux, P. (1986). La Perception de l'Entrée en Apprentissage. *L'Orientation Scolaire et Professionelle*, 15, (4), 311-330.

Cognition and Technology Group, Learning Technology Center, Peabody College of Vanderbilt University (1991). Technology and the Design of Generative Learning Environments. *Educational Technology*, 31, (5), 34- 40.

Cobb, P. (1995). Continuing the Conversation: A Response to Smith. *Educational Researcher*, 24, (7), 25-27.

Cooper, E. (1980). *The Woodcarvers of Hong Kong: Craft Production in the World Capitalist Periphery*, Cambridge University Press, Cambridge.

Cooper, E. (1989). Apprenticeship as Field Method: Lessons from Hong Kong, (137-148) in *Apprenticeship; From Theory to Method and Back Again*, Michael W. Coy (ed.). S.U.N.Y Press, Albany.

Coy, M.W. (1989). From Theory. in *Apprenticeship; From Theory to Method and Back Again*, Michael W. Coy (ed.). S.U.N.Y Press, Albany.

Craven, P. (1981) The Law of Master and Servant in Mid-Nineteenth-Century Ontario. In David H. Flaherty (Ed.), *Essays in the History of Canadian Law,* 1, 175-211. University of Toronto Press.

Cunningham, D.J. (1991). Assessing Constructions and Conducting Assessments: A Dialogue. *Educational Technology,* 31, (5), 13-17.

Cunningham, D.J. (1992). Beyond Educational Psychology: Steps Toward an Educational Semiotic. *Educational Psychology Review,* 4, (2), 165-194.

Daloz, L.A. (1987). Martha Meets Her Mentor. *Change,* 19, (4), 35-37

Daloz, L.A. (1990). *Mentorship.* In Adult Learning Methods: A Guide For Effective Instruction, M.W. Galbraith (Ed.), Krieger Publishing Co., Malabar Florida. Chapter 10.

Darnell, B. (1991). BC's Privatization of Apprenticeship: The 'New Reality' Hits Home, *Our Schools/Our Selves* 2, (4), 26-35.

Deafenbough, L. (1989). Hausa Weaving Surviving Amid the Paradoxes, (163-179) in *Apprenticeship; From Theory to Method and Back Again*, Michael W. Coy (ed.). S.U.N.Y Press, Albany.

Delbos, G. and Jorion, P. (1984). *La Transmission des Savoirs,* Editions de la maison des sciences de l'homme, Paris.

Denzin, W. (1970). *The Research Act.* Chicago, Aldine Publishing Co.

Dickinson, G. (1973). *Teaching Adults: A Handbook for Instructors*, (Chapter 3), Ontario General Publishing Co., Don Mills.

Dienesch, R.M. and Liden, R.C. (1986). Leader-Member Exchange Model of Leadership: A Critique and Further Development. *Academy of Management Review*, 11, (3), 618-634.

Dilley, R.M. (1989). Secrets and Skills: Apprenticeship among Tukolor Weavers, (181-198) in *Apprenticeship; From Theory to Method and Back Again*, Michael W. Coy (ed.). S.U.N.Y Press, Albany.

Dougherty, C. (1987). The German Dual System: a heretical view. *European Journal of Education* 22 (4), 195-199.

Dow, J. (1986). *The Shaman's Touch: Otomi Indian Symbolic Healing*. University of Utah Press, Salt Lake City

Dow, J. (1989). Apprentice Shaman, (199-209) in *Apprenticeship; From Theory to Method and Back Again*, Michael W. Coy (ed.). S.U.N.Y Press, Albany.

Driver, R., and Scotte P. (1995). Mind in Communication: A Response to Erick Smtih. *Educational Researcher* 24, (6), 27-28.

Duffy, T.M., and Jonassen, D.H. (1991). Constructivism: New Implications for Educational Technology? *Educational Technology*, 31, (5), 7-12.

Duncan, W.J. (1989). Organizational Culture: "Getting a Fix" on an Elusive Concept. *Academy of Management Executive*, 3, (3), 229-236.

Eisner, E.W.. (1992). Are All Causal Claims Positivistic? A Reply to Francis Schrag. *Educational Researcher*, 21, (5), 8-9.

Elbaum, B. (1989). Why Apprenticeship Persisted in Britain But Not in the United States, *The Journal of Economic History* 49, (2), 337-349.

Elias, J.L., & Merriam S.B. ([1980], 1984). *Philosophical Foundations of Adult Education*. Malabar, Fla. Robert E. Krieger.

Elwood, M. (1982) Halifax Cabinet-Makers, 1837-1875: Apprenticeships. *Material History Bulletin*, 15, 67-71. Canada, National Museum of Man.

Entwistle, N. (1984). Contrasting Perspectives on Learning, (1-18) in *The Experience of Learning*, Ference Marton, Dai Hounsell, and Noel Entwistle (eds.), Scottish Academic Press.

Erickson, F. (1992). Why the Clinical Trial Doesn't Work as a Metaphor for Educational Research: A Response to Schrag. *Educational Researcher*, 21, (5), 9-11.

Finger, M. (1990). Does adult education need a philosophy? Reflections about the function of adult learning in today's society, *Studies in Continuing Education* 12, (2), 99-106.

Firestone, W.A. (1987). Meaning in Method: The Rhetoric of Quantitative and Qualitative Research. *Educational Researcher*, 16, (9), 16-21.

Flew, A. (1979). *A Dictionary of Philosophy*. Pan, MacMillan Press.

Gagne, R. M. (1977). *The Conditions of Learning*, Second edition. Holt, Rinehart and Winston, New York.

Gagne, R. M. (1985). *The Conditions of Learning and the Theory of Instruction*, Fourth edition. Holt, Rinehart and Winston, New York.

Gagne, R.M., Briggs L. J., & Wager, W.W. (1988) *Principles of Instructional Design*, Third edition, Holt, Rinehart and Winston, New York.

Gamst, F. (1980). *The Hoghead: An Industrial Ethnology of the Locomotive Engineer*, Holt, Rinehart, and Winston, New York.

Gamst, F. C. (1989). The Railroad Apprentice and the 'Rules": Historic Roots and Contemporary Practices, (65-86) in *Apprenticeship; From Theory to Method and Back Again*, Michael W. Coy (ed.). S.U.N.Y Press, Albany.

Gamst, F. C. (1995 a). Considerations of Work (1-45), in *Meanings of Work*, Frederick Gamst (ed.), S.U.N.Y. Press, Albany.

Gamst, F. C. (1995 b). The Web of Rules in Comparative Work Relations Systems (147-188), in *Meanings of Work*, Frederick Gamst (ed.), S.U.N.Y. Press, Albany

Gaskell, J. (1992). *Gender Matters From School to Work*, OISE Press.

Gehrke, N. (1988). Toward a Definition of Mentoring. *Theory into Practice*, 27, (3), 190-194.

Gendre, F. (1987). L'Orientation et le Devenir des Apprentis: Dix ans de Recherches à l'Ipaul. *Revue Suisse de Psychologie*, 46, (3-4), 155-171.

Gitter, R.J. (1994). Apprenticeship-trained workers: United States and Great Britain, *Monthly Labor Review* 117, 38-48.

Goldschmidt. (1995). Task Performance and Fulfillment: Work and Career in Tribal and Peasant Societies (79-89), in *Meanings of Work*, Frederick Gamst (ed.), S.U.N.Y. Press, Albany.

Goody, E.N. (1982a). Introduction & Daboya weavers: relations of production, dependence and reciprocity (1-37, 50-84), in *From craft to industry; the ethnography of proto-industrial cloth production*, Esther N. Goody (ed.), Cambridge University Press, Cambridge.

Goody, E.N. (1982b). *Parenthood and Social Reproduction; Fostering and Occupational Roles in West Africa* (189-213), Cambridge University Press, Cambridge.

Goody, E.N. (1989). Learning, Apprenticeship and the Division of Labor, in *Apprenticeship; From Theory to Method and Back Again*, M. Coy (ed.), SU.N.Y., Albany.

Goulet, L. and Kurtzman, L. (1987). Le Rallye Universitaire; Recherche-action portant sur les femmes et l'apprentissage. *Revue québecoise de psychologie*, 8, (3), 135-153.

Grabowski, D.J. (1983). Apprenticeship Today, *Vocational Education* 58, (1), 30-31.

Granatstein, J.L., Abella, I.M., Bercuson, D.J., Brown, R.C., & Neatby, H.B. (1983). *Twentieth Century Canada*, Chap. 10, 349-399.

Graves, B. (1958). "Breaking Out": An Apprenticeship System among Pipeline Construction Workers, *Human Organization* 17, 9-13.

Graves, B. (1989). Informal Aspects of Apprenticeship in Selected American Occupations, (51-64) in *Apprenticeship; from theory to method and back again*, Michael W. Coy (ed.), S.U.N.Y. Press, Albany.

Guba, E.G. (1981). Criteria for Assessing the Trustworthiness of Naturalistic Enquiries. *Educational Resources Information Center Annual Review Paper* 29, (2), 75-91.

Gustman, A.I. and Steinmeier, T.L. (1982). The Relation between Vocational Training in High School and Economic Outcomes, *Industrial and Labor Relations Review* 36, (1), 73-87.

Haas, J. (1972). "Binging": Education Control Among High Steel Ironworkers, *American Behavioral Scientist* 16, 27-34.

Haas, J. (1989). The Process of Apprenticeship: Ritual Ordeal and the Adoption of a Cloak of Competence, (87-105) in *Apprenticeship; From Theory to Method and Back Again*, Michael W. Coy (ed.). S.U.N.Y Press, Albany.

Haas, J. and Shaffir, W. (1987). *Becoming Doctors: The Adoption of a Cloak of Competence*, J.A.I. Press, Greenwich, Connecticut.

Hager, P. (1990). Vocational Education/General Education: a False Dichotomy? *Studies in Continuing Education*, 12, 1, 13-23

Hamilton, S.F. (1987). Apprenticeship as a Transition to Adulthood in West Germany. *American Journal of Education* 95, (2), 314-345.

Hamilton, S.F. (1990). *Apprenticeship for Adulthood; Preparing Youth for the Future.* The Free Press, Collier Macmillan Publishers, London.

Hanks, W.F. (1991). Foreword. in *Situated Learning; Legitimate Peripheral Participation*, Jean Lave and Etienne Wenger. Cambridge University Press.

Hardcastle, B. (1988). Spiritual Connections: Protégés' reflections on Significant Mentorships. *Theory into Practice*, 27, (3), 201-208.

Harding, S. (1993). Rethinking Standpoint Epistemology: "What is Strong Objectivity?", in L. Alcoff and E. Potter (eds.), *Feminist Epistemologies*, Routledge, New York

Hattrup, K. and Schmitt, N. (1990). Prediction of Trades' Apprentices Performance on Job Sample Criteria, *Personnel Psychology* 43, 453-465.

Havlik, J.J. (1984) . How to Improve Apprenticeship: A View from Industry. In *The Future of Apprenticeship, Report of the Symposium, Focus on Apprenticeship*, 181-182. Ontario, Ministry of Colleges and Universities

Hegland, S. and Andre, T. (1992). Helping Learners Construct Knowledge. *Educational Psychology Review*, 4, (2), 223-240.

Horton, M. (1990). Myles Horton's Views on Learning in the Social Environment, in *Social Environment and Adult Learning*, R.A. Fellenz and G.J. Conti (eds.), Center for Adult Learning Research, Montana State University.

Hounsell, D. (1984). Learning and Essay-Writing. In *The Experience of Learning*, Ference Marton, Dai Hounsell, and Noel Entwistle (Eds.). Scottish Academic Press.

Howe, K. & Eisenhart, M. (1990). Standards for Qualitative (and Quantitative) Research: a Prolegomenon. *Educational Researcher*, 19, (4), 2-9.

Ihde, D. (1977). *Experimental Phenomenology*. New York, G.P. Putnam's Sons Capricorn Books.

Jacoby, D. (1991). The Transformation of Industrial Apprenticeship in the United States, *The Journal of Economic History* 51, (4), 887-910.

Johnson, J. (1993). *Exploring Teaching Assistants' Conceptions of Teaching*. Unpublished M.A. thesis. University of British Columbia, Vancouver.

Johnson, N.B. (1989). Japanese Temple Gardens and the Apprentice Training of Priests, (211-232) in *Apprenticeship; from theory to method and back again*, Michael W. Coy (ed.), S.U.N.Y. Press, Albany.

Jones, G.R. (1986). Socialization Tactics, Self-Efficacy, And Newcomers' Adjustments to Organizations. *Academy Of Management Journal*, 29, (2), 262-279.

Jordan, B. (1989). Cosmopolitan Obstetrics: Some Insights from the Training of Traditional Midwives, *Social Science and Medecine* 28, (9), 925-944.

Kealey, G. (1973). *Canada Investigates Industrialism*. University of Toronto Press

Keane, P. (1988). The State, Laissez-faire and the Education of Adults in Britain, *International Journal of Lifelong Education* 7, 1, 13-31

Kidd, J.R. and Selman G.R. (1978). *Coming of Age: Canadian Adult Education in the 1960's*. Canadian Association for Adult Education.

Kilburn, P. (1980). In New Brunswick and Nova Scotia: Joint Curriculum Development for Apprenticeship Programs, *Canadian Vocational Journal* 16, (3), 14-15.

Knox, W. (1986). Apprenticeship and De-Skilling in Britain, 1850-1914, *International Review of Social History* 31, (2), 166-184.

Krefting, L. (1991). Rigor in Qualitative Research: The Assessment of Trustworthiness. *American Journal of Occupational Therapy*, 45, (3), 214-222.

Kuhn, T.S. (1970). *The Structure of Scientific Revolutions* (2nd edition). Chicago, The University of Chicago Press.

Lave, J. (1982). A Comparative Approach to Educational Forms and Learning Processes, Anthropology and Education Quarterly 13, (2), 181-188.

Lave, J. (1986). The Values of Quantification, (88-111) in *Power, Action and Belief; A New Sociology of Knowledge?*, John Law (ed.), Routledge & Kegan Paul, London, Boston and Henley.

Lave, J. (1988). *Cognition in Practice; Mind, mathematics and culture in everyday life*, Cambridge University Press, Cambridge.

Lave, J. and Wenger, E. (1991). *Situated Learning; Legitimate Peripheral Participation*, Cambridge University Press.

Leeson, R.A. (1979).*Travelling Brothers*. London George Allen & Unwin Ltd.

Levitan, S.A, Mangum, G.L., and Marshall, R. (1972). *Human Resources and Labor Markets; Labor and Manpower in the American Economy*, Harper & Row, Publishers, New York, Evanston, san Francisco, London.

Lipsmeier, A. (1994). The Historical Context of the Vocational Training System. Important Reforms and Debates on Vocational Training Policy since Enactment of the Vocational Training Act. In *Vocational Training in Germany: Modernisation and Responsiveness*, Organization for Economic Co-Operation and Development, Paris

LLoyd, C.C. (1984) . The Training Role of the Community Colleges. In *The Future of Apprenticeship, Report of the Symposium, Focus on Apprenticeship*, 183-188. Ontario, Ministry of Colleges and Universities.

Louis, M.R. (1980). Surprise And Sense Making: What Newcomers Experienceln Entering Unfamiliar Organizational Settings. *Administrative Science Quarterly*, 25, 226-251.

Louis, M.R., Posner, B.Z., and Powell, G.N. (1983). The Availability And Helpfulness Of Socialization Practices. *Personnel Psychology*, 36, (4), 857-866.

McDougall, J. (1990). *Discussion Paper on Apprenticeship Training*, Canadian Labour Market and Productivity Centre, Ottawa.

McKeachie, W.J. (1984). Foreword. In *The Experience of Learning*, F. Marton, D. Hounsell, & N. Entwistle (eds.). Scottish Academic Press.

McKeachie, W.J. (1988). Cognition and the Adult Learner. In *Papers for an Institute,* Robert A. Fellenz (ed.). Center for Adult Learning Research, Montana State University.

McLaren, P. (1990). Radical Pedagogy: Constructing an Arch of Social Dreaming and a Doorway to Hope. In *Social Environment and Adult Learning*, Robert A. Fellenz and Gary J. Conti (eds.). Center for Adult Learning Research, Montana State University.

McMillan, J.H. & Schumacher, S. (1989). *Research in education: a conceptual introduction.* 2nd edition. Harper Collins.

MacNeill, R.M. (1994). *An Analysis of the Regulation of Trades Occupations in British Columbia*, Unpublished MBA Thesis, Simon Fraser University.

Mainiero, L.A. (1986). Muddling Through: The Anguish of Apprenticeship, *Leadership & Organization Development Journal* 7, (5), 3-7.

Marchak, M.P. (1981). *Ideological Perspectives on Canada,* (2nd ed.), Chap. 8, 150-177. McGraw-Hill Ryerson Limited, Toronto, Montreal.

Marshall, H. (1972). Structural Constraints on Learning, in B. Geer (ed.), *Learning to Work*, Sage Publications, Beverly Hills.

Martin, J. and Sugarman, J. (1993). Beyond Methodolatry: Two Conceptions of Relations Between Theory and Research in Research on Teaching, *Educational Researcher* 22, (8) 17-24.

Marton, F. (1988). Phenomenography: Exploring Different Conceptions of Reality. In *Qualitative Approaches to Evaluation in Education*. D.M. Fetterman (ed.). New York, Praeger

Marton, F. and Säljö, R. (1984). Approaches to Learning. In *The Experience of Learning*, Ference Marton, Dai Hounsell, and Noel Etwistle (Eds.). Scottish Academic Press.

Mathison, S. (1988). Why Triangulate? *Educational Researcher*, 13-17.

Maurice, M. and Sellier, F. (1979). Societal Analysis of Industrial Relations: A Comparison Between France and West Germany, *British Journal of Industrial Relations* 17, (1-3), 322-336.

Merriam, S.B. (1983). Mentors and Protégés: A Critical Review of the Literature. *Adult Education Quarterly*, 33, (3), 161-173.

Merriam, S.B. (1991). *Case study Research in education: a qualitative approach*. Jossey-Bass, San Francisco.

Miller, S.I. and Fredericks, M. (1991). Postpositivistic Assumptions and Educational Research: Another View. *Educational Researcher 20*, (4), 2-8.

Mishler, E.G. (1980). Comments on Symposium on adults' conception of reality. Annual Meeting of the American Educational Research Association, Boston, April 7-11.

Mjelde, L. (1990). Labour and Learning: The Apprenticeship Program in Norway. *Interchange*, 21, (4), 34-48.

Moore, D. T. (1986) Learning at Work: Case Studies in Non-School Education. *Anthropology & Education Quarterly*, 17, 166-184.

Moran, A.P. (1982). Some Distinctive Characteristics of High-Achieving Irish Apprentices, *Perceptual and Motor Skills* 54, 651-654.

Moyers, B.. (1990). Bill Moyers' Journal: An Interview with Myles Horton, in *Social Environment and Adult Learning*, R.A. Fellenz and G.J. Conti (eds.), Center for Adult Learning Research, Montana State University.

Nelson, L.H. (1993). Epistemological Communities. In L. Alcoff and E. Potter (Eds.) *Feminist Epistemologies* (121-151). New York: Routledge.

New York State (1975). *Training and Work Experience of Former Apprentices*, State of New York, Department of Labor.

Noe, R.A. (1988). An Investigation of the Determinants of Successful Assigned Mentoring Relationships. *Personnel Psychology*, 41, (3), 457-479.

Noe, R.A. and Schmitt, N. (1986). The Influence of Trainee Attitudes on Training Effectiveness: Test of a Model. *Personnel Psychology*, 39, 497-523.

Ontario, Ministry of Colleges and Universities, (1984). The Future of Apprenticeship, *Report of the Symposium, Focus on Apprenticeship*.

O.E.C.D. (1979). *Policies for Apprenticeship*, Organization for Economic Co-Operation and Development, Paris

O.E.C.D. (1994). *Vocational Training in Germany: Modernisation and Responsiveness*, Organization for Economic Co-Operation and Development, Paris

Parkay, F.W. (1988). Reflections of a Protégé. *Theory Into Practice*, 27, (3), 195-200

Parkay, F.W., Currie, G.D., and Rhodes, J.W. (1992). Professional Socialization: A Longitudinal Study of First-time High School Principals. *Educational Administration Quarterly*, 28, (1), 43-75.

Perkins, D.N. (1991). Technology Meets Constructivism: Do They Make a Marriage? *Educational Technology*, 31, (5), 18-23.

Perry, R.L. (1991). The German Apprenticeship System: Everybody's talking about it, but is it right for America? *Vocational Education Journal*, 66 (5), 30-31.

Peshkin, A. (1988). In Search of Subjectivity - One's Own. *Educational Researcher*, , 17-21.

Peterson, R.J. (1971). *Apprenticeship in Ontario 1911-1965.* Unpublished M.A. Thesis, University of Toronto

Peterson, B. (1974 a). A brief history of apprenticeship in Ontario. *Elements of Technology*, 5, 1, 6-9

Peterson, B. (1974 b). A brief history of apprenticeship in Ontario. *Elements of Technology*, 5, 2, 16-20

Peterson, B. (1974 c). A brief history of apprenticeship in Ontario.*Elements of Technology*, 5, 3, 23-26.

Phillips, D.C. (1995). The Good, The Bad, and The Ugly: The Many Faces of Constructivism. *Educational Researcher*, 24, (7), 5-12.

Pillet, J. (1982). Scolarisation et Apprentissage; le cas des filles et des garcons de 17 a 19 ans en 1962 en 1968 et en 1975, *L'Orientation Scolaire et Professionelle* 11, (3), 215-231.

Popkewitz, T.S. (1992). Cartesian Anxiety, Linguistic Communism, and Reading Texts. *Educational Researcher*, 21, (5), 15-11.

Pratt, D.D. (1984). Teaching adults: A conceptual framework for the first session. *Lifelong Learning: An Omnibus of Practice and Research.* 7 (6), 7-9, 28

Pratt, D.D. (1992). Conceptions of Teaching. *Adult Education Quarterly*, 42 (4), 203-220.

Prawat, R.S. (1995). Misreading Dewey: Reform, Projects, and The Language Game. *Educational Researcher*, 24, (7), 13-22.

Pressley, M., Harris, K.R., and Marks, M.B. (1992). But Good Strategy Instructors are Constructivists! *Educational Psychology Review*, 4, (1), 3-31.

Quick, J.C. (1979). Dyadic Goal Setting Within Organizations: Role-Making And Motivational Considerations. *Academy of Management Review*, 4, (3), 369-380.

