



Cooks Apprenticeship Comparative Study: Canada and Germany

Prepared for:
Canadian Tourism Human Resource
Council (CTHRC)

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Table of Contents

1.0 INTRODUCTION.....	3
1.1 Project Outline.....	3
1.2 Methodology.....	5
1.2.1 Background Research.....	5
1.2.2 Questionnaire Development.....	5
1.2.3 Data Collection.....	5
1.2.4 Framework Development.....	6
1.2.5 Validation.....	6
1.3 Cook Definitions.....	7
1.4 Overview of Credentialing Programs for the Cook Trade.....	8
1.5 CANADA - Canadian Tourism Human Resource Council (CTHRC).....	9
1.5.1 History, Role and Services.....	9
1.5.2 Overview of emerit.....	9
1.5.3 emerit Line Cook Training System.....	9
1.5.4 emerit Line Cook Professional Certification.....	10
1.6 CANADA - Interprovincial Standards