Rajan, G.S. (1966). *A Study of the Registered Apprenticeship Program in Wisconsin.* The University of Wisconsin, Center for Studies in Vocational and Technical Education, Industrial Relations Research Institute.

Reichardt, C.S. and Cook, T.D. (1979). Beyond Qualitative Versus Quantitative Methods, in *Quantitative and Qualitative Methods in Evaluation Research*, Sage, Beverly Hills.

Reuben, (1984) . The Future of Apprenticeship: a Comparative View. In *The Future of Apprenticeship, Report of the Symposium, Focus on Apprenticeship*, 75-86. Ontario, Ministry of Colleges and Universities.

Rogers, C.R. (1979). *Freedom to Learn*, Charles E. Merrill Publishing, Columbus Ohio.

Rubenson, K. (1989). The Sociology of Adult Education, in S. Merriam and P. Cunnigham (eds.), *Handbook of Adult and Continuing Education*, Jossey-Bass, San Francisco.

Ruddell, D. T. (1970) *Apprenticeship in Early 19th Century Quebec, 1793-1815.* Unpublished M.A. Thesis Université Laval. Bibliothèque Générale (microfilm)

Ruggles, R. I. (1977). Hospital Boys of the Bay. *The Beaver* 308, 2, 4-11

Russell, R. (1991) The Culture of Mastery. *Transition*, 40, (11), 9-11

Säljö, R. (1984). Learning from Reading. In *The Experience of Learning*, Ference Marton, Dai Hounsell, and Noel Etwistle (Eds.). Scottish Academic Press.

Schrag, F. (1992 a). In defense of Positivist Research Paradigms. *Educational Researcher*, 21, (5), 5-7.

Schrag, F. (1992 b). Is There Light at the End of this Tunnel. *Educational Researcher*, 21, (5), 16-17.

Seaman, D.F. and McDivitt, P. (1989). Proprietary Schools. In, Merriam, S.B. and Cunningham, P.M. (Eds.), *Handbook of Adult and Continuing Education,* Chap. 31, 410-421

Selman, G. R. (1976). Adult Education in British Columbia During the Depression. *Occasional Papers in Continuing Education*, 12. Centre for Continuing Education, The University of British Columbia

Selman, G. R., and Dampier, P. (1991). *Adult Education in Canada*. Thompson Educational Publishing, Inc.

Singleton, J. (1989). Japanese Folkcraft Pottery Apprenticeship: Cultural Patterns of an Educational Institution, (13-30) in *Apprenticeship; From Theory to Method and Back Again*, Michael W. Coy (ed.), S.U.N.Y. Press, Albany.

Smith, R.M. (1982). *Learning how to Learn: Applied Theory for Adults*, Follet, Chicago.

Smith, S. R. (1973). The London Apprentices as Seventeenth-Century Adolescents. *Past and Present* 61, 149-161.

Smith, S. R. (1981). The Ideal and Reality: Apprentice-Master Relationships in Seventeenth Century London. *History of Education Quarterly* 21, 4, 449-459.

Smith, J.K. & Heshusius, L. (1986). Closing Down the Conversation: The End of Quantitative-Qualitative Debate Among Educational Inquirers. *Educational Researcher*, 15, (1), 4-12.

Sonntag, Kh. & Frieling, E. (1983). New ways of vocational training in the Federal Republic of Germany: an empirical research comparing training systems. *International Review of Applied Psychology*, 32, (3), 289-306.

Spiro, R.J., Feltovich, P.J., Jacobson, M.J., and Coulson, R.L. (1991). Cognitive Flexibility, Constructivism, and Hypertext: Random Access Instruction for Advanced Knowledge Acquisition in Ill-Structured Domains. *Educational Technology*, 31, (5), 24-33.

Stalker, J. (1989). *Reframing the issue of Participation in Adult Education: an Interpretive Study.* Unpublished Doctoral Thesis, University of British Columbia.

Stewart, R. (1989 a). Interprovincial mobility; Red Seals certify Canada's 200,000 journeypersons, *Education Manitoba* 17, (1), 28-29.

Stewart, R. (1989 b). Apprenticeship: a viable choice for women, *Education Manitoba* 17, (2), 28-29.

Taylor, D. and Deane, A. (1984). The Green Certificate; Apprenticeship training Process, *Canadian Vocational Journal* 20, (2), 7-10.

U.N.E.S.C.O. (1979). *Developments in Technical and Vocational Education: A Comparative Study.* UNESCO, Paris.

United States, Bureau of Labor Statistics (1980). Apprenticeships: New Jobs in an Old Tradition, *Occupational Outlook Quarterly* 24, (4), 9-11, U.S. Bureau of Labor Statistics, Washington D.C.

Vaunaize, R. and Cordier, A. (1982). Le passage de l'Ecole au Métier; étude réalisée sur les élèves de la section G. *L'Orientation Scolaire et Professionelle*, 11, (3), 265-281.

Venables, E. (1974). *Apprentices Out of Their Time; a follow-up study*, Faber and Faber, London.

Wanous, J.P. (1976). Organizational Entry: From Naive Expectations To Realistic Beliefs. *Journal Of Applied Psychology*, 61, (1), 22-29.

Wanous, J.P. (1977). Organizational Entry: Newcomers Moving From Outside to Inside. *Psychological Bulletin*, 84, (4), 601-618.

Wanous, J.P., Reichers, A.E., and Malik, S.D. (1984). Organizational Socialization and Group Development: Toward an Integrative Perspective. *Academy Of Management Review*, 9, (4), 670-683.

Warren, W.G. (1990). Personal Construct Theory as the Ground for a Rapproachment Between Psychology and Philosophy in Education. *Educational Philosophy and Theory*, 22, (1), 31-39.

Watson, T. (1983). Interprovincial Standards Program - A Model of Flexibility and Cooperation. *Background Paper 29*, Canada, CEIC, Training Branch

Weiermair, K. (1984). *Apprenticeship Training in Canada: A Theoretical and Empirical Analysis*. Economic Council of Canada Discussion paper No. 250.

Willis, P. ([1977], 1983). *Learning to Labour*, Gower Publishing Co. Ltd., Aldershot Hampshire, England.

Wingfield, A. (1979). *Human Learning and Memory: An Introduction*. Harper & Row, Publishers.

Yamamoto, K. (1988). To See Life Grow: The Meaning of Mentorship. *Theory Into Practice*, 27, (3), 183-189.

APPENDIX 1

APPRENTICESHIP ACT

APPRENTICESHIP ACT

CHAPTER 17

[Consolidated November 10, 1992]

PART 1

INTRODUCTION

Interpretation

   1. In this Act

"apprentice" means a person who, to receive training, enters into an apprenticeship
      agreement or a registered apprenticeship agreement;

"apprenticeable trade" means a trade included in Schedule B of the regulations;

"apprenticeship agreement" means an apprenticeship agreement not registered under
      this Act;

"board" means the Provincial apprenticeship board;

"certificate of apprenticeship" means a certificate of apprenticeship issued by the
      board;

"certificate of qualification" means a certificate of qualification issued by the board;

"designated trade" means a trade included in Schedule A of the regulations;

"institution" means an institution designated under the *College and Institute Act;*

"registered apprenticeship agreement" means an apprenticeship agreement registered
      by the director of apprenticeship;

"trade" includes a skill, trade or occupation designated by order of the minister;

"training" means training for employment that is not excluded by the minister in
      writing or provided under the *University Act* or the *College and Institute Act;*

"training program" means a training program for an apprenticeable trade or designated
      trade.

> 1977-65-1; 1983-3-25, effective December 22, 1983 (B.C. Reg. 486/83); 1983-10-21,
> effective October 26, 1983 (B.C. Reg. 393/83); 1985-51-2, effective August 15, 1985
> (B.C. Reg. 251/85); 1989-61-196; 1990-64-38.

Powers of minister

   2. The minister may, in the name of the Province, make agreements with
      (a) the federal Minister of Employment and Immigration for Canada under
          the *Adult Occupational Training Act* (Canada) relating to a training
          program, or
      (b) a person, including Canada or a province, for training, job creation or
          employment, apprenticeship or the preparation of persons for it, occupa-
          tional counselling, forecasting employment and training needs, industrial
          training or a matter determined by regulation.

> 1977-65-2; 1985-51-3, effective August 15, 1985 (B.C. Reg. 251/85); 1990-21-9;
> 1990-64-39.

Employment opportunity programs

3. (1) The minister or his nominee designated in writing may make an agreement to facilitate the employment of persons and in the agreement may obtain the commitment of another party to the agreement to

(a) employ persons under stated terms of employment;

(b) provide the minister with information and reports;

(c) establish and maintain an accounting system, satisfactory to the minister, for the employment; and

(d) allow records relating to the employment to be inspected by or on behalf of the minister.

(2) Unless otherwise provided, the minister and the Province are not employers of a person employed under this section.

1977-65-3.

Staff

4. The director of apprenticeship and other persons necessary for the administration of this Act shall be appointed under the *Public Service Act*. The minister may designate their responsibilities.

1977-65-4; 1985-51-3, effective August 15, 1985 (B.C. Reg. 251/85); 1990-64-40.

Prohibition on agreements without authorization

5. A person may not, subject to the *College and Institute Act*, without the written approval of the minister, make an agreement described in section 2 with the federal minister for Canada or with a province.

1977-65-5.

Powers of inspection and inquiry

6. (1) For the purposes of this Act, the minister or his nominee authorized in writing may, during normal business hours,

(a) enter and inspect the premises, equipment and training facilities of an employer;

(b) inspect employer records and inquire into matters that, in either case, relate to wages, hours of work, conditions of employment or training.

(2) A person acting under this section has the power, privileges and protection conferred on a commissioner under sections 12, 15 and 16 of the *Inquiry Act*.

(3) No person shall obstruct or impede a person acting under this section or withhold from him or conceal or destroy a record relevant to the inspection or inquiry.

1977-65-6; 1985-51-4, effective August 15, 1985 (B.C. Reg. 251/85); 1990-64-41.

Allocation of funds by minister

7. (1) The minister may allocate operational funds, training allowances, capital and other grants, and other money received for the purposes of this Act from any person, including Canada, or a province.

(2) The Lieutenant Governor in Council may by regulation assess employers or employees in a trade for the cost of maintaining an apprenticeship or training program

in the trade. The money assessed shall be collected from the employer or employee and paid into the consolidated revenue fund.

1977-65-7.

8. [Repealed 1983-3-26, effective December 22, 1983 (B.C. Reg. 486/83).]

PART 2

APPRENTICESHIP

List of trades

9. The Lieutenant Governor in Council may list in Schedule A of the regulations the designated trades and in Schedule B of the regulations the apprenticeable trades.

1977-65-9.

Provincial apprenticeship board

10. (1) A Provincial apprenticeship board is established.

(2) The minister shall appoint the members of the board and designate the chairman, and the vice chairman if any.

1977-65-10.

Duties of the board

11. The board shall determine its procedure and issue directives on

(a) the qualifications for entrance to or certification in a designated or apprenticeable trade;

(b) the terms for a registered apprenticeship agreement;

(c) the form of a registered apprenticeship agreement; and

(d) the fee to be paid by an applicant

(i) to be examined by the board of examiners,

(ii) to receive a certificate of apprenticeship or of qualification, or

(iii) to receive a permit indicating that exemption under section 23 (2) is granted.

1977-65-11(1); 1985-13-2, effective May 30, 1985 (B.C. Reg. 156/85); 1992-14-2.

Further duties

12. The board shall

(a) establish trade advisory committees and examining boards and specify their duties and rules of procedure;

(b) [Repealed 1983-3-27, effective December 22, 1983 (B.C. Reg. 486/83).]

(c) hear and decide appeals from decisions of the director of apprenticeship or an examining board; and

(d) carry out duties directed by the minister.

1977-65-11(2); 1983-3-27, effective December 22, 1983 (B.C. Reg. 486/83).

Duties of director

13. The director of apprenticeship shall

(a) establish and maintain a system of apprenticeship registration and certification;

    (b) issue certificates of apprenticeship and certificates of qualification to persons who qualify;

    (c) monitor the quality of apprenticeship training;

    (d) appoint the members of examining boards and trade advisory committees and forward reports on their activities to the board;

    (e) advise the board on the needs of registered apprentices for instruction by institutions;

    (f) develop and review course content and apprentice examinations;

    (g) establish an apprentice information and counselling system;

    (h) on application by a party to a registered apprenticeship agreement, decide any question respecting the rights and duties of the parties under the agreement; and

    (i) carry out other duties directed by the minister or the board.
> 1977-65-12; 1983-3-28, effective December 22, 1983 (B.C. Reg. 486/83).

Apprenticeship agreement

14. An apprenticeship agreement may be filed with the director of apprenticeship who may register it. An apprenticeship agreement relating to a designated trade has no effect unless registered by the director.
> 1977-65-13.

Parties to apprenticeship agreement

15. An apprenticeship agreement for registration under this Act may be entered into by the person to be an apprentice and, as his principal, his employer or a person authorized in writing by the minister.
> 1977-65-14.

Termination of agreement

16. (1) The director of apprenticeship may refuse to register or may cancel registration of an apprenticeship agreement that, in his opinion, is not in the best interests of the apprentice.

(2) A party to an apprenticeship agreement, registered or not, may terminate it without the consent of the other parties.

(3) Where a registered agreement is terminated, the apprentice and the principal shall each notify the director in writing.

(4) With the prior written approval of the director and agreement of the parties, a registered agreement may be assigned to another principal.
> 1977-65-15(1 to 4).

Further training

17. Where a registered agreement is terminated or assigned or an agreement is registered after designation of the trade, the director shall determine what further training or experience the apprentice must complete to qualify for a certificate of apprenticeship.
> 1977-65-15(5).

Limit on number of apprentices

18. An employer shall not employ more apprentices than allowed by order of the director.
> 1977-65-16.

Minors

19. On registration a minor's apprenticeship agreement is binding on all the parties as if the minor were an adult.

1977-65-17.

Registration does not validate

20. Subject to section 19, registration does not make binding an apprenticeship agreement or a provision in it which, for any reason, is not binding on a party.

1977-65-18.

Agreement prior to designation of trade

21. The principal in an apprenticeship agreement made before the trade is a designated trade shall file a copy of the agreement with the director within 3 months after the date of designation. The director shall register the agreement unless it is not in the best interests of the apprentice.

1977-65-19.

Application of Act to scheduled trade

22. (1) This Act applies to an apprenticeship in a designated or apprenticeable trade 3 months after the regulation is made.

(2) The director may give credit to a person for the period of employment or training served in a trade before this Act applies to the trade.

1977-65-20.

Employment in certain designated trades

23. (1) The Lieutenant Governor in Council may, by regulation, designate trades and require that in a specified designated trade persons hold a certificate of qualification to practise or be employed in that trade.

(2) On application of a person primarily affected by a regulation made under subsection (1), the director of apprenticeship may investigate the applicability of the regulation to the person in the particular circumstances of his practice or employment and may grant him an exemption from the regulation on such terms as the director may specify.

1977-65-21.

PART 3

24 to **27.** [Repealed 1990-64-42.]

28. [Repealed 1983-3-29, effective December 22, 1983 (B.C. Reg. 486/83).]

PART 4
General

Review of decision

29. (1) On application by a person primarily affected by a decision of the board, the minister may review the decision and decide the matter.

(2) A decision of the minister shall not be challenged, reviewed or called into question by a court, except on the ground of lack or excess of jurisdiction.

<div align="center">1977-65-26; 1983-3-30, effective December 22, 1983 (B.C. Reg. 486/83); 1985-51-3, effective August 15, 1985 (B.C. Reg. 251/85); 1990-64-43.</div>

Liability

30. Proceedings may not be taken against a person for anything done or omitted in good faith by the person acting or purporting to act under this Act.

<div align="center">1977-65-29.</div>

Technical defects

31. (1) A person or board acting under this Act may correct a defect, irregularity or error on terms he or it considers just and reasonable.

(2) A proceeding under this Act is not invalid because of a defect in form, a technical irregularity or an error of procedure that does not result in a denial of natural justice.

<div align="center">1977-65-30.</div>

Expenses and remuneration of board

32. A person appointed under this Act or a member of a board or committee established under this Act may be reimbursed by the government for travelling and out of pocket expenses necessarily incurred by him in the discharge of his duties and also may be paid the remuneration for his services fixed by the Lieutenant Governor in Council.

<div align="center">1977-65-27; 1983-10-21, effective October 26, 1983 (B.C. Reg. 393/83).</div>

Offences

33. It is an offence to contravene
    (a) a commitment described in section 3;
    (b) section 6 (3); or
    (c) a regulation under section 23.
    (d) and (e) [Repealed 1990-64-44.]

<div align="center">1977-65-28; 1990-64-44.</div>

Regulations

34. (1) The Lieutenant Governor in Council may make regulations.
(2) [Repealed 1983-10-22, effective October 26, 1983 (B.C. Reg. 393/83).]

<div align="center">1977-65-31; 1983-10-22, effective October 26, 1983 (B.C. Reg. 393/83).</div>

APPENDIX 2

APPRENTICESHIP ACT - APPRENTICESHIP REGULATION

B.C. Reg. 584/79   Filed December 24, 1979
O.C. 3160/79

Apprenticeship Act
[Consolidated January 15, 1987]

APPRENTICESHIP REGULATION
[effective December 31, 1979]
[includes amendments up to B. C. Reg. 377/83]

Interpretation

1. In this regulation,

"**Automotive Mechanical Repair**" means the repair, adjustment and replacement of mechanical and electrical parts of automobiles, trucks and buses;

"**Automotive Body Repair**" means the repair, adjustment and replacement of sheet metal and allied parts of automobiles, trucks and buses;

"**Automotive Painting and Refinishing**" means the preparation for and the application of all types of painting and refinishing of automobiles, trucks and buses;

"**Automotive Parts Warehousing and Merchandising**" means the ordering, warehousing and dispensing of repair and replacement parts for automobiles, trucks and buses;

"**Automotive Radiator Manufacture and Repair**" means the manufacture, reconditioning and repair of radiators and allied parts of the cooling system of automobiles, trucks and buses;

"**Automotive Trimming**" means the repair, reconditioning and replacement of upholstery, general interior furnishings and fabric tops of automobiles, trucks and buses;

"**Boilermaking**" or "**Boilermaking (Erection)**" means the laying-out, burning, shearing, sawing, cutting, punching, drilling, reaming, boring, tapping, riveting, caulking, bolting, connecting, fastening, welding, gouging, shaping, fitting, handling and rigging of structural members, plates and tubes in the fabrication, erection, repair and maintenance of dust, air, gas, steam, oil, water or other liquid-tight containers, structures and equipment and any other work that is usually performed by a journeyman;

"**Bookbinding**" means the converting by hand or machine of printed or non-printed sheets by means of cutting, folding, stitching or other bindery processes to a finished product;

"**Bricklaying**" means the repair and placing of brick, masonry blocks, stone, marble, precast artificial masonry units, refractories and caulking and any other work that is usually done by a journeyman;

"**Carpentry**" means the laying-out, joining, assembling, erecting or dismantling of materials of wood, plastic, cork or composition and any other work that is usually performed by a journeyman;

"**Cement Masonry**" means

    (a) the finishing of all concrete on concrete construction, such as floors, walls, ceilings, sidewalks, curbs and gutters, whether finished by trowel or float or any other process,

(b) the sacking, chipping, rubbing, grinding and curing by compounds in concrete finishing work, and

(c) the dry packing, grouting and finishing in connection with setting machinery, such as engines, generators, air compressors and tanks,

and includes any other work that is generally performed by a journeyman cement mason;

"Cooking" means the supervision of all phases of kitchen activity, including the preparation and distribution of food and any other work that is usually performed by a journeyman cook;

"Domestic Radio and Television Servicing" means the repair and maintenance of domestic radio and television receiving sets and associated equipment using vacuum and gas filled tubes, thermistors, transistors and other solid state components, other than antenna and transmission line equipment;

"Drywall Finishing" means

(a) the preparation, taping, filling and sanding of all seams, corners and angles,

(b) the filling of all basteners, metal corners and edge trims,

(c) the preparation for and application of decorative textures, and

(d) any other work as is usually done by a journeyman drywall finisher;

"Embalming" means the chemical and cosmetic preparation of a dead human body;

"Floor Covering" means

(a) the installation, application, alteration, repair, service and preparation for installation of carpets, rugs, artificial turf, linoleum, seamless plastic flooring or any other type of floor covering or floor product,

(b) the preparation of the subsurface for the installation of a floor covering, and

(c) any work that is usually performed by a journeyman floor covering installer;

"Glazing" means all work usually done by a journeyman glazier and glassworker and includes the handling, cutting, preparing edging, fabricating, removing and installing of glass, mirrors, glass substitutes and all types of architectural metal products, including those for storefronts, entrances, windows and curtain walls in building and automotive applications;

"Heavy Duty Mechanical Repair" means the maintenance, manufacture, overhaul, reconditioning and repair of equipment powered by an internal-combustion engine, including graders, loaders, shovels, tractors, trucks and wheeled and tracked vehicles of all types used in the construction, logging, sawmill and transportation and other industries;

"Industrial Instrumentation" means the repair, replacement, calibration and general servicing of all process monitoring and control instruments, including

(a) signal transmission, telemetering and digital devices in industrial operations, and

(b) indicators, recording devices, control loops and computers, whether these instruments are pneumatic, hydraulic, electronic, electrical, mechanical, fluidic, nuclear, optical or chemical;

"Ironwork" means the welding, burning, riveting, drilling, fitting and fabrication of structural shapes and plates in the erection of structural steel for buildings and bridges and includes

(a) the rigging and placing of machinery,

(b) detailing, placing and tieing of reinforcing steel, and

(c) any other work that is usually performed by a journeyman ironworker;

"Jewellery Manufacture and Repair" includes setting, polishing, plating, carving and engraving of jewellery;

"Joinery (benchwork)" means the layout, joining, assembly, erection, dismantling, in the manufacture of articles that are fabricated with wood, plastic, cork and other material and that are intended to be fixtures in buildings;

"Lithography" includes the following departments: artists, camera, plate-making (including transfer), press and press-feeding;

"Lumber-manufacturing Industry - Benchman" means a qualified saw fitter and circular-saw filer who also is able to bench band saws, including the lining-up of head rigs and grinding of band wheels and any other work that is usually performed by a benchman;

"Lumber-manufacturing Industry - Circular Saw Filer" means a qualified saw fitter who is also competent to bench all circular and gang saws including tensioning, welding cracks, welding on teeth and includes any other work that is usually performed by a saw filer in the lumber-manufacturing industry;

"Lumber-manufacturing Industry - Construction Millwright" means the construction and repair of buildings and structures and repair and maintenance of mill equipment and any other work that is usually performed by a construction millwright in the lumber-manufacturing industry;

"Lumber-manufacturing Industry - Saw Fitter" means the fitting of all types of saws, including circular saws, band saws, gang saws, chain saws, the operation, repair and adjustment of saw-sharpening equipment and any other work that is usually performed by a saw fitter in the lumber-manufacturing industry;

"Lumber-manufacturing Industry - Steam and Pipe Fitting" means the installation, repair and maintenance of steam, hot water, plumbing, pneumatic and hydraulic lines and all work usually performed by a steamfitter or a pipefitter in the lumber-manufacturing industry;

"Machinist" means all work usually done by a journeyman machinist and includes the work of machinist-fitter, tool-maker and die-maker;

"Millwright" means the dismantling, moving, installation, changing the layout, setting-up, repair, overhaul and maintenance of machinery and heavy mechanical equipment and power shafting, pulleys, conveyors and hoists;

"Oil Burner Repair" means the installation, repair and maintenance of all types of oil-fired domestic, commercial and industrial equipment and their

components and any other work that is usually performed by an oil-burner mechanic;

"Painting and Decorating" means the application of paint, organic and inorganic coatings applied in the same manner as paints and the application of wall coverings to a building, structure, surface, ship and any other work that is usually performed by a journeyman painter and decorator;

"Piledriving and Bridgeman" means all work usually done by a journeyman piledriver or bridgeman;

"Plumbing" means the installation, alteration or repair of any plumbing system and includes any other work that is usually performed by a journeyman plumber and is governed by the British Columbia Plumbing Code;

"Refrigeration" means the fabrication, installation, alteration, repair and service of any system that is used for cooling or heating (i.e. heat pumps) in closed systems that contain a refrigerant or a brine and thermo-electric cooling, including piping, controls and electric work usually performed by a refrigeration journeyman;

"Roofing, damp and water proofing" means

    (a) the building or laying of built-up or flat-deck roofs,

    (b) the covering of steep and similar roof frames with unitized materials such as tile, slate and asbestos shingles,

    (c) the application of roof and deck waterproofing with modern plastic coating materials, and

    (d) the damp and water proofing of floors, foundations and below-grade pipes and tanks with such materials as pitch, tar, asphalt, plastic, bitumen

in any building, other than residential premises;

"Sheet Metal Work" means the fabrication, installation, alteration or repair of sheet metal work in any building, structure, ship, boat or barge and any other work that is usually performed by a journeyman sheet metal worker;

"Ship and Boat Building" includes alterations and repairs of boats and ships;

"Sign and Pictorial Painting" includes commercial bulletin and painted display signs;

"Sprinkler Fitting" means the installation, alteration or repair of

    (a) automatic, deluge or open sprinklers,

    (b) foam, fog and CO systems,

    (c) wet or dry standpipes, inside first-aid and hose-pipe systems,

    (d) private firehydrant systems, fire pumps and all related equipment, and any other work that is usually performed by a sprinkler fitter;

"Steamfitting and Pipefitting" means the installation, alteration and repair of

    (a) steam and hot-water boilers, electric, oil and gas burners, pumps, piping, valves, controls, that generate or convey steam or hot air and an attachment to any item referred to in this paragraph,

    (b) air-conditioning systems, air compressors and tanks, chilled-water units, coils, piping, gas piping, valves, pumps, controls that generate

or convey chilled water, gas or air of any attachment or item referred to in this paragraph,

(c) process piping systems in and on industrial projects and manufacturing plants and transportation piping systems where the piping system conveys liquids, solids and gases, all pneumatic and hydraulic piping systems and any attachment connected to any piping system referred to in this paragraph,

and the installation, servicing, examination and calibration of all process control instruments, indicators and recording devices;

"Steel Fabrication" includes welding, fitting, riveting, drilling, pressing and rolling on custom-made articles and supplies, but excludes production line or assembly line manufacture for resale.

"Wall and Ceiling Installation" means the application of wood, wire or metal to a gypsum type lath, steel studs or any other material used as a base for plaster and any other work that is usually done by a journeyman lather.

[am. B.C. Reg. 16/82, s. 2.]

Designated and apprenticeable trades

2. The designated trades are listed in Schedule A to this regulation.

3. The apprenticeable trades are listed in Schedule B to this regulation.

4. No person other than an apprentice or journeyman shall practice or be employed in a trade under the heading "Compulsory Certificate of Qualification" in Schedule A of this regulation, unless he holds a compulsory certificate of qualification.

SCHEDULE A

DESIGNATED TRADES

1. *General*

Automotive Body Repair
Automotive Mechanical Repair
Automotive Painting and Refinishing
Automotive Parts Warehousing and Merchandising
Automotive Radiator Manufacture and Repair
Automotive Trimming
Barbering
Boilermaking
Boilermaking (Erection)
Bookbinding

584/79

Bricklaying
Carpentry
Cement Masonry
Commercial Transport Vehicle Mechanical Repair
Cooking
Domestic Radio and Television Servicing
Drywall Finishing
Electrical Work
Embalming
Floor Covering
Glazing
Hairdressing
Heavy-duty Mechanical Repair
Industrial Instrumentation
Ironwork
Jewellery Manufacture and Repair
Joinery (Benchwork)
Lithography
Lumber Manufacturing Industry - Benchman
Lumber Manufacturing Indusrty - Circular Sawfiler
Lumber Manufacturing Industry - Construction Millwright
Lumber Manufacturing Industry - Sawfitter
Lumber Manufacturing Industry - Steam and Pipe Fitting
Machinist
Millwright
Moulding
Office Machine Repair
Oil Burner Repair
Painting and Decorating
Patternmaking
Piledriving and Bridgeman
Plastering
Plumbing
Refrigeration
Roofing, Damp and Waterproofing
Servicing and Repair of Electrical Appliances
Sheet Metal Work
Ship and Boatbuilding
Shipfitting
Sign and Pictorial Painting
Sprinkler Fitting
Steamfitting and Pipefitting
Steel Fabrication
Wall and Ceiling Installation
Watch Repair

[am. B.C. Regs. 16/82, s. 3; 483/82, s. 1; 377/83.]

2. *Compulsory Certificates of Qualification*

Plumbing
Refrigeration
Roofing, Damp and Waterproofing
Sheet Metal Work
Sprinkler Fitting
Steamfitting and Pipefitting

SCHEDULE B

Apprenticeable Trades

Aircraft Maintenance
Armature Winder
Automotive Machinist
Baking
Cableman
Carman
Cladding
Dental Mechanic
Dental Technician
Diesel Engine Mechanical Repair
Electronics (Audio and Radio Servicing)
Electronics (Community Antenna Television)
Electronics (Industrial)
Electronics (Instrument Repair and Calibration)
Electronics (Marine)
Electronics (Panels and Controls)
Electronics (Radio Communications)
Electronics (Telecommunications)
Elevator Mechanic
Gasfitting
Heat and Frost Insulating
Inboard/Outboard Mechanical Repair
Industrial Warehousing
Letterpressman
Lineman
Machinist-Fitter
Maintenance Mechanic (Pipeline Industry)
Marine Engine Mechanical Repair
Meat Cutting
Partsman

584/79

Plastic and Rubber Fabrication
Practical Horticulture
Power Engineering
Printer
Small Engine Repair
Tile Setting
Tire Repair
Tool and Die Making
Welding

[Provisions of the *Apprenticeship Act* relevant to the enactment of this regulation: sections 9, 23 and 34]

ORDER OF THE LIEUTENANT GOVERNOR IN COUNCIL

Order in Council No. **0506** , Approved and Ordered **APR. 27. 1995**
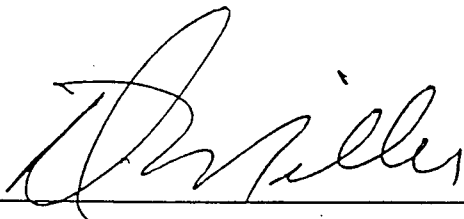
Lieutenant Governor
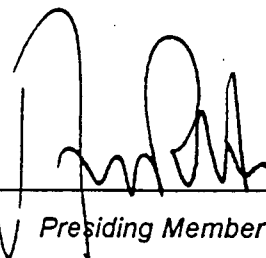
Executive Council Chambers, Victoria

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and consent of the Executive Council, orders that

a) effective July 1, 1996, the Apprenticeship Regulation, B.C. Reg. 584/79, is amended as set out in the attached schedule.

b) the Prescribed Skills or Occupations Regulation, B.C. Reg. 333/89, is repealed.
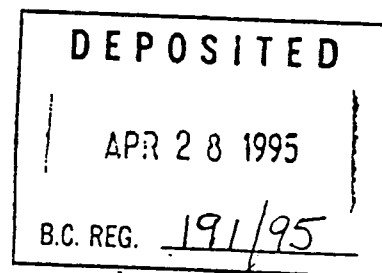
```
DEPOSITED

APR 2 8 1995

B.C. REG. 191/95
```

_____
Minister of Skills, Training and Labour

_____
Presiding Member of the Executive Council

(This part is for administrative purposes only and is not part of the Order.)

(hority under which Order is made:

Act and section: _Apprenticeship Act_, section 9, 23 and 34

Other (specify): oic 3160/79

363/95/13

PROVINCE OF BRITISH COLUMBIA

BY THE LIEUTENANT GOVERNOR

1. Section 1 of the *Apprenticeship Regulation*, B.C. Reg. 584/79, is amended

   (a) by repealing the definition of "Automotive Mechanical Repair" and substituting the following:

   "Automotive Service Technician Trade" means the repair, adjustment and replacement of mechanical and electrical parts of automobiles and light trucks;,

   (b) by striking out "Automotive Body Repair" and substituting "Automotive Collision Repair Technician Trade",

   (c) by striking out "Automotive Painting and Refinishing" and substituting "Automotive Painting and Refinishing Technician Trade", and

   (d) by adding the following:

   "Power Line Technician Trade" means the installation, construction, alteration, repair, maintenance, testing, servicing and operation of related overhead, underground and marine electrical transmission and distribution systems;.

2. Schedule A is amended

   (a) under the heading "General",

      (i) by striking out "Automotive Body Repair" and substituting "Automotive Collision Repair Technician Trade",

      (ii) by striking out "Automotive Mechanical Repair" and substituting "Automotive Service Technician Trade",

      (iii) by striking out "Automotive Painting and Refinishing" and substituting "Automotive Painting and Refinishing Technician Trade",

      (iv) by striking out the following trades:

      Automotive Radiator Manufacture and Repair
      Automotive Trimming, and

      (v) by adding "Power Line Technician Trade", and

   (b) under the heading "Compulsory Certificates of Qualification", by adding the following trades:

      Automotive Collision Repair Technician Trade
      Automotive Service Technician Trade
      Automotive Painting and Refinishing Technician Trade
      Power Line Technician Trade.

3. Schedule B is amended

   (a) by adding the following trades:

      Automotive Electrical
      Automotive Electrical and Tune Up
      Automotive Radiator Manufacture and Repair
      Automotive Transmission Repair
      Automotive Trimming
      Wheel Alignment and Brake Service
      Wheel Alignment and Frame Straightening, and

   (b) by striking out "Lineman".

ORDER OF THE LIEUTENANT GOVERNOR IN COUNCIL
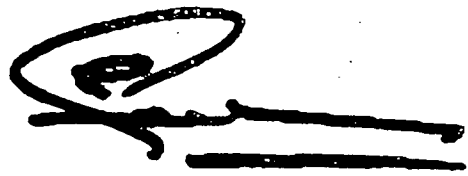
235

Order in Council No. **0955**   , Approved and Ordered **JUL 28 1995**

Lieutenant Governor

Executive Council Chambers, Victoria

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and consent of the Executive Council, orders that, effective July 1, 1996, the Apprenticeship Regulation, B.C. Reg. 584/79, is amended as follows:

1. _Section 1 is amended by adding the following definition:_

    "**Electrician Trade**" means the installation, alteration, repair or maintenance of electrical equipment and electronic systems but does not include a person who is permanently employed in an industrial site at a limited purpose occupation who is required to operate electrical equipment or perform maintenance of electrical equipment in its normal operation; .

2. _Schedule A is amended_

    (a) _under the heading "General" by striking out "Electrical work" and substituting "Electrician Trade", and_

    (b) _under the heading "Compulsory Certificates of Qualification" by adding "Electrician Trade"._

Minister of Skills, Training and Labour

Presiding Member of the Executive Council

(This part is for administrative purposes only and is not part of the Order)

Authority under which Order is made:

· and section:-   Apprenticeship Act, sections 9, 23, 34   RSBC 1979 c.17

Other (specify):-   oic 3160/79

July 26, 1995

APPENDIX 3

APPRENTICESHIP AGREEMENT

Province of British Columbia   Apprenticeship Agreement   Apprenticeship No:

This Agreement is made pursuant to the Apprenticeship Act (R.S.B.C. 1979, Chapter 17) and to Schedule "A" which is an integral part of this Agreement as if set out at length in the body of the Agreement, this   day of
      , by and between:

(THE "APPRENTICE")   ON-SITE WITH (EMPLOYER/TRADE UNION/BOARD
                                                COLLECTIVELY THE "EMPLOYER")

1. The **EMPLOYER**, in consideration of the conditions herein contained, agrees:
   (a)   to receive the Apprentice for the period stated herein and to teach efficiently the trade or occupation specified in this Agreement; and
   (b)   to fulfill the other obligations of an Employer as set out in Schedule "A".

2. The **APPRENTICE**, in consideration of the conditions herein contained, agrees:
   (a)   to place himself/herself as an apprentice in the
         trade/occupation for a period of   months, beginning the   day of   ,   , ending on the
         day of   ,   , with   months credit for previous experience; and
   (b)   to fulfill the other obligations of an Apprentice as set out in Schedule "A".

3. The **EMPLOYER** and **APPRENTICE** further agree:
   (a)   that for secondary school students registered in an approved apprenticeship training program, the prescribed rate of pay shall not be less than the prevailing minimum wage; and
   (b)   that where there is no relevant Collective Agreement in place that set out prescribed rates of pay for apprentices, the schedule of minimum wages shall not be less than the prevailing minimum wage, or in accordance with the prescribed scale below, whichever is the greater;

Wage Scale as a Percentage of Employer's Journeyperson Wage

Period (in months)	0 - 6	7 - 12	13 - 18	19 - 24	25 - 30	31 - 36	37 - 42	43 - 48	49 - 54	55 - 60
	%	%	%	%	%	%	%	%	%	%
Five-year term	50	55	60	65	70	75	80	80	90	90
Four-year term	50	55	60	65	70	75	80	90		
Three-year term	50	55	65	70	80	90				
Two-year term	50	60	75	90						
One-year term	50	90								

4. The **EMPLOYER** and **APPRENTICE** also agree to the transfer of this Agreement to subsequent Employers of the Apprentice, if necessary, for completion of the apprenticeship.

_____   _____   _____
(WITNESS SIGNATURE)   (EMPLOYER SIGNATURE)   (TITLE/POSITION)

_____   _____
(PRINT NAME)   (SCHOOL BOARD REPRESENTATIVE)
                                                                  (IF APPRENTICE IS A SECONDARY
                                                                  SCHOOL STUDENT)
_____
(WITNESS SIGNATURE)

                                 _____   _____
_____   (APPRENTICE SIGNATURE)   (PARENT/GUARDIAN)
(PRINT NAME)

Registered at the office of the Director of Apprenticeship on the _____ day of _____, _____.

_____
Director of Apprenticeship or Designate

SCHEDULE 'A'

1. Schedule 'A shall apply to all apprenticeship agreements entered into pursuant to the Apprenticeship Act, R.S.B.C. 1979, Chapter 17, whether or not such trades or agreements are covered by special regulations.

2. The definitions contained in the Apprenticeship Act shall apply also in the interpretation of Schedule 'A'.

Obligations of an Employer

3. Every Employer shall:
   (a) Immediately notify the Director of Apprenticeship (the "Director") when employing a minor or Apprentice in any designated or apprenticeable trade;
   (b) Provide adequate training for each of its Apprentices in all branches of the trade so far as the facilities and the scope of the business will permit;
   (c) Keep each Apprentice to attend such in-school training classes as may be prescribed by the Director.
   (d) Arrange for each Apprentice to attend such in-school training classes as may be prescribed by the Director;
   (e) Refrain from employing any person in a designated or apprenticeable trade except a journeyperson when one or more of the indentured Apprentices in such a trade is idle;
   (f) Co-operate with the Director in the transfer of an Apprentice;
   (g) Notify the Director and obtain the approval of the Provincial Apprenticeship Board before making any change affecting the Apprenticeship Agreement;
   (h) notify the Director immediately of any difficulty that occurs to interfere with the fulfillment of the terms of the Apprenticeship Agreement; and
   (I) Notify the Director immediately when, for nay reason, an Apprentice is laid off or terminated from employment.

Obligations of Apprentice

4. Every Apprentice shall:
   (a) Render faithful, honest, and diligent service to the Employer during the period of apprenticeship;
   (b) Attend regularly the place of employment;
   (c) Obey all lawful and reasonable demands and requirements of the Employer, or those whom the Employer places in authority over him/her;
   (d) Show due regard for the equipment and goods of the Employer and avoid damage to and waste of such equipment and goods;
   (e) Attend regularly such in-school training classes as may be prescribed by the Director;
   (f) Subject to the approval of the Provincial Apprenticeship Board, incur the loss of periodic wage increases for nonattendance at prescribed classes;
   (g) incur the cancellation of the Apprenticeship Agreement for willful failure to attend prescribed classes where such failure could reasonably have been avoided;
   (h) Notify the Director immediately of any difficulty that occurs to interfere with the fulfillment of the terms of this Agreement; and
   (I) Notify the Director immediately when, for any reason, he/she is laid off, voluntarily leaves or is terminated by the employer to whom he/she is indentured.

Period of Apprenticeship

5. (1) The period of apprenticeship shall be as set out in the Apprenticeship Agreement.
   (2) For the purpose of computing the time served in an apprenticeship year, attendance at prescribed day classes shall be considered as part of the Apprenticeship year.

Hours of Work and Overtime

6. (1) The hours of work of an Apprentice shall be the same as those established for journeypersons in the trade.
   (2) Conditions relating to holiday pay, overtime pay and other benefits afforded a journeyperson will also apply to the Apprentice.

Apprenticeship Certificate

7. (1) On the advice of the Director a Certificate of Apprenticeship shall be issued to an Apprentice who has, in the opinion of the Provincial Apprenticeship Board, satisfactorily completed his/her term of apprenticeship.
   (2) The Certificate of Apprenticeship shall be signed by the Minister of Skills, Training and Labour, the Director of Apprenticeship, and the Employer.

APPENDIX 4

APPERENTICESHIP FORUMS REPORT

<u>Summary of Regional Forums</u>

<u>Apprenticeship Training Delivery</u>

<u>Data Analysis and Recommendations</u>

<u>BACKGROUND</u>:

Since its inception 60 years ago, the British Columbia Apprenticeship System is facing new challenges in the light of the need to develop a skilled labour force to meet a competitive global market within the constraints of economic realities. Apprenticeship Revitalization, introduced in 1994 and funded through the Skills Now! Initiative, faces a new issue with the reduction of Federal funding for apprentice technical training as of April 1, 1996. Due to its statutory responsibility to provide technical training, the province will cover 100% of the in-school training for at least the next fiscal year. The challenge is to expand the number of apprenticeable occupations and apprenticeship berths to meet industry's needs and priorities within current fiscal boundaries.

The Ministry of Skills, Training and Labour, now reorganized within the Ministry of Education, Skills and Training and the Ministry of Labour, conducted fourteen regional forums across the province. The purpose of the regional forums was to bring together business, labour, training providers, representatives from the Provincial Apprenticeship Board and government to discuss apprentice technical training and to develop a more flexible, industry responsive and innovative system.

The desired goal and outcome of the forums was to find ways to strengthen the apprenticeship training delivery system by ensuring:

- it is able to adapt to labour market, economic and fiscal changes;
- partnerships will be developed which will empower business, labour, post-secondary institutions and local apprenticeship staff to delivery apprenticeship training which meets provincial and local/regional needs;
- programs will be more efficient, cost-effective and relevant to local and regional needs;
- regional advisory structures can be established to assist the Provincial Apprenticeship Board (PAB), Trade Advisory Committees (TACs), and the Ministries in more effective technical training for both apprentices and journeypersons;
- local/regional partnerships will be able to pilot new and innovative delivery options which respond to local needs and priorities; and
- the understanding of and commitment to apprenticeship revitalization is enhanced.

Participants in the forums focused discussion on what action can be taken to:

- ensure a more effective and efficient use of funds;
- expand the system and minimize the impact of funding cutbacks;
- develop effective and flexible delivery models; and
- maximize journeyperson upgrading.

Recommendations arising from the forums are grouped at the conclusion of the summary for consideration by the Ministries and the Provincial Apprenticeship Board.

DATA ANALYSIS:

In analyzing the responses collected in the forums, it is noted that recurring themes and issues which crossed all questions emerged. The majority of these issues dealt with the delivery of technical training and the cutback on support funding for apprentices. An issue that is not addressed in the responses is that of the organizational structure of the system.

An important aspect which needs to be considered is that apprenticeship training can be an integrated system which includes secondary school, ELTT, apprentices, journeypersons, trades persons, upgrading requirements and career laddering. There should be no fragmentation within the system if it is to be efficient and effective. The infrastructure should be organized to support this concept.

Another important issue which received attention is that of the workplace based training component of apprenticeship which makes up approximately 80% of the apprenticeship compared to approximately 20% for classroom technical training. The majority of technical training is presently available in the Lower Mainland resulting in 50% of apprentices attending classes there during the block time allocated.

The analysis consisted of grouping all responses into major categories and quantifying the responses within the categories for the report. The report provides information and interpretation of the data in each category. Based on the analyzed data and related issues from the forums, the consultant has provided recommendations for consideration by the Ministries and the Provincial Apprenticeship Board.

MAJOR RESPONSE CATEGORIES:

The major response categories in order of priority from the fourteen forums were:

Delivery Systems	35.9%
Standards	17.8%
Funding	14.3%
Curriculum	12.3%
Scheduling	11.5%
Marketing	8.2%
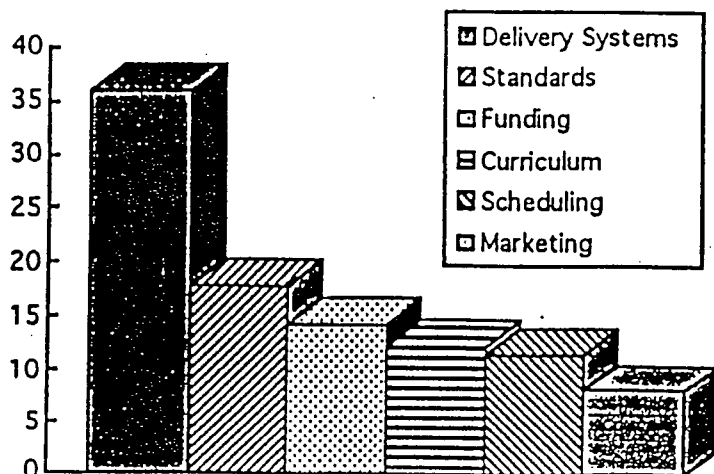
DELIVERY SYSTEMS:

The greatest area of concern expressed in the forums related to delivery systems. The fact that a large majority of apprentices are required to take their technical training in the Lower Mainland area and attend for a block of time was seen as expensive and restrictive for those apprentices from outside the area. In general, the current system was seen as inequitable in terms of access, waiting periods, centralized block scheduling and seat assignments. At the same time, the block delivery system was seen to meet the needs of some industries.

Strong support was evident for access to programs in the community with an industry driven model, more on the job training and less institutional training through:

- employer facilitated instruction;
- mobile instructors and mobile units;
- technology and distance education with tutorial support;
- self-paced instruction packages;
- industry sponsored instruction; and
- the provision of a common core sector based course followed up by specialty courses.

Further it was deemed important that partners in the community or region share resources, facilities and trained staff.

The responses indicated that individual responsibility for learning would provide greater accountability to the system. The flexibility of program delivery, maintaining standards in workplace based training and continued government support of technical training institutions were seen as necessary to meet this objective.

Program delivery suggestions which were evident in the data were:

The use of mobile units, technology, distance education with tutorial support, with access to SSA, ELTT, apprentices and journeypersons	30.3%
Industry driven training with more on the job instruction and less institutional instruction	28.4%
Partnerships (employers, labour, colleges) sharing resources, facilities and personnel/instructors	26.1%
Flexible access, closer to or in community	15.2%

If one regards the first three entries as providing access within or near the community, then it could be stated that program delivery in the community is very strongly supported and that flexible delivery strategies will need to be employed.

Recommendations:

- The Ministries organize infrastructures which facilitate the concept of industry driven partnerships with greater access to training nearer to communities.

- The Ministries facilitate greater flexibility in program delivery through the use of technology, distance education with tutorial support, workplace based technology training, and industry based training with greater responsibility for learning placed on the apprentice.

- The Ministries recognize the discrepancies of population and training demand within the province and encourage training institutions to work cooperatively in providing access, reducing redundancy and supporting on the job technical training.

- The Ministries support innovative options to develop more flexible, efficient training models.

FACILITIES:

Facilities were included in the program delivery section, however, some aspects need to be emphasized. The use of existing and shared facilities, updated equipment from industry and shared resources for the delivery and administration of programs was supported. The development of collaborative partnerships with industry, colleges, unions, employers, government, and communities to provide viable, efficient and effective facilities and programs was endorsed.

Recommendation:

- The Ministries develop options to utilize a variety of available facilities and resources, including those of private industry, for program delivery.

STANDARDS:

The issue of establishing and maintaining provincial, national and international standards was apparent. Forum participants agreed that the development of competencies for the workplace component of apprenticeship and monitoring and recording the achievement of these competencies in a Skills Passport (log book) was essential. Technical instruction and workplace based instructor training, monitoring and assessment through industry evaluation master journeyperson instructors, and upgrading journeypersons were viewed as important foundations for standards. An improved selection process, admitting younger apprentices and those from secondary school programs would provide an opportunity to improve standards. Increasing the number of trades requiring compulsory certification and re-certification was deemed necessary in achieving standards, as illustrated in the table.

Early entrance/younger apprentices	30.5%
Improved technical instruction, workplace-based training, assessment and record keeping	18.7%
Improved selection processes for entry	16.7%
Compulsory certification and re-certification for a greater number of trades	13.8%
Master certification for instructors and journeypersons be made available through upgrading	12.5%
Industry standards integrated into certification	7.8%

Instructors with updated qualifications and pedagogical skills will be required to ensure that standards are met. Industry based evaluations, master qualifications and workplace coaching/training for employers were put forward as a means of achieving this goal.

Upgrading of journeypersons was a contentious issue in that few participants were aware of the funding available and needed to be informed. It should be noted that there was considerable discussion about whose responsibility it should be to upgrade existing journeypersons. For the most part, forum participants agreed that it is the individual's responsibility. Suggested mechanisms for upgrading included delivery through technology, distance education, modular packages, which could be completed at home with the assistance of the employer, and training based on changes in the labour market.

Recommendations:

- The Ministries work towards compulsory certification, re-certification and compulsory upgrading requirements for a greater number of trades.

- The Ministries, in collaboration with partners, work towards a seamless system to ensure that journeypersons have access to upgrading programs to master certification and beyond.

- The Ministries work towards requiring a masters certification for all technical instructors.

- The Ministries ensure that workplace based training be monitored, and that pedagogical and evaluation strategies be made available with the intent of establishing recognized and certified workplace based training sites.

- The Ministries continue initiatives to support Secondary School Apprenticeships and to ensure younger apprentices have training and indenturing access.

FUNDING:

Efficient, shared, accountability

Indentured apprentices are required to attend technical/theoretical training during their apprenticeship. Discussions on funding, based on the current system, resulted in concerns that family hardships, apprentices quitting and diminished quality would reduce the number of apprentices. It was also suggested that younger apprentices without family responsibilities may not be as affected by the lack of funding. Finally, placing apprenticeship training on an equal funding footing with universities through subsidies and fees was discussed. Comments on workplace based training, funded by the employer, were related to providing incentives for the employer and eliciting more commitment from the apprentice.

The returns on funding responsibility point out that participants in the forums strongly support the responsibility of the apprentice in providing funding for technical training through user pay, loans, scholarships, bursaries and savings plans such as wage deferment. A second area supported was the setting up of a compulsory fund into which all employers pay. Other support such as fund raising and incentives were recorded in relation to funding as seen in the following table.

User pay fees and costs through access to loans, bursaries, scholarships, wage deferment and other sources	57.6%
Employer pay/contributes to a common fund for all, compulsory levy	16.7%
User and Employer share costs (training fund)	13.1%
Donations, fund raising and fund reallocations	12.6%

It should be noted that students attending post-secondary institutions are required to pay fees and have access to loans, bursaries, scholarships, etc. At the same time, the issue of the need to increase the status of trades training and the number of apprentices is evident. If status and responsibility are to be attained then equal opportunity for all students should be established. Further, by paying fees the apprentice can gain some tax benefits and assume greater responsibility for learning which demonstrates greater commitment. The final result should be a more equitable, self-funding system.

Recommendations:

- The Ministries establish a user pay technical training system equivalent to that available to post-secondary students.

- The Ministries encourage industry to contribute to scholarships, bursaries and similar support for apprenticeship technical training.

CURRICULUM:

The need for current, updated, industry driven, modularized, competency-based curriculum as opposed to time based curriculum reflects the suggested delivery models. The concept of a core curriculum was endorsed with specialty workplace based training, sponsored by industry. What is important to note is that participants want more flexibility in curriculum and delivery systems which enable them to complete training nearer to or at home.

Update current modules	53.1%
Offer cross trade core modules and specialty modules	46.9%

Recommendations:

- The Ministries continue to revise modules which fit a more flexible delivery model, and which can be the basis for self study.

- The Ministries, in collaboration with industries, develop cross sector core modules and specialty modules.

- The Ministries ensure that all modules meet industry standards with competency based evaluations.

SCHEDULING:

The need for flexible scheduling was dominant. Night school, longer classroom days, day release, weekends, down times and continuous intake were supported. Less time on theory and more on practical at the worksite was suggested. Instruction outside of working hours was clearly supported as seen in the table below.

Scheduling in non working times and seasonal down times	36.6%
Day release	36.1%
Flexible scheduling	27.3%

Recommendations:

- The Ministries limit block scheduling to areas where it is efficient and effective in meeting client needs with the intent of providing greater flexibility in scheduling.

- The Ministries support innovative scheduling arrangements.

MARKETING:

If apprenticeship enrollments are to increase, a marketing strategy will assist in achieving this goal. First and foremost is the need to improve the public status of apprenticeship through media strategies and initiatives, and career development in schools. Apprenticeship is an industry driven training system in which employers need to be aware of the benefits of hiring and training apprentices. Information for parents, employers and equity groups needs to be distributed. Efforts should be focused on encouraging employers engaged in traditional industries to re-invigorate their interest in apprenticeship training. Providing a greater variety of apprenticeable occupations which meet labour market needs and the emerging technological society could encourage more participation.

Participants agreed that there was a necessity to educate partners, including potential apprentices, employers, the PAB, TACs, and training providers to ensure that all communication is understood and access to information is equitable.

Forum groups agreed that tax incentives would encourage greater participation of employers and apprentices. Simultaneously, raising the image of apprenticeships and educating the public were supported.

Tax and Other Incentives	63.2%
Educate Partners and the Infrastructure	18.4%
Initiatives to Raise the Status	18.4%

Recommendations:

- The Ministries continue to support marketing initiatives.

- The Ministries seek ways to provide tax and other incentives.

- The Ministries coordinate communication of information to ensure that all partners become knowledgeable about the apprenticeship system.

- The Ministries continue to develop and promote programs in emerging trades and re-invigorate apprenticeship in traditional industries.

APPENDIX 5

BC FEDERATION OF LABOUR - AGM MOTIONS ABOUT APPRENTICESHIP

SUBSTITUTE RESOLUTION TO COVER C2, C4, C5, C6, C7, C10 and C14

COMMITTEE   Concur _____   Non-Concur _____

CONVENTION   Concur _____   Non-Concur _____

THEREFORE BE IT RESOLVED that the B.C. Federation of Labour adopt and implement a permanent plan of action for a viable apprenticeship training program that includes the following demands:

1. That the provincial government consolidate apprenticeship and trades training under one umbrella authority, which includes Trades Advisory Committees, and similar structures for other trades and occupations as needed, and which has a stand-alone statutory base.

2. That this restructured provincial apprenticeship authority has majority representation from labour and industry and provisions be made for representation from training providers.

3. That this restructured provincial apprenticeship authority be given a new name which reflects the functions of an Industry Training Authority, including the mandate for governance for both apprenticeship and trades training, including the responsibility for setting standards and curriculum, doing province-wide credentialling for trades and occupations, approve and manage the budgets for apprenticeship and training, and monitor results achieved.

4. That the restructured provincial apprenticeship authority not deliver programs directly, but by setting the standards, and issuing province-wide credentials only when the standards have been met, ensure that courses delivered through both public and private post-secondary institutions meet the requirements set by the new entity.

5. That this restructured provincial apprenticeship authority has as a priority the promotion of apprenticeship and training for equity-seeking groups to include women, visible minorities, aboriginal peoples and people with disabilities.

6. Public and private sector employers provide apprenticeship opportunities.

7.   Establish a compulsory levy grant system for trades training to ensure employers fund necessary training and provide opportunities for apprenticeships.

BE IT FURTHER RESOLVED that we oppose the recently-announced cuts to apprenticeship and trades training and demand that the provincial government establish and maintain an adequate level of funding for apprenticeships and trades training; and

BE IT FURTHER RESOLVED that through local union negotiations, proposals be brought forward concerning employer-sponsored apprenticeships and the importance of training the workforce; and

BE IT FINALLY RESOLVED that the Federation oppose programs designed to undermine the apprenticeship system.

res\comp-c2
Nov25/96 · 11:45 am
oteu-15

APPENDIX 6

MINISTER'S SELECT COMMITTEE - RECOMMENDATIONS ON NEW STRUCTURE

*FINAL REPORT
ON
GOVERNANCE*

*MINISTER'S COMMITTEE ON THE INDUSTRY
TRAINING AND APPRENTICESHIP COMMISSION
(ITAC)*

Submitted to the
Minister of Education, Skills and Training
and
Minister of Labour

February 18, 1997

FINAL REPORT

INDUSTRY TRAINING AND APPRENTICESHIP COMMISSION (ITAC) GOVERNANCE ISSUES PAPER

Note: references in this document to ITAC, unless specified otherwise, refer to the Board which will govern the Industry Training and Apprenticeship Commission.

I. INTRODUCTION

In November, 1996, former Minister of Education, Skills and Training and Labour, Moe Sihota, established a committee with representatives of the Provincial Apprenticeship Board, business, labour, education and training providers, and government, to make proposals for broadening access, improving coordination, and increasing the effectiveness of government spending on entry-level trades training (ELTT) and apprenticeship training. The former Minister challenged the Committee to address these issues in a way that encompassed his vision of an expanded industry training and apprenticeship system which is current and relevant to the needs of industry, workers and learners. The Committee was to report back by December 31, 1996.

On December 18, 1996, the Minister's Committee submitted its report to the Acting Minister of Education, Skills and Training and Labour, the Honourable Joy MacPhail. The Committee unanimously recommended the creation of a new governance model -- an Industry Training and Apprenticeship Commission (ITAC). In addition, the Committee recommended that it continue to work on some of the critical next steps issues, in particular, governance structure/composition and the parameters for new legislation.

The Minister accepted the Committee's recommendation to establish the ITAC, and directed it to continue work on the next steps issues and present a report by February 21, 1997. The Minister indicated that she intended to target the Spring session of the Legislature for introduction of new legislation.

Since the recent government reorganization, the Ministers of Education, Skills and Training, the Honourable Paul Ramsey, and Labour, the Honourable John Cashore, have been briefed on, and have indicated their full support for, the ITAC and the Committee's work.

This paper on governance is the result of discussions by Minister's Committee members and their constituencies. It contains a series of recommendations with respect to both the legislation and how the ITAC will operate, but it is not intended to be a legislative framework.

MINISTER'S COMMITTEE ON ITAC

II. LEGISLATION

RECOMMENDATIONS:

- That the legislative authority to establish ITAC be through an enabling act limited to the essentials necessary in legislation and permitting many of the operations and other issues to be dealt with through Regulation and By-Law. This approach will ensure that the timelines for the Spring legislative agenda are met, and will allow for greater flexibility as the ITAC evolves;
- That Regulations be made by the Lieutenant-Governor in Council;
- That the ITAC be an agent of the Crown, subject to the Public Service Act and Public Service Labour Relations Act.

III.   MANDATE/RESPONSIBILITIES

The broad mandate for the ITAC, as set out in the Minister's Committee report dated December 18, 1996, is as follows:

The ITAC will provide and promote a vision of industry-driven training and apprenticeship for the 21st Century that is attractive to workers, learners and industry, and that is consistent with the economic development needs of the Province. The ITAC will have the authority to: make decisions; effect allocations; coordinate credentialled industry training and apprenticeship; and be responsible for ensuring that training delivered meets the credentialling standards as established by the ITAC. The ITAC will not be an advisory board. The mandate of the ITAC will be to:

- create a new industry training and apprenticeship system which has the capacity to increase/expand the number of trained people, and to increase the contribution of all partners to the system;
- strengthen and enhance industry training, initially apprenticeship and ELTT, and ensure there are linkages between these areas;
- set standards and criteria for province-wide credentials for industry training including ELTT and apprenticeship, and apply these to both new and existing training programs;
- monitor and enforce standards and quality of training and credentials, and ensure transferability and portability across training providers;
- provide the Minister(s) with both a long term plan and an annual plan which specifies the Commission's goals/objectives for the year, links to the broader government-wide goals for training and education, and is based on industry needs and priorities. The plan will also include a description of how the operating funds of the Commission will be spent to carry out these goals/objectives;

- oversee the administration of the industry training and apprenticeship system, including contractual arrangements with existing public and private institutions to deliver the training courses;
- establish, implement and monitor accountability mechanisms to ensure training being delivered meets provincial standards and credentialling criteria;
- make and implement decisions regarding the allocation of funding for industry training, including ELTT and apprenticeship, among colleges and institutes and other ITAC approved deliverers on the basis of the voted estimates and appropriations supplied by the Ministries.

RECOMMENDATIONS:

- That the Industry Training and Apprenticeship Commission (ITAC) be an industry-driven, senior-level, strategic, policy board, rather than a working level, administrative board;
- That, in keeping with the strategic policy focus, the ITAC have the authority to delegate responsibilities as appropriate to standing or executive committees, industry/trade advisory committees, or the CEO/staff;
- That the legislation give the ITAC the authority to make By-Laws respecting policy and operations;
- That the legislation require the ITAC to submit to government for approval both multi-year business and training plans and annual operational/funding plans.

A. Powers

RECOMMENDATIONS:

- That the legislation set out the legal powers and authorities of the ITAC;
- That, in order to fulfill its mandate, the ITAC have certain program and operating powers and authorities specified in legislation, including:

(1) Powers and Duties of ITAC

- power to designate trades and occupations, and recognize skills acquired
- power to create and grant credentials, approve curriculum and examinations
- power to set fees and collect revenue
- power to establish standing or executive committees and industry/trade advisory committees (including sector committees as appropriate) and to appoint members
- it shall be the duty of ITAC to consult with its established committees and to hear their advice
- it shall be the duty of ITAC to hear from workers/learners on their issues and interests

- it shall be the duty of ITAC to consult with equity seeking groups on their issues and incorporate their issues into the ITAC agenda
- power to establish By-Laws
- power to request the appointment of additional members to address specific issues and/or constituencies
- power to establish and implement appeal procedures/mechanisms
- power to advise government and make recommendations on assessments and compulsory certification
- power to delegate authorities to committees and/or the CEO, as appropriate

(2) Powers of Committees

- powers delegated by the ITAC
- power to advise ITAC on industry needs/priorities, content of credentials, prior learning assessment, curriculum, examinations, and other related matters

(3) Powers of CEO

- powers delegated by the ITAC Board
- power for the administration and operations of the Commission, with respect to staffing and other human resources matters, and financial administration

(4) Powers/Duties of the Lieutenant-Governor in Council

- power to designate compulsory trades
- power to assess employers and/or employees for the costs of training
  - it shall be the duty of the Lieutenant-Governor in Council to consult with the ITAC and to hear their advice and/or recommendations on assessments and compulsory certification
- power to appoint members to ITAC and to appoint the Chair
- power to appoint the CEO, on the recommendation of the ITAC
- power to approve conflict of interest guidelines
- power to make Regulations

IV. STRUCTURE/COMPOSITION

A. Structure of the Board

RECOMMENDATIONS:

- That the ITAC be an agent of the Crown, governed by a Board of Commissioners.
- That the ITAC be a partnership of 4 parties -- business, labour, education/training, and government.

- That members, while bringing the expertise and perspectives of their community of interest, will have, as their paramount concern, the best interests of the mandate and objectives of the ITAC as well as the overall education/training system, rather than their community of interest (Note: this will be set out in legislation).
- That the structure of the ITAC be as follows:
  - a majority of business and labour members, equal in numbers;
  - geographically and demographically representative;
  - representative of the trades and, in future, designated occupations;
  - representative of business (small, medium and large) and of the range of industry (i.e., existing/traditional and emerging industries: e.g., construction, manufacturing, resource development, technology, knowledge, etc.)
- That all members appointed to the ITAC be of a very senior level, with a connection to, experience with, industry training and apprenticeship;
- That all members appointed to ITAC will be responsible for consulting with their broader constituencies.
- That appointments be made by the Lieutenant-Governor in Council;
- That terms of appointments be staggered to ensure that, while there is turnover, there is also continuity of membership on the ITAC.

B. Composition

RECOMMENDATIONS:

- That the broad framework model for the composition of the ITAC be as follows:

8	Business
8	Labour
4	Government (representing Education, Skills and Training, Labour, Employment and Investment, and the Private Post-Secondary Education Commission)
4	Public Post-Secondary Education/Training (2 representing senior system management and 2 representing employee groups)
1	Chair (to be appointed by the Lieutenant-Governor in Council for an initial 2 to 3 year term, after which time, as the ITAC gains experience, Cabinet may appoint the Chair upon the consensus recommendation of the ITAC)
1	Chief Executive Officer (ex-officio)

- That the ITAC operate by consensus in decision-making.
- That, in the event there is a non-consensus, all members vote unless they have a conflict of interest on the issue. That the voting procedures be as follows: a minimum of 50 percent of each constituency shall be the required quorum, with a simple majority of each constituency voting in favour.

FINAL REPORT

- That membership within the business, labour, education/training, and government constituencies will reflect equity and equity-seeking groups and endorse principles of inclusiveness.
- That the ITAC meet monthly, but should meet a minimum 6 times per year. However, standing or executive committees may need to meet more frequently.

C. Committees

RECOMMENDATIONS:

- That the legislation specify the ITAC has the authority to establish Standing or Executive Committees and Industry/Trade Advisory Committees.
- That it be the duty of the ITAC to consult with established committees and to hear their advice.
- That it be the duty of the ITAC to hear from workers/learners on their issues and interests.
- That the composition of committees generally reflect the principles for representation set out for the ITAC.

(1) Standing or Executive Committees

RECOMMENDATIONS:

- That, because the ITAC will be a strategic, direction-setting board of senior level representatives, the legislation set out that the ITAC has the authority to establish Standing or Executive Committees to address the following (but not be limited to the following) functional areas of responsibility:
  - Credentials (including designations, curriculum and examinations)
  - Appeals
  - Labour Market Information/Economic Outlook
  - Strategic Planning and Budgets
  - Audit and Outcomes
  - K-12 Liaison
  - Apprenticeship
- That these committees be chaired by ITAC members, but may be comprised of both ITAC and non-ITAC members. (Note: this will ensure broader representation from all constituencies);
- That committee members have a high level of knowledge and expertise in the subject matter of the committee;
- That committees have the authority to make recommendations to the ITAC or to make decisions within areas of responsibility delegated by the ITAC.

FINAL REPORT

(2) Industry/Trade Advisory Committees

RECOMMENDATIONS:

- That the ITAC be given the authority in the legislation to establish industry/trade advisory committees, including sector-focused committees if deemed appropriate. These committees would have a broad mandate to:
  - provide labour market information/intelligence;
  - provide advice on industry training needs and priorities;
  - provide advice on the designation of trades and occupations;
  - define training outcomes and industry standards for trades/occupations, including curriculum and examinations;
  - assess the quality of training outcomes and standards;
  - identify new trades/occupations;
  - identify required equipment for training and assist in procuring this equipment for training institutions;
  - advocate for the ITAC and all training operating under the ITAC umbrella;
  - assist training programs to obtain practical experience opportunities for students and instructors;
  - procure bursary and scholarship support; and
  - assist in marketing occupational opportunities to youth.
- That the industry/trade advisory committees report to ITAC or its Standing or Executive Committees as established by decision of the ITAC;
- That members on industry/trade advisory committees be knowledgeable of industry training and apprenticeship, and be inclusive of the education/training community.

V. OFFICERS AND EMPLOYEES

RECOMMENDATIONS:

- That the legislation specify the Chief Executive Officer (CEO) reports to and is accountable to the ITAC;
- That some of the ITAC's responsibilities (particularly the administrative and operational responsibilities) be delegated to the CEO and staff, as appropriate;
- That the CEO have the authority and accountability for Commission staffing/human resources issues and for prudent financial administration;
- That the CEO be an ex-officio member of the ITAC;
- That employees of the Commission be covered by the Public Service Act, the Public Service Labour Relations Act, and the Superannuation (Public Service) Act.

FINAL REPORT

- That, because both the ITAC and the government have an interest in the selection of the CEO and would want to be involved in final decisions on the CEO's appointment, the appointment be made by the Lieutenant-Governor in Council on the recommendation of the ITAC.

VI.   CONFLICT OF INTEREST RULES/REGULATIONS

RECOMMENDATIONS:

- That the legislation require the ITAC to establish, through By-Law, appropriate Conflict of Interest Guidelines to be approved by the Lieutenant-Governor in Council.

VII.   REPORTING

RECOMMENDATIONS:

- That, since the ITAC is a partnership which needs the active involvement of all stakeholders, there be a dual reporting to the Ministers responsible for education, skills and training and for labour.

VIII.   INTERIM STRUCTURE

It was agreed that there needs to be an interim structure which:

- ensures continuity until the ITAC legislation is passed and proclaimed and the ITAC is established officially;
- demonstrates movement to a new partnership;
- recognizes that the Apprenticeship Act will remain in place until the new legislation is proclaimed;
- recognizes that the PAB has considerable day-to-day work, e.g., appeals, which must continue as long as the Apprenticeship Act is in effect;
- recognizes that the new ITAC cannot become bogged down in day-to-day PAB administration and lose its strategic policy focus.

RECOMMENDATIONS:

ITAC

- That the new ITAC be appointed, called the Provincial Apprenticeship Board for legislative purposes until the new legislation is passed and proclaimed

FINAL REPORT

- That membership reflect the new structure/composition set out above, with a core of existing PAB members appointed within the ITAC constituencies -- business, labour, education/training, government
- That a Chair be appointed who is acceptable to all parties
- That membership be reviewed upon formal establishment of the ITAC, but may not need to be changed
- That the interim ITAC have responsibility for strategic planning and transition planning from the current structure to the new, formal ITAC
- That the interim ITAC also have responsibility for existing day to day PAB functions; however, this will be delegated to an Apprenticeship Committee

Apprenticeship Committee

- That an Apprenticeship Committee responsible for day to day PAB functions be appointed
- That membership on the Apprenticeship Committee be comprised of a core of existing PAB members
- That the Apprenticeship Committee reports to the ITAC
- That the role of the Apprenticeship Committee be reviewed upon formal establishment of the ITAC (September/97) -- it could be disbanded, or could be reconfigured into the Apprenticeship Standing Committee (referenced earlier in this paper)

Interim Chief Executive Officer

- That an interim CEO be named as quickly as possible in order to move forward with the implementation plan and to ensure continuity through transition and implementation/operation of the ITAC.

Strategic Planning
Transition Planning

Day to Day PAB Functions
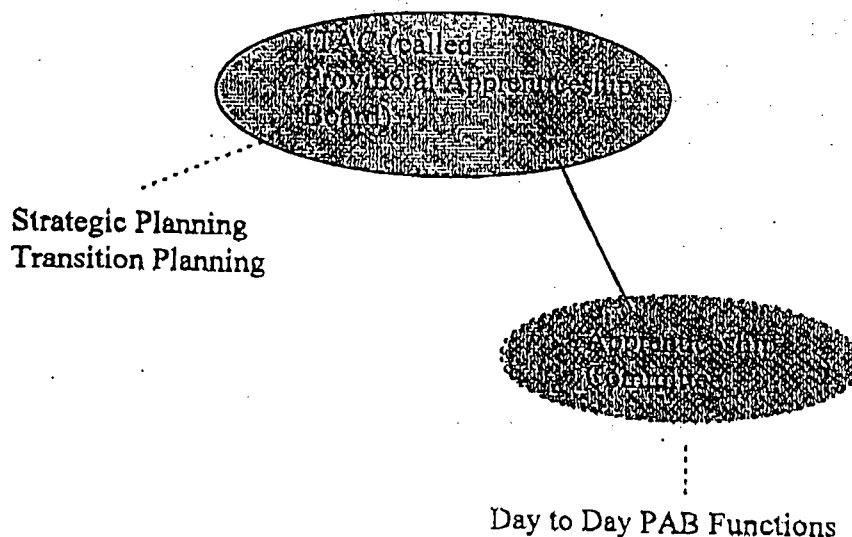
APPENDIX 7

INTERVIEW SCHEDULE FOR THE APPRENTICES

Demographic information

1. Age, sex

2. Schooling: pre- and post- secondary education, current extra-curricular schooling, future/planned schooling

3. Socio-economic factors:

    a) Did mother, father, or a significant other in your family also go through an apprenticeship? Who? When? Where? What trade? Do they still work in that trade? If no then see (b) below

    b) How did you hear about apprenticeship? What prompted you to undergo an apprenticeship? When did you start? How did you choose where you are apprenticing? Tell me how you chose the trade you are apprenticing?

    c) Tell me a little bit about your growing up. Where did you live? What kind of neighborhood was it?

Apprenticeship information

1. Actions:

    a) Describe a typical day a work.

    b) What specific skills are you working on right now? Probe: Did you have to learn other skills first, before you could tackle the ones you just described? What were they? How long did it take to learn them? How long ago was this? What was the first thing that you learned on the job.

    c) What can you tell me about some kind of "homework" you might have had.

d) What makes you different from other workers, journeypersons perhaps, on the jobsite? Probe: Are you treated differently? By whom?

e) Let's take a regular day at work, compare what you have to do with what others have to do.

f) When you're learning a new skill, do you ever use written, audio, video, or any other type of materials? Probe: can I see them, perhaps get a copy of them?

g) Besides the "master" or the journeyperson you're apprenticed to, tell me about others who are teaching you things.

h) Tell me a little bit about three or four of the most important things you've learned so far?

2.   Intentions:

a) As you go along and you're getting closer to the end of the apprenticeship, what are you trying to get out of this training? Probe: Would you say this has changed over time? How?

b) Tell me about the days when you feel you haven't learned anything.

c) Do you feel that the journeyperson always goes about showing you things in the same manner? Probe: tell me a little bit about that.

d) What happens when you mess up? You can use an example if you remember.

e) When you go to school, how do you stack up with the other apprentices in your class? Why do you think that is so?

f) What did you think you were going to learn during the apprenticeship?

g) What did you think you role as an apprentice was going to be like?

3. <u>Beliefs</u>:

a) Do you feel you have changed since the beginning of the apprenticeship? How?

b) What is your role as an apprentice in the organization here.

c) If you knew an ideal journeyperson for a cooking apprenticeship, what would this person be like?

d) If a friend of yours asked you about a cooking apprenticeship, what would you say?

e) What are you going to do when you're finished this apprenticeship?

f) When you're a journeyperson and you take on apprentices, what will you expect them to be like?

g) Besides experience, how is a journeyperson different from an apprentice?

APPENDIX 8

INTERVIEW SCHEDULE FOR THE MASTERS/TRAINERS

<u>Demographic information</u>

1.   Age, sex

2.   Schooling: pre- and post- secondary education, current extra-curricular schooling, future/planned schooling

3.   Socio-economic factors:

a) Did mother, father, or a significant other in your family also go through an apprenticeship? Who? When? Where? What trade? What do you remember most about your apprenticeship? Can you describe key moments/figures of your apprenticeship?

b) How did you hear about apprenticeship? What prompted you to take on apprentices? When did you start? How did you choose the apprentices?

c) Tell me a little bit about your growing up. Where did you live? What kind of neighborhood was it?

<u>Apprenticeship information</u>

1.   <u>Actions:</u>

a) How do you prepare or plan when you know you're going to have to teach something new to the apprentice.

b) What do you do when you're teaching the apprentice?

c) When you teach, how long does it last? Probe: how often in a normal day? Are all days the same?

d) When you need to know how well the teaching is going, what do you do? Probe: does anyone help you with this? Do you have any forms or other documents that you use?

e) How different are you when you're teaching as opposed as when you're not teaching?

f) What methods do you use to make sure that the apprentice has learned what you've taught? Probe: can you assess all that you teach that way?

g) What types of things do you teach? Probe: do you use any type of documents or other things to help with the teaching?

h) Why would you let someone else help with the teaching?

2.   Intentions:

a) What are you trying to achieve with the apprentice? Probe: what kinds of things do you feel have to be done? Have you any documents that help you here?

b) Do you think that all apprentices are the same, that you can teach them all the same way?

c) If you're teaching, say, deboning poultry, how do you know when to stop teaching that particular skill?

d) Besides skills are there other things that you feel you have to teach?

e) What do you want apprentices to get out of an apprenticeship?

f) When you have more than one apprentice, do you teach them all the same way?

g) I you had to compare a journeyperson and an apprentice who'd just finished an apprenticeship, how do they stack up?

3. Beliefs:

a) Who is the model or "hero" who guides your teaching? Probe: what is it about him/her that you most admire?

b) If you could get an ideal apprentice, what would he/she be like? Probe: what about an ideal master? What about an ideal apprenticeship program?

c) What are the attitudes or behaviors that you feel you must pass on to the apprentices?

d) If you were in charge of a number of masters, what would you say to them?

e) What motivated you to become a master?

f) Some people say that anyone can become a master, what do you think?

APPENDIX 9

APPLICATION TO REGISTER AN APPRENTICE

Province of British Columbia

Ministry of Skills, Training and Labour

Skills Development Division

APPLICATION TO REGISTER AN APPRENTICE
COMPLETE IN FULL
DO NOT WRITE IN SHADED AREA

COLLECTION OF PERSONAL INFORMATION (PLEASE READ CAREFULLY)
The information collected on this form is collected under the authority of the Apprenticeship Act R.S.B.C. 1979 C.17 and will be used for processing your Application for Apprenticeship. Inquiries regarding the collection of this information should be directed to the Director of Apprenticeship, Ministry of Skills, Training and Labour, Room 220 - 4946 Canada Way, Burnaby, British Columbia V5G 4J6, Telephone No. (604) 660-7432.

APPRENTICE

SURNAME	GIVEN NAMES	SOCIAL INSURANCE NUMBER

PRINTING NAME	BIRTHDATE YY MM DD	**OFFICE USE ONLY**

ADDRESS		AREA OF RESIDENCE

EQUIVALENCY FOR IN-SCHOOL TRAINING CREDITS
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

CITY/TOWN	PROVINCE	POSTAL CODE

E.L.T.T. ☐   S.S.A. ☐

TELEPHONE NO.	CANADIAN CITIZENSHIP? ☐ YES ☐ NO	GENDER ☐ MALE ☐ FEMALE	

MONTHS GRANTED FOR PRACTICAL TRAINING ☐

SECONDARY EDUCATION

PRACTICAL SKILLS LEVEL CREDIT
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

SECONDARY SCHOOL	LOCATION	GRADE COMPLETED	GRADUATED YES ☐ NO ☐

TRAINING RECORD BOOK ISSUED ☐

OGRAM ☐ ACADEMIC ☐ VOCATIONAL ☐ GENERAL	☐ TECHNICAL ☐ G.E.D.

AGREEMENT ☐

POST SECONDARY EDUCATION

APPRENTICESHIP START
YY MM DD

COURSE	INSTITUTION	DATE COMPLETED YY MM

EXPIRY DATE
YY MM DD

COURSE	COLLEGE/UNIVERSITY	LEVEL	DATE COMPLETED YY MM

COMPLETION OF THIS SECTION IS VOLUNTARY

WORK EXPERIENCE RELATED TO TRADES

Information collected will be used to assist the Apprenticeship Program in measuring and supporting the participation of designated groups.

EMPLOYER'S NAME	TYPE OF WORK	START DATE YY MM	END DATE YY MM

I am a member of the following designated group:

Women	☐
Aboriginal People	☐
People with Disabilities	☐
Visible Minority	☐

DATE STAMP HERE	*PLEASE RETURN APPLICATION TO:*

FORM 002

EMPLOYER/JOINT TRAINING BOARD/UNION

NAME OF ORGANIZATION (LEGAL NAME)

PRINT NAME

NAME OF OWNER

IN-SCHOOL TRAINING DELIVERED IN-SERVICE   YES ☐

EMPLOYER/JOINT TRAINING BOARD/UNION

INDUSTRY

STREET ADDRESS

MAILING ADDRESS (IF DIFFERENT THAN STREET ADDRESS)

INDUSTRY CODE

CITY/TOWN	PROVINCE	POSTAL CODE

AREA ID FOR EMPLOYER

CONTACT PERSON	TELEPHONE	EXT.

FAX NO. / CELL PHONE NO.	JOURNEYPERSON NAME (IF DIFFERENT THAN CONTACT)

APPRENTICE TRADE

TRADE CODE

JOURNEYPERSON WAGE PER HOUR ▷ $	APPRENTICE WAGE PER HOUR ▷ $	JOURNEYPERSONS THIS TRADE	NO. OF EMPLOYEES

APPRENTICESHIP START DATE

TRAINING CONSTRAINT (TO BE COMPLETED BY COUNSELLOR)

_____   PLEASE PRINT NAME   DATE
AUTHORIZED EMPLOYER/JOINT BOARD
UNION SIGNATURE

_____   PARENT/GUARDIAN (IF UNDER 19)   DATE
APPRENTICE SIGNATURE

_____   DATE
DIRECTOR OF APPRENTICESHIP OR DESIGNATE

(DISCLOSURE OF PERSONAL INFORMATION (PLEASE READ CAREFULLY)

signing this Application Form I certify the above information is accurate and I give the Ministry of Skills, Training and Labour permission to disclose that I am an apprentice to other Ministries of the Province of British Columbia, Colleges and Institutes and the Federal Government and to disclose to Apprenticeship officials in other Provinces and Territories, details of my Apprenticeship Training Record.

APPENDIX 10

TECHNICAL TRAINING DOCUMENTS: PROGRAM OUTLINE AND LEARNING
GUIDES SAMPLE

APPRENTICESHIP B.C.

Cook

Apprenticeship Program Outline

Training works!

COOK

APPRENTICESHIP
PROGRAM OUTLINE

December 1993

FOREWORD

This Training Program is issued by the Director of Apprenticeship for use in apprenticeship training classes sponsored by the Ministry of Advanced Education, Training and Technology. Indentured apprentices will be directed to the Apprenticeship Training classes in accordance with the General Regulations made pursuant to the Apprenticeship Act of British Columbia.

This training program is intended to provide a logical order of study so that apprentices, no matter where they are in the Province, will receive the same training at the same time in the apprenticeship.

Safe working habits in this program are an implied part of the training and must be stressed throughout.

The Training Program was prepared with the advice and assistance of the Director's Provincial Trade Advisory Committee comprised of representatives of management and labour and in co-operation with the Apprenticeship Branch of the Skills Development Division.

The Ministry of Advanced Education, Training and Technology would also like to acknowledge the dedication and hard work of:

> Chuck Currie, Earl's Restaurants
> Ivor MacGregor, Cal Van Canus
> Wolfgang Brunner, Bridge House Restaurant
> Ed Zdancewicz, Apprenticeship Branch
> James Kennedy, Food and Service Resource Group, Course
> Writer

COOKING APPRENTICESHIP
PROGRAM OUTLINE

EVALUATION

At the completion of each year's training program, each apprentice will complete an evaluation examination based on that year's work. The apprentice must achieve a 70% pass mark before advancing to the next year of training.

*NOTE: The apprentice will be graded in practical competencies with emphasis placed on:
- appropriate utensils used
- ingredients measured or cut accurately
- recipe followed correctly
- product has desired texture, colour and temperature
- product has neat and attractive appearance
- product is appropriately seasoned or flavoured
- work was well organized with good mis-en-place and safe work habits
- work station kept clean and tidy
- production time within industry expectations

PRESCRIBED TEXTS

- Professional Cook Training Learning Guides
  Lines A through L inclusive
  Province of British Columbia
  Ministry of Advanced Education, Training and Technology

- Professional Cooking - Second Edition
  by Wayne Gisslen
  John Wiley and Sons, Publishers

These are the standard texts for all three years of instruction. It is required that apprentices purchase these texts prior to attending the appropriate level of training.

SUPPLEMENTARY TEXTS

- Food Safe Handbook Levels I & II
- What is WHMIS
- Employment Standards Bulletins
- Responsibility That We All Share - B.C. Human Rights Council

TABLE OF CONTENTS

Second Year		Page	Time (in %)
Line A	**Vegetable and Starch Cookery**		**5**
Unit 1	Prepare Vegetables and Fruits	90	
Unit 2	Prepare Farinaceous Products	92	
Line B	**Meat and Poultry Cookery**		**12**
Unit 1	Cook Meats by Dry Heat Methods	94	
Unit 2	Cook Poultry by Dry Heat Methods	96	
Unit 3	Cook Meats by Moist Heat Methods	98	
Unit 4	Cook Poultry by Moist Heat Methods	99	
Line C	**Seafood Cookery**		**4**
Unit 1	Cook Fish Using Dry Heat Methods	101	
Unit 2	Cook Fish Using Moist Heat Methods	103	
Line D	**Stocks, Soups and Sauces**		**16**
Unit 1	Prepare Stocks and Glazes	104	
Unit 2	Prepare Soups	107	
Unit 3	Prepare Mother and Secondary Sauces	109	
Line E	**Meat, Poultry and Seafood Cutting and Processing**		**12**
Unit 1	Identify Factors Affecting the Cooking of Beef, Veal, Lamb and Pork	112	
Unit 2	Cut Beef, Veal, Lamb and Pork	113	
Unit 3	Process Poultry	116	
Unit 4	Process Seafood	117	
Line F	**Cold Kitchen**		**7**
Unit 1	Prepare Buffet Salads, Cheese, Meat and Vegetable Platters	119	
Unit 2	Prepare Salad Dressings and Cold Sauces	121	

Second Year (cont'd)		Page	Time (in %)
Line L	**Human Resource Developments**		8
Unit 1	Describe Principles of Communication	149	
Unit 2	Give and Receive Feedback	151	
Unit 3	Describe Assertive Behavior	152	
	Orientation / Evaluation		3
			————
			100%

COOKING APPRENTICESHIP
PROGRAM OUTLINE

Line A   **Vegetable and Starch Cookery**

Unit 1   **Select and Store Vegetables and Fruits**

Learning Tasks

---

1. Describe selection and storage of vegetables and fruits including:

    A. Use of various packaging methods:
        - fresh
        - frozen
        - canned
        - dehydrated

    B. Quality Indicators:
        - freshness
        - colour
        - flavour
        - size
        - general appearance

    C. Storing and handling procedures:
        - correct storage temperatures
        - stock rotation
        - cleanliness and sanitation
        - specific storage methods
        - prevention of freezer burn
        - insect prevention

Practical Competency

---

1. Demonstrate correct storage and handling of vegetable and fruit products.

Line A   **Vegetable and Starch Cookery**

Unit 2   **Prepare Vegetables and Fruits**

Learning Tasks

---

1.   Describe methods of preparing vegetables and fruits including:

    A.   Correct procedures for:
- removal of foreign matter
- removal of stems, cores, peels, etc.
- refreshing
- secondary storage

    B.   Basic cuts and shapes:
- (1/8" stick) allumette
- (1/4" stick) batonet
- (1/16" dice) brunoise
- concasser
- dice
- emincer
- (1/16" stick) julienne
- shred
- (1/2" stick) baton

    C.   How cooking affects:
- texture
- flavour
- colour
- nutrients

    D.   Proper procedures for:
- blanching
- boiling
- steaming
- pan frying
- braising

Line A   **Vegetable and Starch Cookery**

Unit 2   **Prepare Vegetables and Fruits**

Learning Tasks

---

1. D. cont'd

- baking
- broiling
- deep frying
- pureeing
- stuffing
- glazing

Practical Competency

---

1.   Correctly remove foreign matter, stems, cores, peels etc. from vegetables and fruits.

2.   Correctly store vegetables and fruits after primary processing.

3.   Perform all basic cuts and shapes of vegetables and fruits using the correct tools.

4.   Store prepared vegetables and fruits for future use.

5.   Blanch, boil and steam vegetables and fruits.

6.   Demonstrate correct methods of:

   A.   Holding finished product for service.

   B.   Chilling and holding for future use.

Learning Guide Line **A**
VEGETABLE AND STARCH COOKERY
Level I

PROFESSIONAL COOK
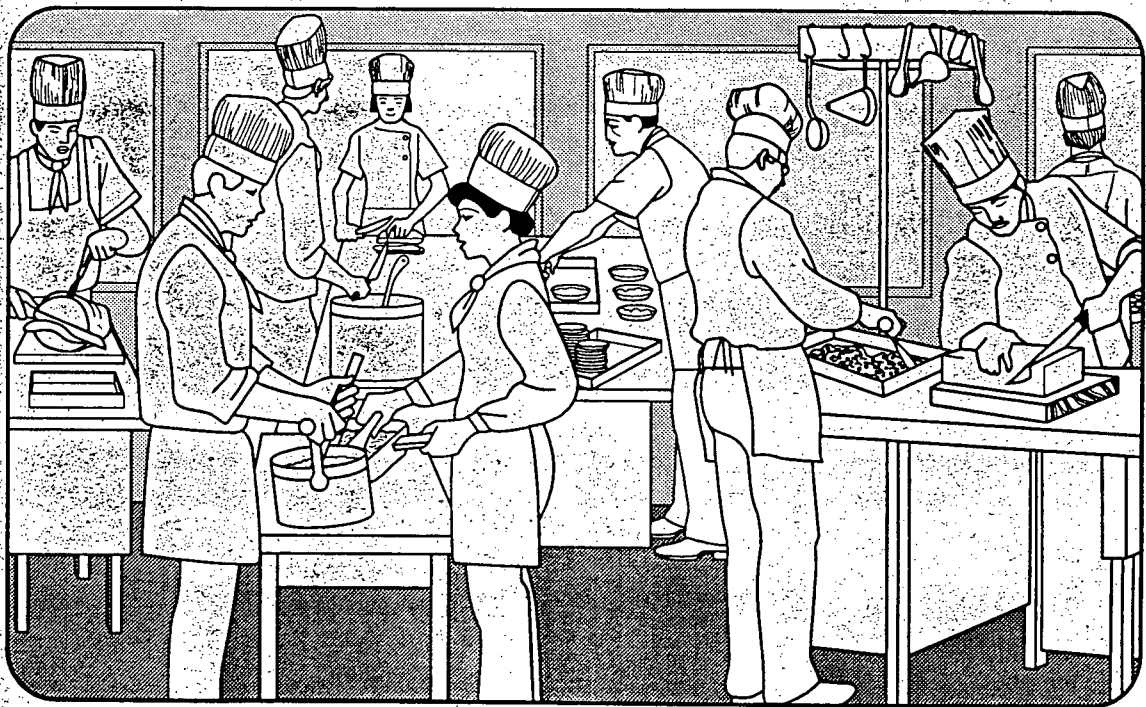
Province of British Columbia
Ministry of Advanced Education, Training and Technology
and the
Centre for Curriculum and Professional Development
1994

TOURISM

Contents

Level I

Competency A-1

Prepare Vegetables
(Level I)

Requirements

Goals

One of the skills expected of a cook is in the preparation and presentation of nutritious vegetables. It is important to understand the effects of cooking on the texture, flavour, nutritional value and colour of vegetables in order to select the correct cooking methods.

On completion of this competency, you will be able to

- describe cutting techniques and the basic cuts and shapes
- identify a variety of vegetables
- prepare vegetables for service

Competencies

WRITTEN: On the Written Competency at the end of Level I of Line A, "Vegetable and Starch Cookery", you will be tested on your ability to identify vegetables and describe their preparation for service.

You must achieve at least 70% on the Written Competency.

PRACTICAL: You will be required to cook/prepare a variety of vegetables as directed by your instructor in accordance with the menu requirements, and to industry standards, for production time.

You must achieve at least 70% on the Practical Competency.

Resources

You will need to refer to the following resources:

TEXT: Gisslen, W., Professional Cooking, 2nd edition, 1989, John Wiley & Sons

Learning Task 1: Describe selection and storage of vegetables

Upon delivery, vegetables should be inspected for the following qualities: freshness, colour, flavour, size and general appearance.

Freshness

The most important factor to consider in the selection of vegetables is freshness. Buy vegetables that are in season; they are the most flavourful and usually reasonably priced.

Colour

The colours should be bright, natural and even.

Flavour

Young vegetables which have been recently harvested have a relatively high sugar content which gives them a slightly sweet taste. Vegetables which have been stored for a long period of time lose their sweetness as their sugar changes into starch. This is particularly noticeable in beets, carrots, corn on the cob and peas.

Size

Overgrown vegetables are not desirable for use in the kitchen, as they usually lack flavour and sometimes are woody. This is especially true of carrots.

General Appearance

The vegetables you select should be firm, uniform in size and shape and should be clean. Avoid any vegetables that have been bruised, cracked or show any signs of deterioration.

Selection and storing methods of common vegetables

The following techniques are recommended for selecting and storing those vegetables commonly used in the food industry.

Asparagus (asperges)

There are only a few varieties of asparagus used commercially. The two types most widely used are based on the colour of their spears - white or green.

White asparagus is seldom grown in Canada and is therefore very hard to find fresh; it is mostly marketed canned. Fresh green asparagus appears on the market from early March through June and California has a crop from October through November.

Green asparagus should have a bright, fresh looking colour. The stalks should be straight, and the tips should be pointed, compact and crisp. The stalk should break with ease at, or slightly above, the woody portion of the stem and there should be only about an inch of woody base to trim at the bottom. If the asparagus spear has met all these requirements, you should remember that the thicker the spear, the more tender the asparagus. The asparagus has fibers which are similar to green beans. In the larger asparagus spears, these fibers are separated by more of the meaty pulp, which will make the spear more tender after cooking.

Asparagus is one of the most perishable vegetables on the market and needs to be kept in the coldest part of the cooler. For freshness it is recommended that you wrap the base of the spears with a damp towel.

Green beans (haricots verts)

Green beans have long straight pods. String or stringless varieties are available. Select only beans which are crisp enough to snap easily when bent between your fingers. Green beans which have started to ridge and bulge are most likely old, tough and leathery. String beans come in green and yellow; the yellow are often called wax beans. The pods can be flattened or rounded, and selection is based on personal preference since both are considered equally good.

Notes: _____

_____

_____

Fresh beans can be stored for only a brief period of time. The ideal
temperature range is 4° to 7°C (40° to 45°F) and ideal humidity is 85%.
Washing the beans before putting them in the cooler will help prevent
dehydration.

Beets (betteraves)

Beets are available on the market all year round. They can be sold with or
without their tops, and beet tops can also be sold separately. The colour
and appearance of the tops are very important, as they are only pleasing to
the palate when they are young and tender. Select leaves which are thin
ribbed, and a fresh green colour, not wilted or slimy. Fresh, top quality
beets are smooth and hard, and a deep red in colour.

The ideal temperature for storing beets is about 0°C (32°F) with a humidity
of around 95%. As the leaves are extremely perishable, beets with the tops
attached should be stored only briefly.

Broccoli (brocoli)

Broccoli, a member of the cabbage family, is available throughout the year.
When selecting broccoli, look for a rich green colour in the heads, leaves
and the stems, and for florets that are tightly closed. The heads should
have a dark green purplish colour. The size of the heads do vary, but this
has no effect on the eating quality. The stalks of the broccoli should be
tender and firm.

Broccoli should be stored only briefly, ideally at 0°C (32°F) with a
humidity of 95%.

Brussels sprouts (choux de Bruxelles)

Brussels sprouts resemble miniature cabbages. Select sprouts which are
compact and bright in appearance with a good green colour. Sprouts which
are soft and puffy are poor in quality and lack flavour. Wilted and yellow
leaves indicate aging.

For ideal storage conditions, refrigerate at 0°C (32°F) with a humidity of
90%. To retain freshness and colour, use as soon as possible.

Notes: _____

_____

_____

Cabbage (chou)

There are numerous varieties of cabbage, but the characteristics for quality are generally the same for all types. Some varieties used in the kitchen are:

Green cabbage (chou blanc)

The most widely used cabbage, and the one you are probably most familiar with is the green cabbage. Select heads that are firm. light green and that have no cracks. The leaves should be crisp and finely ribbed.

Purple cabbage (chou rouge)

Purple cabbage is identical to green cabbage except for the colour.

Savoy cabbage (chou frisé)

Savoy cabbage has crimped leaves which are yellowish/greenish in colour, it is softer than green or purple cabbage.

Ideal storage conditions for cabbage are 0°C (32°F) and 90% humidity. Cabbage will wilt quickly in dry storage.

Chinese cabbage (chou de Chine)

Chinese cabbage, also known as celery cabbage, nappa cabbage or sui choy, refers to one of the many cabbage varieties developed in China. Chinese cabbage has become widely used in the West in salads and Chinese cookery. It has a longish, tightly closed head and combines characteristics of romaine lettuce and cabbage.

Carrots (carottes)

In selecting carrots, choose firm, well shaped, smooth carrots with no side roots. The colour should be orange red and the tops should be well trimmed. Wilted and soft shriveled carrots, or carrots with large green areas (sunburn) at the top should be avoided. Do not buy carrots which have green shoots or yellow tops. They usually are too old, or have been

Notes: _____

_____

_____

In selecting parsley, look for bright green, fresh looking leaves. Avoid parsley that has wilted or become yellow, or that shows signs of rot. Fresh parsley is stored in the refrigerator.

Peas (pois)

The most commonly used variety are green peas (petit pois) which are picked while they are still immature. They should be shelled immediately after picking and served as soon as possible, as peas quickly lose their flavour once harvested. Peas should be very green in colour, smooth textured, and firm to the touch. Peas that have been left to mature on the plant are made into dried peas for use in soups and as seeds.

Peppers (poivrons)

There are numerous kinds of peppers available on the market, however the sweet, mild pepper is the most commonly used. It is either green or red in colour, depending on the stage of maturity. Peppers are an excellent source of Vitamin C.

Select peppers that are well shaped, firm and have a uniform glossy colour. Pale colour and soft seeds are signs of immaturity. Avoid peppers with sunken or blistered spots as these are signs of decay.

Mature peppers should not be stored below 7°C (45°F). The ideal temperature is around 8° to 9°C (46° to 48°F) with a humidity of 85%. Under these conditions, peppers can usually be stored for up to two weeks.

Potatoes (pommes de terre)

Potatoes are available in a great many shapes, colours and sizes. Generally only the white fleshed varieties are used in the food industry.

Select potatoes that are well shaped and firm with relatively smooth, clean skins. Avoid badly cut, bruised, wilted, sprouted, sun- or light-burned potatoes.

Size does not affect the quality of the potatoes; depending on the use, you should choose the size that is suitable.

Notes: _____

_____

_____

Storage of potatoes

Do not wash potatoes before storing; washing will hasten the decay process. Ideally potatoes should not be stored in the refrigerator, but rather in a cool dark area. Storage temperatures of around 4°C (40°F) or lower will turn the potato starch into sugar, which will make the cooked potato too sweet. As well, the potato will turn dark during cooking.

Read pages 424 to 425 in Professional Cooking for information on the

· types of potatoes and their uses
· signs of quality
· storing methods
· market forms of potatoes

Sweet potatoes (patates douces)

There are basically two types of sweet potatoes: moist-meated type and the dry-meated type. The moist-meated type is also known as yam (igname). Its colour varies from a whitish tan to a brownish red.

In selecting sweet potatoes, choose bright clean specimens that are free from blemishes. Any sign of decay will affect the taste of the entire potato. For economy, select chunky medium-sized potatoes which taper toward the end.

Sweet potatoes should be stored only for a short period of time at a temperature of about 10° to 13°C (50° to 55°F).

Rutabaga and turnip (chou-navet et navet)

Most commercially sold rutabagas are yellow-fleshed, although there are also white-fleshed varieties. Rutabagas are rounded and slightly longish, whereas turnips are more uniformly round. The flesh of rutabaga tends to be firmer than that of a turnip. The skin of rutabaga is mottled with a purplish colour, whereas the skin of turnip is a solid yellow.

Select rutabagas that have smooth skin and feel heavy for their size.

Ideal storage conditions for turnips and rutabagas are 0°C (32°F) temperature and 95% humidity.

Notes: _____

_____

_____

Spinach (épinard)

There are two types of spinach available to the consumer: the curly leaf and the flat leaf.

Select spinach that is deep green in colour. The leaves should be crisp and clean. Avoid overgrown stalky plants, as they tend to be tough and bitter tasting. Also avoid wilted or yellowed spinach which usually indicates the presence of slime and rot.

Spinach is an excellent source of Vitamin C and iron.

Ideal storage temperature is around 0°C (32°F) with a humidity of 95 to 98%.

Squash (gourde)

There are two types of squash used for cooking: the soft-shell squash (e.g. crookneck or zucchini) and the hard-shell squash (e.g. hubbard or acorn).

Soft-shelled squashes should be fresh and fairly heavy for their size. The rind should be tender so it can be easily punctured. The seeds of the fruit should be soft and edible.

Ideally, soft-shelled squashes should be stored at 0° to 4°C (32° to 40°F) with a humidity of 85 to 90%.

Hard-shelled squashes are not expected to be fresh. Choose squashes whose shells are intact and hard with no visible signs of decay.

The ideal storage temperature is 10°C (50°F) with 70 to 75% humidity.

Tomato (tomate)

In selecting tomatoes, there are these factors to consider: colour and appearance, firmness and weight, internal appearance and flavour. Good tomatoes are firm, bright red and smooth-skinned. The size of the tomato is a matter of preference. A tomato can be of good quality whether it is large or small.

Tomatoes are a good source of Vitamin A and C.

Notes: _____

_____

_____

Do not store at temperatures below 10°C (50°F) as the flesh will lose its firmness and become mushy.

As you will have noticed, storage temperatures and humidity vary for different vegetables. In practice, it is not possible to have such precisely controlled conditions and most food service establishments follow guidelines similar to those on page 16 "Refrigerator Storage" in Professional Cooking.

Processed vegetables

Read the section, "Handling Processed Vegetables", on page 391 in Professional Cooking.

Frozen vegetables

Read the section, "Handling Frozen Vegetables", on page 391 in Professional Cooking.

When selecting and storing frozen vegetables, you should

· buy only frozen vegetables from a reputable company

· avoid frozen vegetables with large frozen ice crystals; this indicates improper handling

· avoid vegetables with signs of freezer burn; the frozen vegetables should have a bright natural colour

· avoid frozen vegetables in which the carton shows signs of leakage; this usually means thawing

· store in a freezing unit at recommended temperature usually outlined on the carton

Notes: _____

_____

_____

For more information, read the section on page 16, "Freezer Storage", in _Professional Cooking_.

Canned Vegetables

Read pages 391 to 392 in _Professional Cooking_, "Handling Canned Vegetables".

Everyday in Canada thousands of people contract food poisoning from improperly handled food. Improperly stored or canned foods are some of the contributors.

1.   Familiarize yourself with the manufacturers' labels.

2.   Do not purchase home canned products.

3.   Avoid specials. This could mean outdated or damaged stock.

4.   Avoid canned goods with damaged, loose or repasted labels.

5.   Check expiry date on labels.

6.   Follow storage instructions displayed on labels.

7.   Do not use cans which are dented, leaking or bulging.

Dried vegetables

Read the section, "Handling Dried Vegetables", on page 392 in _Professional Cooking_, and for a summary on storage procedures for fresh, frozen, dried or canned vegetables and for leftovers, read pages 393 to 394.

Notes: _____

_____

_____

Now complete Self Test 1 and check your answers.

Notes: _____

_____

_____

Self Test 1

Answer the following questions.

1.   Identify three qualities you should look for when selecting fresh vegetables.

2.   The primary determinant of flavour in vegetables is

   a.   moisture content
   b.   size
   c.   freshness
   d.   smoothness

3.   Name the two types of asparagus generally used in cooking.

4.   A thick stem on asparagus indicates

   a.   tenderness
   b.   toughness
   c.   sweetness
   d.   bitterness

5.   How should asparagus be stored?

   a.   in a dark, dry cool cupboard or bin
   b.   in the coldest part of the refrigerator
   c.   wrapped in plastic in the warmest part of the refrigerator
   d.   at room temperature

6.   Identify the two varieties of green beans.

7.   Yellow beans are also called

   a.   carotenoid beans
   b.   scarlet runners
   c.   French beans
   d.   wax beans

8. You should wash green beans before storing.

   a. true
   b. false

9. You should select beets whose tops are

   a. thin ribbed and bright green
   b. thick ribbed and dark green
   c. shiny and curling at the edges
   d. ribbed with yellow veins

10. Identify two characteristics you should look for in a beet.

11. Broccoli is a member of the cabbage family.

    a. true
    b. false

12. Good quality broccoli is characterized by

    a. buds that have begun to open
    b. rich green colour
    c. pale green/yellow tops
    d. finely ribbed leaves

13. Good quality Brussels sprouts should be soft and puffy.

    a. true
    b. false

14. Name four varieties of cabbage used in the kitchen.

15. At room temperature, cabbage _____ very quickly.

16. Green areas at the top of carrots are referred to as

    a. malaise
    b. sunburn
    c. wood stalk
    d. discolouration

17. Which type of cabbage has crimped yellowish/greenish coloured leaves?

    a.   nappa cabbage
    b.   green cabbage
    c.   yellow cabbage
    d.   Savoy cabbage

18. Cauliflower florets should be

    a.   light creamy yellow and rice-textured
    b.   small and rice-textured
    c.   large and loosely open
    d.   white and or creamy white and very firm

19. Plastic wrap on the cauliflower helps preserve the _____ and _____.

20. The most commonly used celery is called

    a.   celeriac
    b.   bok choy
    c.   Pascal
    d   Mendel

21. The leaf, stem or stalks of celery should

    a.   snap readily when bent
    b.   bend without breaking
    c.   be coarsely grained
    d.   feel puffy to the touch

22. The kernels of good quality corn should

    a.   puncture easily when pressure is applied
    b.   be deep yellow and ridged
    c.   line up in straight rows with a gap between each row
    d.   have a rice-like texture

23. Like carrots and other root vegetables, corn can be stored for long periods.

    a.   true
    b.   false

24. Identify the three classes of cucumbers.

25.   Select cucumbers that

a.   are a light yellow green in colour
b.   feel firm to touch
c.   dent when finger pressure is applied
d.   have been ripened in a cool dark environment

26.   You should not select mushrooms that

a.   are pure white
b.   feel smooth and firm to touch
c.   are a pale brown colour
d.   have an open veil at the base of the cap

27.   Identify three criteria for selecting quality parsnips.

28.   Parsnips can be stored for short periods only.

a.   true
b.   false

29.   Pale colour and soft seeds in green peppers indicate

a.   immaturity
b.   overripeness
c.   low moisture content
d.   excessive water content

30.   Potatoes should be stored in the refrigerator.

a.   true
b.   false

31.   Identify three differences between rutabagas and turnips.

32.   Identify the two types of spinach commercially available.

33.   Zucchini is a hard-shell squash.

a.   true
b.   false

34.   Soft-shelled squashes should have a _____ rind.

       a.   thick, tough
       b.   purplish coloured
       c.   tender
       d.   deep green

35.   If raw and cooked foods are stored in the same refrigerator, the raw
       food should be _____ the cooked food.

       a.   above
       b.   below

36.   List four things you should check for in frozen vegetables.

37.   With canned vegetables you should avoid

       a.   leaking cans
       b.   cans with damaged labels
       c.   puffy or swollen cans
       d.   all of the above

38.   Identify five points in checking the quality of potatoes.

39.   What do green areas on the potato indicate?

       a.   unripeness
       b.   high sugar content
       c.   storage temperatures that are too cold
       d.   presence of poisonous solanine

40.   To prevent green areas from developing on potatoes, you should

       a.   store them in a dark place
       b.   store them in a well lit area
       c.   wrap them in clear plastic wrap before storing
       d.   wash them before storing

41.   Which type of potato is best suited for baking?

       a.   chef's potatoes
       b.   new potatoes
       c.   russet potatoes
       d.   waxy potatoes

42.   Which type of potato is best suited for making French fries?

    a.   chef's potatoes
    b.   new potatoes
    c.   russet potatoes
    d.   waxy potatoes

43.   Which type of potato has the highest sugar and moisture content?

    a.   new or waxy potatoes
    b.   mature potatoes
    d.   Idaho potatoes
    d.   chef's potatoes

44.   Identify the three correct methods for thawing frozen foods.

Answers are on pages 35-37.

Learning Task 2: Describe methods of preparing vegetables

Effects of cooking

Before you begin your work on preparing vegetables, it is important that you understand the changes that occur in vegetables when they are heated. Read pages 376 to 380, "Controlling Quality Changes During Cooking", in Professional Cooking. You need to become thoroughly familiar with the way in which cooking affects

- texture
- flavour

- colour
- nutrients

and the following new terms:

- acids
- alkalis
- anthocyanins
- carotenoids

- chlorophyll
- fibre
- flavones
- pigment

Preparation

Read the section on "Cleaning and Cutting the Raw Materials" on pages 102 to 112. This section deals with knife handling, cutting techniques and the basic cuts and shapes including the following:

- allumette
- bâtonnet (stick)
- brunoise
- concasser
- dice (small, medium, large)

- emincer
- French fry
- julienne
- mince
- shred

Then read the section "Fresh Vegetable Prepreparation" on pages 381 to 390. Note that the section on trimming losses is not required.

Types of cooking

Blanching vegetables

As you will recall, blanching is a process of partial and brief cooking in boiling water or hot fat. It is usually preliminary to other cooking methods, such as sautéing or glazing.

Read page 111, "Blanching and Parcooking", in Professional Cooking to identify the four reasons for blanching vegetables.

Procedure for blanching

· place vegetables into rapidly boiling salted water
· quickly bring the water back to a boil; blanching time will vary depending on the vegetable
· plunge the vegetables into ice water; this stops the cooking process and helps preserve colour
· when cool, drain and store covered in the refrigerator

Blanching potatoes

· place potatoes into boiling salted water
· bring back to boil
· simmer to the desired doneness
· remove from water (do not rinse, as they will become too watery)

Blanching in oil

Blanching in oil is equivalent to a pre-frying process and is most commonly used for blanching potatoes. The temperature of the oil should be approximately 130°C (265°F).

Notes: _____

_____

_____

Boiling vegetables

For information on the procedures for boiling vegetables, read the section on page 398, "Procedure for Boiling Vegetables", in <u>Professional Cooking</u>.

Steaming vegetables

For information on the procedures for steaming vegetables, read the section on pages 398 to 399, "Procedure for Steaming Vegetables", in <u>Professional Cooking</u>.

Sautéing and pan-frying vegetables

For information on the procedures for sautéing and pan-frying vegetables, read the section on page 406 to 409, "Sautéing and Pan-frying", in <u>Professional Cooking</u>.

Braising vegetables

Braising is a moist slow cooking process. Vegetables that are often braised include cabbage, sauerkraut and celery.

For information on the procedures for braising vegetables, read the section on pages 409 to 413, "Braising", in <u>Professional Cooking</u>.

Notes: _____

_____

_____

Baking vegetables

Starchy vegetables such as potatoes, sweet potatoes and winter squash are often baked, but baking has only limited application for other vegetables as they tend to dry out.

For information on procedures for baking vegetables, read the section on pages 413 to 414, "Baking", in <u>Professional Cooking</u>.

Broiling vegetables

For information on the limited applications of broiling for vegetables, read page 417, "Broiling", in <u>Professional Cooking</u>.

Deep-frying vegetables

Read the section on deep-frying on pages 418 to 420, "Deep-frying", in <u>Professional Cooking</u>.

Basic finishing procedures for boiled or steamed vegetables

There are many variations in the ways you can combine vegetables and among the sauces you can select for finishing your vegetable dishes. Listed below are some of the more common variations.

Notes: _____

_____

_____

Baking

Read page 431, "Baking", of <u>Professional Cooking</u> for the correct procedure for baking potatoes, and page 433, "Baked "En Casserole"", for information on potatoes baked "en casserole".

Sautéing and pan-frying

Read pages 437 to 440, "Sautéing and Pan-frying", of <u>Professional Cooking</u> for information on the methods for preparing the many varieties of sautéed and pan-fried potato dishes.

Deep-frying

Read pages 442 to 443, "Deep-frying", of <u>Professional Cooking</u> for information on basic deep-frying procedures for potatoes and for the procedures for preparing and cooking French fries.

Now complete Self Test 2 and check your answers.

Notes: _____

_____

_____

Types of preparation

Read pages 399 to 405 of _Professional Cooking_ to identify the following types of preparations for finishing or dressing vegetables:

- buttered
- herbed
- Amandine
- Hollandaise
- Polonaise
- puréed

- creamed
- Mornay
- Cheddar cheese
- Béchamel
- au gratin
- glazed

Then read the section, "Some Suggested Vegetable Seasonings, Flavourings and Combinations", on pages 420 and 421.

Cooking potatoes

The methods for cooking potatoes range from the very simple to the fairly complex which involve combinations of several methods.

Boiling and steaming

Read pages 425 to 426, "Boiling and Steaming Potatoes", in _Professional Cooking_ for information on boiling and steaming potatoes, and on the following variations:

- steamed
- parslied

- new
- creamed

Potato purée

For information on the procedure for cooking potato purée, read page 428, "Potato Purée", of _Professional Cooking_. Potato purée is the basis for mashed and whipped potatoes.

Notes: _____

_____

_____

Self Test 2

Answer the following questions.

1. Which of the following vegetables has the least amount of fiber?

    a. celery
    b. parsnip
    c. spinach
    d. turnip

2. What effect does heat have on fiber?

3. What is the effect of lemon juice, tomato products and other acids on fiber?

4. Why should you never add baking soda to green vegetables?

5. Broccoli tips contain more fiber than the stalk.

    a. true
    b. false

6. In order to retain as much flavour as possible in boiled vegetables, you should

    a. start them in cold water
    b. add them after the water is boiling
    c. use a lot of water
    d. bring water temperature to just under boiling

7. Steaming, in contrast to boiling, reduces cooking time and retains more flavour.

    a. true
    b. false

8. To keep vegetables such as cauliflower white during cooking, you
    should add a little _____ to the water.

    a.   baking soda
    b.   salt
    c.   oregano
    d.   lemon juice

9. What is the effect of alkalis on vegetables such as red cabbage or
    beets?

    a.   makes them a brighter red
    b.   turns them a blue-green colour
    c.   toughens the fibers
    d.   draws out the nutrients

10. To keep green vegetables green and fresh looking, you should add a
    little lemon juice to the water.

    a.   true
    b.   false

11. Which cooking method preserves the greatest amount of nutrients?

    a.   baking
    b.   braising
    c.   boiling
    d.   steaming

12. In order to retain flavour, nutrients and colour, vegetables should
    be cooked

    a.   for as short a time as possible
    b.   with a little baking soda in the water
    c.   with a little sugar added to the water
    d.   slowly at a simmer

13. Green vegetables should always be cooked

    a.   covered
    b.   uncovered
    c.   by braising
    d.   by boiling

14.   Match the following pigments from Column II with the correct term in Column I.

Column I   Column II

1.   _____ carotenoids   a.   white
2.   _____ anthocyanins   b.   red
3.   _____ flavones   c.   green
4.   _____ chlorophyll   d.   yellow/orange

15.   Which pigment colours tomatoes?

a.   carotenoids
b.   anthocyanins
c.   flavones
d.   chlorophyll

16.   Which pigment colours asparagus, broccoli and spinach?

a.   carotenoids
b.   anthocyanins
c.   flavones
d.   chlorophyll

17.   The addition of salt to cooking vegetables helps to reduce

a.   colour loss
b.   the strength of fibers
c.   the loss of nutrients
d.   flavour loss

18.   To prevent red vegetables from turning blue during cooking it is necessary to add a little

a.   alkali
b.   sugar
c.   acid
d.   salt

19.   Strongly flavoured vegetables such as cabbage should always be cooked

a.   covered
b.   uncovered
c.   by braising
d.   by simmering

20. For older vegetables, especially corn, peas, carrots, turnips and beets, you should add a little _____ to the cooking water.

    a. lemon juice.
    b. sugar
    c. orange juice
    d. pepper

21. To ensure even cooking, vegetables should be

    a. cut into uniform sizes
    b. boiled or steamed for a minimum of 8 minutes.
    c. immersed at least 2" in water
    d. salted before cooking

22. List five principles for successful vegetable cooking.

23. List seven standards of quality in cooked vegetables.

24. With most vegetables, blanching is followed by

    a. immersion in ice water
    b. immediate refrigeration
    c. immersion in lukewarm water
    d. air drying

25. When blanching potatoes, you should not

    a. salt the water
    b. rinse them after
    c. refrigerate them after
    d. peel them beforehand

26. Identify three types of vegetable dishes most commonly cooked by the baking method.

27. For vegetables, broiling is most often used

    a. to cook starchy vegetables such as potatoes, yams and winter squash
    b. for browning or glazing or au gratin vegetables
    c. for quickly precooking vegetables that will be reheated later
    d. for cooking vegetables slowly in fat

28.   Match the shapes shown in the illustrations with the correct term.

1.   _____ bâtonnet   a.
2.   _____ julienne
3.   _____ brunoise
4.   _____ French fry
5.   _____ large dice
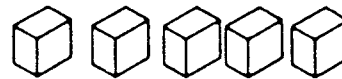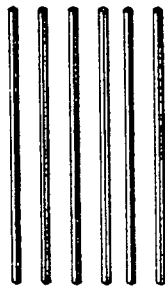
b.   c.
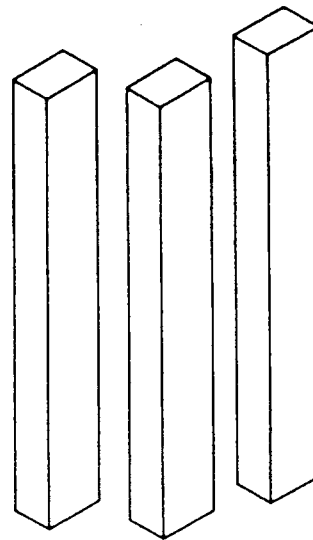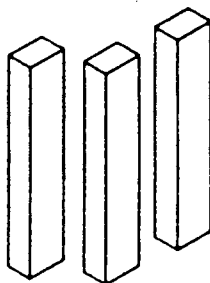
d.   e.
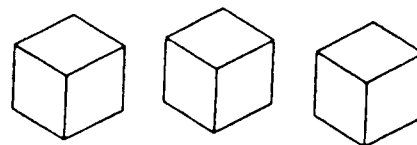
29.   Which of the following vegetables is not well suited to cooking in a
       compartment steamer?

       a.   broccoli
       b.   beans
       c.   spinach
       d.   carrots

30. Which of the following are ingredients in Polonaise sauce?

    a. breadcrumbs and hard cooked egg
    b. almonds and butter
    c. sugar and butter
    d. mineral water and parsley

31. Which of the following are ingredients in glazes?

    a. breadcrumbs and hard cooked egg
    b. almonds and butter
    c. sugar and butter
    d. mineral water and parsley

32. The term "concasser" means

    a. to chop coarsely
    b. to purée
    c, to cut into very thin slices
    d. to cut into thin strips

Answer Sheet

Self Test 1 -- pages 17-22

1. Any three of the following:
    - freshness
    - bright natural colour
    - optimum flavour
    - optimum size
    - good general appearance

2. c.   freshness

3. - white
    - green

4. a.   tenderness

5. b.   in the coldest part of the refrigerator

6. - string
    - stringless

7. d.   wax beans

8. a.   true

9. a.   thin ribbed and bright green

10. - hard flesh
    - smooth skin

11. a.   true

12. b.   rich green colour

13. b.   false: They should feel firm.

14. - Chinese
    - purple
    - Savoy
    - green

15. wilts

16. b.   sunburn

17. d.   Savoy cabbage

18. d.   white or creamy white and very firm

19. - freshness
     - flavour

20. c.   Pascal

21. a.   snap readily when bent

22. a.   puncture easily when pressure is applied

23. b.   false: Corn should <u>not</u> be stored for long periods; it loses
          its sweetness.

24. - field grown cucumbers
     - pickling cucumbers
     - hothouse cucumbers

25. b.   feel firm to touch

26. d.   have an open veil at the base of the cap

27. Any three of the following:
     - firmness
     - good shape
     - absence of rootlets
     - small to medium size

28. b.   false: Parsnips are one of the hardiest vegetables on the
          market.

29. a.   immaturity

30. b.   false: Potatoes should <u>not</u> be stored in the refrigerator; the
          starch changes to sugar.

31. - rutabagas have firmer flesh
     - turnips are more uniformly round
     - rutabaga skin is a mottled purplish colour, whereas turnip skin is
       solid yellow

32. - curly leaf
     - flat leaf

33. b.   false: Zucchini is a soft-shell squash.

34. c.   tender

35. b.   below

36.   - freezer burn
       - large ice crystals
       - temperature
       - leakage

37.   d.   all of the above

38.   Any five of the following:
       - firm and smooth
       - dry skins
       - no sprouts
       - no green colour
       - absence of cracks, blemishes and rotten spots

39.   d.   presence of poisonous solanine

40.   a.   store them in a dark place

41.   c.   russet potatoes

42.   a.   russet potatoes

43.   a.   new or waxy potatoes

44.   - in the refrigerator
       - under cold running water
       - in the microwave if the food is to be cooked immediately

Self Test 2 -- pages 29-34

1.   c.   spinach

2.   - heat softens fiber

3.   makes the fiber firmer and extends cooking time

4.   it makes them mushy and destroys vitamins

5.   b.   false: The tips of broccoli and asparagus contain less fiber
            than the stalk.

6.   b.   add them after the water is boiling

7.   a.   true

8.   d.   lemon juice

9.   b.   turns them a blue-green colour

10.   b.   false: Acid turns the colour to a drab olive green.

11.   d.   steaming

12.   a.   for as short a time as possible

13.   b.   uncovered

14.   1.   d - carotenoids
       2.   b - anthocyanins
       3.   a - flavones
       4.   c - chlorophyll

15.   a.   carotenoids

16.   d.   chlorophyll

17.   d.   flavour loss

18.   c.   acid

19.   b.   uncovered

20.   b.   sugar

21.   a.   cut into uniform sizes

22.   Any five of the following:
       - Don't overcook.
       - Cut vegetables into uniform sizes.
       - When boiling vegetables, place them into already boiling, salted
         water.
       - Cook green and strong flavoured vegetables uncovered.
       - Never use baking soda with green vegetables.
       - Cook as close to service time as possible and in small quantities.
       - Never mix batches of cooked vegetables.
       - If vegetables must be cooked ahead, undercook slightly and chill
         rapidly. Reheat at service time.

23.   - colour
       - appearance on plate
       - texture
       - flavour
       - seasoning
       - sauces
       - vegetable combination

24.   a.   immersion in ice water

25.   b.   rinse them after

26.   - starchy vegetables such as potatoes, sweet potatoes and winter
         squash
       - moist vegetables that are stuffed such as tomatoes, peppers or
         zucchini
       - vegetable casseroles

27.   b.   for browning or glazing or au gratin vegetables

28.   1.   d - bâtonnet
       2.   b - julienne
       3.   a - brunoise
       4.   c - French fry
       5.   e - large dice

29.   c.   spinach

30.   a.   breadcrumbs and hard cooked egg

31.   c.   sugar and butter

32.   a.   to chop coarsely

Practical Competency 1: Prepare vegetables

1.   You are required to correctly and safely blanch, boil, steam, sauté, deep-fry, bake and purée a variety of the vegetables studied in Level I.

2.   Your instructor will direct you to the specific vegetables and cooking methods you will use in order to complete this Practical Competency.

3.   Study the appropriate recipes.

4.   Assemble the ingredients and utensils.

5.   Prepare and cook the dishes.

6.   Present your work to your instructor who will evaluate it according to the following criteria:

· appropriate utensils used

· ingredients measured or cut accurately

· recipe followed correctly

· product has desired texture, colour and temperature

· product has neat and attractive appearance

· product is appropriately seasoned or flavoured

· work was well organized, with good mise en place and safe work habits

· work station kept clean and tidy

· production time within industry expectations

Notes

APPENDIX 11

LEVEL COMPLETION EXAMINATION SAMPLE

APPRENTICESHIP B.C.

Cook

Completion Examination Level 1

Province of British Columbia
Apprenticeship Branch

INSTRUCTIONS TO CANDIDATES

1.   **DO NOT WRITE ANYWHERE IN THIS BOOK.** Place all answers on the separate **ANSWER SHEET.**

2.   Do not start until told to do so by the Examiner.

3.   Fill in the personal information portion of **PART 2** of the answer sheet.

4.   **WARNING**

     YOU MUST NOT TALK TO ANOTHER PERSON OR USE ANY UNAUTHORIZED MATERIALS DURING THE EXAMINATION.

5.   **TRY TO ANSWER ALL QUESTIONS.** Do not spend too much time on any one question. If you are having trouble, go on to the next question and return to the difficult one later.

6.   The questions in this book require you to choose **ONLY ONE ANSWER** from several that are suggested. Each suggested answer is lettered **A, B, C or D.**

7.   Use the special pencil provided to fill in completely the lettered box corresponding to your answer. For example, if you believe that the correct answer is c, fill in box c as follows:

     Example: Ⓐ Ⓑ ● Ⓓ Ⓔ

     To change your answer, erase completely and re-mark.

8.   All examination books and papers are to be handed to the Examination Supervisor at the end of the examination session.

9.   To pass the examination you must answer 70% of the questions correctly.

TABLE OF CONTENTS

TRADE: COOK   **TYPE:**   COMPLETION
                                        EXAMINATION LEVEL 1

SECTION	TITLES	ITEMS	TOTAL
1.	BAKING AND DESSERTS	1–12	12
2.	COLD KITCHEN	13–28	16
3.	EGG COOKERY	29–36	8
4.	EQUIPMENT	37–43	7
5.	HEALTH AND COOK-CHILL	44–49	6
6.	KITCHEN MANAGEMENT	50–63	14
7.	MEAT CUTTING	64–79	16
8.	MEAT, POULTRY, AND GAME	80–90	11
9.	SAFETY AND SANITATION	91–103	13
10.	SEAFOOD COOKERY	104–111	8
11.	STOCKS, SOUPS, AND SAUCES	112–127	16
12.	VEGETABLE AND STARCH COOKERY	128–141	14

SECTION 1

BAKING AND DESSERTS

1. Strong flour is used for baking

   A.   delicate baked goods.
   B.   cookies and pie pastries.
   C.   breads.
   D.   biscuits and muffins.

2. Bread flour has the following characteristics:

   A.   very smooth, fine flour that will form a lump when squeezed in the hand.
   B.   slightly coarse when rubbed between the fingers and will not hold its shape when squeezed in the hand.
   C.   feels much like cake flour, but has a creamy colour.
   D.   because it is rather weak, can be used in pastries.

3. Yeast ferments best between

   A.   7 and 10 degrees C (45 and 50 degrees F).
   B.   15 and 20 degrees C (60 and 70 degrees F).
   C.   20 and 32 degrees C (70 and 90 degrees F).
   D.   32 and 40 degrees C (90 and 105 degrees F).

4. In terms of relative strength, a given amount of dry yeast is

   A.   the same strength as an equal amount of compressed yeast.
   B.   stronger than an equal amount of compressed yeast.
   C.   weaker than an equal amount of compressed yeast.
   D.   dependent on the water temperature.

APPENDIX 12

SCHOOL REPORT SAMPLE

APPRENTICE SCHOOL REPORT

TW #

PROGRAM	LEVEL	CLASS CODE	OFFICE
COOKING	03	COO498	VANCOUVER

INSTITUTION

AREA	START DATE	END DATE	DURATION	APPRENTICE EXPIRY	TRADE
14	1996-05-21	1996-06-14	019	1996-07-31	0147

APPRENTICE	EMPLOYER/TRADE UNION/JOINT BOARD

TO BE COMPLETED BY INSTRUCTOR

RATING	70% IS	ABSENT DAYS	I.P. EXAM DATE	I.P. RATING
%	REQUIRED TO PASS			

THE FOLLOWING ACHIEVEMENT CODES ARE USED TO RATE WORK HABITS:

A - EXCELLENT   **B** - GOOD   **C** - AVERAGE   **D** - FAIR   **U** - UNSATISFACTORY

WORK HABITS	RATING	COMMENTS
WORKMANSHIP		
INITIATIVE		

TOPICS/UNITS OF INSTRUCTION	PRACTICAL MARK (%)	THEORY MARK (%)	
VEGETABLE COOKING			**FOR MINISTRY USE ONLY.**
MEAT & POULTRY COOKING			
SEAFOOD COOKING			
STOCKS, SAUCES & SOUPS			
CUTTING MEAT, POULTRY & SEAFOOD			
COLD KITCHEN			
BAKING PASTRY & DESSERTS			
ELEMENTARY KITCHEN MANAGEMENT			
SAFETY, SANITATION & EQUIPMENT			Course Practical Weighting %
HEALTH CARE			
COOK FREEZE SYSTEMS			Course Theory Weighting %

Please refer to your training record book for a more detailed description of these units of instruction.	Final Practical Mark %	Final Theory Mark %	**Working Copy**

Instructor's / Counsellor's Comments:

510

YOUR NEXT TRAINING ASSIGNMENT: LEVEL   -   START DATE: INSTITUTE:

ADDRESS ALL CORRESPONDENCE TO: 1103 - 4720 KINGSWAY   BURNABY BC V5H 4N2

APPENDIX 13

APPRENTICESHIP IN THE FIELD: NOTICE TO ATTEND, CONFIRMATION LETTER,
FAILURE TO ATTEND TECHNICAL TRAINING, FAILURE OF TECHNICAL TRAINING

Telephone: (604)

Fax: (604)

Dear:

This is to advise you that your apprentice
has been mailed a Confirmation of Attendance notice for the following in-school training:

LEVEL: CLASS:

START TIME: START DATE: END DATE:

AT:

Your apprentice must confirm that he/she will be attending this assignment. Failure to do so before
will result in cancellation of the assignment and completion of the apprenticeship will be delayed as a result.
Should the apprentice no longer be working for your company please advise an Apprenticeship Counsellor, at
the above location,**immediately.**

Province of British Columbia

Ministry of Skills, Training and Labour

Field Services Branch
Skills Development Division

Telephone: (604)

In accordance with the terms of the Apprenticeship Agreement, your apprentice's in-school training has been scheduled on the following dates and at the College/Institution: (This information replaces any that we have previously sent to you regarding In-School training.)

Course # Level: Description:
 From   AM to   at

Course # Level: Description:
From   AM to   at

Course # Level: Description:
From   AM to   at

Course # Level: Description:
From   AM to   at

Course # Level: Description:
From   AM to   at

Eight weeks prior to the scheduled class start dates, a Notice to Attend will be mailed to your apprentice. Confirmation of attendance is required or his/her training assignment and all subsequent assignments will be cancelled.

During the term of the Apprenticeship it is your apprentice's responsibility to ensure he/she is available to attend in-school training as scheduled. Should you have any questions or require additional information regarding your apprentice's assignment please discuss them with his/her Apprenticeship Counsellor at the above listed location.

This schedule may be subject to change. In the event that scheduling changes are required, you will be advised, in writing, of your apprentice's revised in-school training assignments and schedule.

EMPLOYER

Province of
British Columbia

Ministry of Labour

Field Services Branch

338

Telephone: (604)

Fax: (604)

IMPORTANT NOTICE

REQUEST FOR CONFIRMATION

You are scheduled to attend in-school training on the following dates and at the college/institute shown below:

| | LEVEL: | CLASS: |
| START TIME: | START DATE: | END DATE: |

AT:

You are required to confirm your attendance with the office listed above, by signing and returning the confirmation slip below, or by phoning no later than _____. Failure to confirm attendance will result in cancellation of this assignment and all subsequent assignments. Consequently, completion of your apprenticeship will be delayed. If responding by mail, please allow at least 3 days for delivery. If you are unable to attend as scheduled, please contact your Apprenticeship Counsellor immediately.

- - - - - - - - - - Please cut and return lower portion to Field Services Branch or fax to number shown below - - - - - - - - - -

; confirmed to attend Class: on   in

Please sign and return to the above noted office this portion of the letter as confirmation of your attendance.

_____   _____
APPRENTICE SIGNATURE   DATE

When this confirmation is received in the above noted office, your place in class is assured. Should your circumstances change **after** you have signed and returned this letter, notify your Apprenticeship Counsellor immediately. If the Counsellor is unavailable, please leave a message outlining the purpose of your call.

Province of British Columbia

Ministry of Skills, Training and Labour

SKILLS NOW
Real skills for the real world.

Skills Development Division
Field Services Branch
Metrotower II
1103-4720 Kingsway
Burnaby, British Columbia V5H 4N2
Telephone: 660-7100
Facsimile: 775-0768

Dear

On   you failed to attend your first level of apprenticeship schooling for the   trade. Under your apprenticeship agreement, your apprenticeship may be cancelled for failing to attend assigned training without jusitfiable cause.

In order for you to continue as an apprentice you must provide an explanation for your falure to attend and provide a written statement indicating your commitment to continuing this apprenticeship. Also note that any further training must be attended as assigned or your apprenticeship will be cancelled. If I do not receive a letter from you as described above by   I will assume that you no longer wish to continue with your apprenticeship and I will close your file.

Yours truly,

Apprenticeship Counsellor

Dear Apprentice:

RE: TECHNICAL TRAINING

Enclosed, you will find a copy of your
school report. A mark of 70% or better is required for a
pass. Your mark was __%.

We must advise you that effective January 1, 1994, any
apprentice who fails the same level of technical training
twice, may have their apprenticeship contract cancelled.

It is strongly recommended that you review all your
technical training material and upgrade your knowledge in
areas that you received less than 70% to ensure you do not
fail a second time.

I may be contacted at   if you need information or
assistance with upgrading.

Yours truly,

Apprenticeship Counsellor

/hl

cc: employer

APPENDIX 14

APPRENTICESHIP IN THE FIELD: CHANGE OF EXPIRY, EMPLOYMENT ENQUIRY,
TRANSFER OF APPRENTICESHIP, TERMINATION OF APPRENTICESHIP

**Province of
British Columbia**

**Ministry of
Skills, Training
and Labour**

CHANGE IN EXPIRY OR COMPLETION DATE OF APPRENTICESHIP AGREEMENT

APPRENTICE

EMPLOYER

We have been advised that a change in expiry or completion date has been requested for the above named apprentice. In order to amend the Apprenticeship Agreement, the following information is required:

The present expiry date is _____ and is to be revised to _____

| YEAR | MONTH | DAY | | YEAR | MONTH | DAY |

Reason: _____

_____

_____

_____

Please sign and return immediately to the address listed above. A copy will be returned to both the employer and apprentice once this change has been authorized by a designated representative of the Apprenticeship Program.

_____   _____
EMPLOYER SIGNATURE   DATE

_____   _____
APPRENTICE SIGNATURE   DATE

Authorized by:

_____   _____
DIRECTOR OF APPRENTICESHIP OR DESIGNATE   DATE

Province of British Columbia

Ministry of Labour

Field Services Branch 343
Room 1103, 4720 Kingsway
MetroTower II
Burnaby, BC   V5H 4N2
Phone: (604) 660-7100
Fax: (604) 775-0768

Dear Apprentice:

Information has been received that you are no longer working for

_____.

Will you please advise us with who you are now working so that the necessary action may be taken to either transfer your contract to your new employer or have your file cancelled.

Should no reply be received from you by _____, our apprenticeship records will be closed out with this office.

Yours truly,

Apprenticeship Counsellor

/hl

New Employer: _____

Address: _____

City: _____ **Postal Code:** _____

Contact Name: _____

Tel. No.: _____ **Fax No.:** _____

Province of British Columbia

Ministry of Skills, Training and Labour

Field Services Branch
Skills Development Division
301 - 1726 DOLPHIN AVENUE
KELOWNA BC V1Y 9R9

Telephone: (604) 717-2040
Fax   (604) 717-2038

TRANSFER OF APPRENTICESHIP AGREEMENT

APPRENTICE   NEW EMPLOYER

We have been advised that you wish to accept the transfer of the Apprenticeship Agreement for the above named apprentice. In order to amend the Apprenticeship Agreement, the following information is required:

TRANSFER OF APPRENTICESHIP AGREEMENT TO NEW EMPLOYER FROM:

Effective _____ , the obligations and responsibilities of the employer, as stated in the

Apprenticeship Agreement dated _____ are to be transferred to:

_____

_____

NO. OF JOURNEYPERSONS: [ ]   JOURNEYPERSON WAGE: [ ]

NO. OF APPRENTICES: [ ]   APPRENTICE WAGE: [ ]

NO. OF EMPLOYEES: [ ]

CONTACT PERSON: _____

TELEPHONE: _____

Please sign and return immediately to the address listed above. A copy will be returned to both the employer and apprentice once this transfer has been authorized by a designated representative of the Apprenticeship Program.

_____   _____
EMPLOYER SIGNATURE   DATE

_____   _____
APPRENTICE SIGNATURE   DATE

Authorized by:

_____   _____
DIRECTOR OF APPRENTICESHIP OR DESIGNATE   DATE

Province of
British Columbia

Ministry of
Skills, Training
and Labour

Field Services Branch
Skills Development Division 5
301 - 1726 DOLPHIN AVENUE
KELOWNA BC V1Y 9R9

Telephone: (604) 717-2040
Fax   (604) 717-2038

April 17, 1996

TERMINATION OF APPRENTICESHIP AGREEMENT

APPRENTICE   EMPLOYER

We have been advised that you intend to terminate the Apprenticeship Agreement for the above named apprentice. In order to terminate the Apprenticeship Agreement, the following information is required:

Termination date:

| YEAR | MONTH | DAY |

Reason:

_____

_____

_____

_____

Please sign and return immediately to the address listed above. A copy will be returned to both the employer and apprentice once the termination has been authorized by a designated representative of the Apprenticeship Program.

_____   _____
EMPLOYER SIGNATURE   DATE

_____   _____
APPRENTICE SIGNATURE   DATE

Authorized by:

_____   _____
DIRECTOR OF APPRENTICESHIP OR DESIGNATE   DATE

APPENDIX 15

APPRENTICESHIP IN THE FIELD - TRAINING RECORD BOOK

APPRENTICESHIP B.C.

Cook
Training Record Book

Training works!

Province of British Columbia
Ministry of
Skills, Training
and Labour
Apprenticeship Branch

APF - 08/94

COOK
APPRENTICESHIP

Training Record Book

REVISED
SEPTEMBER, 1993

INTRODUCTION

The intent of this document is to promote better understanding for both apprentice and employer of their roles and responsibilities in the Cooking Apprenticeship Training Program. This document will provide them with accurate information respecting the training objectives to be achieved through Apprentice Self Study, On-The-Job Training, and In-School Training Periods.

SCOPE OF THE TRADE

A Cook performs all phases of kitchen activity including the preparation of meat, fish, poultry, vegetables, and dessert dishes. A Cook must also ensure that a safe and sanitary environment exists for the preparation and storage of food. The planning of menus and the costing of ingredients and labor are an integral part of the Cook trade. In the course of a Cook's duties, an even disposition and ability to interact with others is an invaluable part of the trade.

For further information, contact any of the Ministry of Skills, Training and Labour offices located in the centres listed below:

ABBOTSFORD	BURNABY
COQUITLAM	CRANBROOK
DAWSON CREEK	KAMLOOPS
KELOWNA	NANAIMO
PRINCE GEORGE	SURREY
TERRACE	VANCOUVER
VICTORIA	

EMPLOYER INFORMATION

Company: _____

Address: _____
_____
_____

Telephone: _____

Summary of Hours:

Dates of Employment: From _____   To _____

Total hours of Training and Instruction between dates of Employment _____ Hours

_____   _____
Employer's   Date   Apprentice's   Date
Signature   Signature

EMPLOYER INFORMATION

Company: _____

Address: _____
_____
_____

Telephone: _____

Summary of Hours:

Dates of Employment: From _____   To _____

Total hours of Training and Instruction between dates of Employment _____ Hours

_____   _____
Employer's   Date   Apprentice's   Date
Signature   Signature

CERTIFICATE OF APPRENTICESHIP AUTHORIZATION

This is to certify that

_____

has successfully completed the minimum requirements of technical training and has reached a standard of on-the-job performance acceptable to the industry. We therefore recommend issuance of a Certificate of Apprenticeship in the trade of Cook.

_____
Date

_____
Employer's Signature

_____
Apprenticeship Counsellor

APPRENTICESHIP COMPLETION RECORD

351

Year One

Date In-school Training Completed _____

Date On-the-job Training Completed _____

Signature of Apprentice _____

Signature of Authorized Company Rep. _____

Company Name _____

Year Two

Date In-school Training Completed _____

Date On-the-job Training Completed _____

Signature of Apprentice _____

Signature of Authorized Company Rep. _____

Company Name _____

Year Three

Date In-school Training Completed _____

Date On-the-job Training Completed _____

Signature of Apprentice _____

Signature of Authorized Company Rep. _____

Company Name _____

EMPLOYER INFORMATION

Company: _____

Address: _____

Telephone: _____

Summary of Hours:

Dates of Employment: From _____ To _____

Total hours of Training and Instruction between dates of Employment _____ Hours

Employer's Signature _____ Date _____ Apprentice's Signature _____ Date _____

EMPLOYER INFORMATION

Company: _____

Address: _____

Telephone: _____

Summary of Hours:

Dates of Employment: From _____ To _____

Total hours of Training and Instruction between dates of Employment _____ Hours

Employer's Signature _____ Date _____ Apprentice's Signature _____ Date _____

352

IN-SCHOOL TRAINING

All subject material is normally presented by the instructor through organized classroom lessons and practical demonstrations.

Safe working practices are stressed in each year of the apprenticeship program and form an integral part of the whole program.

RELATED SUBJECTS

Mathematics (arithmetic and geometry)

Consisting of addition, subtraction, division, (of whole numbers and fractions), ratio, proportion and volume.

Science

Consisting of basic laws, principles and formulae (given as required in practical instruction).

Note: Mathematics and Science will be taught as trade related subjects. Specific trade applications will be used to reinforce the theory covered.

English

Consisting of basic usage and business communications, trade terminology and usage, menu planning and construction, ingredients ordering and the interpretation and use of ingredient manufacturers published materials.

Safety

Consisting of safe work habits in all operations within the topics covered.

IN-SCHOOL TRAINING   YEAR THREE

LINE G   Baking and Desserts

1. Prepare and present flambé desserts.
2. Prepare and present soufflés and sabayon.
3. Prepare and present specialty cakes for a la Carte and banquet service.

LINE H   Basic Food Service and Kitchen Management

1. Plan an à la Carte menu.
2. Apply food cost control procedures.
3. Interpret a profit and loss statement.
4. Prepare a basic Pro-Forma.
5. Interpret Point of Sale information.
6. Describe Dining Room Service.
7. Describe Beer, Wine, Spirits and Liqueurs.

LINE I   Egg and Breakfast Cookery

1. Prepare egg products for à la Carte and banquet service.

LINE J   Safety, Sanitation, and Equipment

1. Take Food Safe (Level II) program.

LINE K   Health Care/Cook/Chill

1. Describe food allergies and food sensitivity modification.
2. Describe cook-chill and cook-freeze systems.

LINE L   Human Resource Development

1. Describe team work.
2. Resolving conflicts.
3. Describe the Problem Solving Process.
4. Describe Stress Management.
5. Describe Goal Setting.
6. Describe Interview techniques.
7. Develop a Resume.

353

IN-SCHOOL TRAINING

YEAR THREE

LINE A — Vegetable and Starch Cookery

1. Prepare and present specialty vegetables.
2. Prepare and present vegetables for à la Carte and banquet service.
3. Smoke vegetables and fruits.
4. Prepare and present farinaceous products.

LINE B — Meat, Poultry and Game

1. Cook meats and poultry for à la Carte and banquet service.
2. Cook game birds.
3. Cook furred game.
4. Marinade meats, poultry and game.
5. Smoke meats, poultry and game.

LINE C — Seafood Cookery

1. Identify and cook specialty fish.
2. Identify and cook specialty shellfish.
3. Cook specialty seafood products.
4. Cure and smoke fish and shellfish.
5. Prepare Sashimi and Sushi.

LINE D — Stocks, Soups, and Sauces

1. Prepare stocks and glazes.
2. Prepare and present soups.
3. Prepare and present sauces.

LINE E — Meat, Poultry and Seafood Cutting and Processing

1. Select and store game meats.
2. Cut game meats.
3. Cut game birds.
4. Prepare and process seafood.

LINE F — Cold Kitchen

1. Prepare open faced and fancy sandwiches.
2. Prepare Canapés and Hors d'Oeuvres.
3. Prepare specialty salads and salad dressings.
4. Prepare fresh juices.
5. Prepare buffet items for banquet service.

PRESCRIBED TEXTBOOKS

1. **Professional Cook Training Learning Guides**
   Lines A through L inclusive
   Province of British Columbia
   Ministry of Skills, Training and Labour

2. **Professional Cooking - Second Edition**
   by Wayne Gisslen
   John Wiley and Sons, Publishers

These are the standard texts for all three years of instruction. It is required that apprentices purchase these texts prior to attending the appropriate level of training.

Supplementary Texts

- Food Safe Handbook Levels I & II
- What is WHMIS
- Employment Standards Bulletins
- Responsibility That We All Share - B.C. Human Rights Council

APPRENTICE SELF STUDY

As an apprentice you must study the material as specified for each year of in-school training. You should acquire the prescribed learning guides and textbooks required for each year of apprenticeship as early as possible to ensure that you have sufficient time for the self-study portion of the apprenticeship program.

Your success in becoming a qualified journey person Cook will depend on the effort that you, the apprentice, put into your studies and practical training.

Preview the material to be covered in the in-school training. Study any materials given by the instructor at the end of the in-school training for self training purposes.

ON-THE-JOB-TRAINING

It is the employer's responsibility to expose the apprentice to the practical training and experience required for each year of apprenticeship.

It is not our intention to compel each employer to provide on-the-job training in every aspect of the trade, but rather to ensure that wherever possible, each apprentice will enhance and reinforce the knowledge acquired through Apprentice Self Study and regularly scheduled In-School Training Periods.

YEAR THREE ON-THE-JOB TRAINING RECORD CHART

ON-THE-JOB-TRAINING COMPETENCIES	PERFORMANCE RATING		
	C	B	A
Prepare and present specialty vegetables and pastas			
Prepare meats, poultry and seafood for à la Carte and banquet service			
Prepare furred game and game birds			
Prepare a variety of specialty soups and sauces			
Prepare open faced and fancy sandwiches			
Prepare canapés and specialty banquet items			
Prepare gâteaux, cheesecakes and frozen desserts			
Plan à la Carte and Banquet menus			
Prepare specialty à la Carte and banquet breakfast items			
Practice correct safety and sanitation procedures			
Practice teamwork, conflict resolution and problem solving skills			

'C' Requires assistance to perform this task
'B' Capable of performing the task with limited guidance from a qualified journey person
'A' Capable of performing the task independently

IN-SCHOOL TRAINING

YEAR TWO

LINE H **Basic Food Service and Kitchen Management**

1. Describe the British Columbia Human Rights Act.
2. Describe the British Columbia Employment Standards Act.
3. Take inventory.
4. Calculate food costs.
5. Plan menus.
6. Apply purchasing procedures.

LINE I **Egg and Breakfast Cookery**

1. Cook breakfast in quantity.
2. Properties of eggs.

LINE J **Safety, Sanitation, and Equipment**

1. Describe safe food handling practices.
2. Use safety practices for the kitchen.
3. Describe Fire Safety.
4. Describe kitchen equipment, hand tools and their maintenance.

LINE K **Health Care/Cook/Chill**

1. Describe nutritional requirements.

LINE L **Human Resource Development**

1. Describe principles of communication.
2. Give and receive feedback.
3. Describe assertive behavior.

355

THE ON-THE-JOB TRAINING RECORD CHART

Included in this document are on-the-job Training Record Charts which when completed will become a permanent record of the apprentices exposure to and demonstrated competence in each of the major skill areas in the trade. It is the apprentices' responsibility to take whatever action is necessary to gain experience in all areas of the trade and to achieve the highest level of competency in each skill area.

Ratings on the chart are based on individual performance standards. They are confirmed by a skilled and experienced journey person from the trade who views and evaluates the actual performance.

It is the responsibility of the apprentice to ensure that his/her rating is confirmed by the journey person responsible for the on-the-job training by having the journey person initial the chart.

To become a fully qualified journey person, a registered apprentice must, during the length of the apprenticeship, become skilled in all areas of the trade listed on the training record chart.

The following terms are used to rate the level of competency which the apprentice is required to achieve. Performance Ratings on the chart are based on industry performance standards.

"C"   Requires assistance to perform the task.

"B"   Capable of performing the task with limited guidance from a qualified journey person.

"A"   Capable of performing the task independently.

Note: In those circumstances where the employer is unable to provide work experience in a particular competency, that fact should be noted on the Training Record Chart by placing the letters "N.A" (not available) along with the appropriate person's intials in the "ON-THE-JOB TRAINING COMPETENCIES" column.

356

YEAR ONE ON-THE-JOB TRAINING RECORD CHART

Employers must encourage the development and application of safe work habits by the apprentice during all phases of on-the-job training. Wherever possible, Year One on-the-job training should prepare an apprentice for or reinforce the training received during the first period of in-school training.

ON-THE-JOB-TRAINING

COMPETENCIES	PERFORMANCE RATING		
	C	B	A
Store, handle, process and cook vegetables, fruits, and Farinaceous Products			
Cook meats and poultry by dry, moist and combination heat methods			
Slice, carve and portion meats and poultry			
Select and store fish and shellfish			
Cook fish and shellfish by dry and moist heat methods			
Prepare stocks, sauces, and soups			
Select and store meat and poultry			
Prepare a variety of cold kitchen items			
Store and handle baking ingredients			
Prepare basic pies, desserts and quick breads			
Receive and store foods in an organized manner			
Prepare a variety of egg and breakfast items			
Practice correct safety and sanitation procedures			
Process foods to obtain maximum nutrient retention			

'C'   **Requires assistance to perform this task**
'B'   **Capable of performing the task with limited guidance from a qualified journey person**
'A'   **Capable of performing the task independently**

IN-SCHOOL TRAINING   YEAR TWO

LINE A   Vegetable and Starch Cookery
1. Prepare vegetables and fruits.
2. Prepare farinaceous products.

LINE B   Meat and Poultry Cookery
1. Cook meats by dry heat methods.
2. Cook poultry by dry heat methods.
3. Cook meats by moist heat methods.
4. Cook poultry by moist heat methods.

LINE C   Seafood Cookery
1. Cook fish using dry heat methods.
2. Cook fish using moist heat methods.

LINE D   Stocks, Soups, and Sauces
1. Prepare stocks and glazes.
2. Prepare soups.
3. Prepare mother and secondary sauces.

LINE E   Meat, Poultry and Seafood Cutting and Processing
1. Identify factors affecting the cooking of Beef, Veal, Lamb and Pork.
2. Cut Beef, Veal, Lamb and Pork.
3. Process poultry.
4. Process seafood.

LINE F   Cold Kitchen
1. Prepare buffet salads, cheese, meat and vegetables.

LINE G   Baking and Desserts
1. Prepare yeast products.
2. Prepare cookies.
3. Prepare pastries.
4. Prepare and present cakes.

YEAR TWO ON-THE-JOB TRAINING RECORD CHART

ON-THE-JOB-TRAINING

COMPETENCIES	PERFORMANCE RATING		
	C	B	A
Prepare vegetables, fruits and farinaceous products using a variety of techniques			
Cook meats, poultry and seafood using a variety of techniques			
Prepare consommés, glazes and self-thickened sauces			
Cut, bone and prepare meat, poultry and seafood			
Prepare buffet salads and food platters			
Prepare basic yeast products and pastries			
Calculate food cost percentages and product yields			
Plan sample menus			
Practice correct safety and sanitation procedures			
Prepare menu items to meet specific dietary requirements			
Practice good communication skills			

357

'C' **Requires assistance to perform this task**

'B' **Capable of performing the task with limited guidance from a qualified journey person**

'A' **Capable of performing the task independently**

IN-SCHOOL TRAINING   YEAR ONE

LINE A   Vegetable and Starch Cookery

1. Select and store vegetables and fruits.
2. Prepare vegetables and fruits.
3. Select and store farinaceous products.
4. Prepare farinaceous products.

LINE B   Meat and Poultry Cooking

1. Cook meats by dry heat methods.
2. Cook poultry by dry heat methods.
3. Cook meats by moist heat methods.
4. Cook poultry by moist heat methods
5. Cook meats by combination heat methods.
6. Cook poultry by combination heat methods.

LINE C   Seafood Cookery

1. Select and store fish.
2. Cook fish using dry heat methods.
3. Cook fish by moist heat methods.
4. Select and store shellfish.
5. Prepare and cook shellfish.

LINE D   Stocks, Soups, and Sauces

1. Prepare stocks
2. Prepare basic soups.
3. Prepare mother sauces.

LINE E   Meat, Poultry and Seafood Cutting and Processing

1. Select and store beef, veal. lamb and pork.
2. Describe the primal and secondary cuts of beef, veal, lamb and pork.
3. Portion and cut beef, veal, lamb and pork.
4. Select and store poultry.
5. Portion and cut poultry.
6. Select and store seafood.
7. Portion and cut seafood.

358

IN-SCHOOL TRAINING   YEAR ONE

LINE F   Cold Kitchen

1. Select, store and clean salad ingredients.
2. Describe assorted salad ingredients.
3. Prepare salads.
4. Prepare salad dressings.
5. Select and store sandwich ingredients.
6. Prepare hot and cold sandwiches.
7. Select, store and handle dairy products.
8. Select, store and handle cheese.

LINE G   Baking and Desserts

1. Store and handle baking ingredients.
2. Describe the principles of baking.
3. Describe baking ingredients and their uses.
4. Prepare basic pies.
5. Prepare desserts.
6. Prepare quick breads.

LINE H   Basic Food Service and Kitchen Management

1. Describe basic cooking principles.
2. Receive and store food.
3. Describe cooler and storage room set-up.
4. Describe Reduce/Re-use/Recycle methods.
5. Weigh and measure foods.
6. Convert recipes.

LINE I   Egg and Breakfast Cookery

1. Describe the characteristics and properties of eggs
2. Describe the storage and handling of eggs.
3. Describe the methods of cooking and serving eggs.
4. Cook breakfast items.

IN-SCHOOL TRAINING   YEAR ONE

LINE J   Safety, Sanitation, and Equipment

1. Take Food Safe (Level I) Program.
2. Use safety practices for the kitchen
3. Take Basic First Aid Course.
4. Take the WHIMS Program.
5. Describe applications of the Workers Compensation Act in the workplace.
6. Describe fire safety.
7. Describe kitchen equipment, hand tools and their maintenance.
8. Describe food service occupations.

LINE K   Health Care/Cook/Chill

1. Describe factors affecting food consumption behavior.
2. Identify techniques for maximum nutrient retention in food processing.

THIS TRAINING RECORD BOOK IS ISSUED TO:

NAME: _____

SURNAME   GIVEN NAMES

ADDRESS: _____

       _____

POSTAL CODE   TELEPHONE #

S.I.N. _____

TRADE: _____

DATE RECORD BOOK ISSUED: _____

APPENDIX 16

APPRENTICESHIP IN THE FIELD - INSPECTION REPORT

M I N I S T R Y   O F   L A B O U R
Apprenticeship Information Management System

AIMS3200

APPRENTICE INSPECTION REPORT

Area: 07 -DAWSON CREEK
Sub-Area: 2 -

Visit Date: B/F Date:

361

Apprentice: Employer:

Status: ACTV   Appr. Last Visit: Contact:
Sin: Tradesworker Id: No. of Employees: (604)
Trade: Journeypersons: Ext.:
Start Date: Apprentice Wage: Journeypersons:
Expiry: Journeyperson Wage: Emp. Last Visit:

Institution   ------Class Information------
                           Class Level Start Date End Date   Score   Exam Type Session Date Result Status

                                                                                                   CONF
Tradesworker Remarks: ASGN

_____

_____

Counsellor Remarks:

_____

_____

Employer / Supervisor Remarks:

_____

_____

_____

Confirm Apprenticeship Completed: YES   NO   Employer Signature: _____

                                                                   Date: _____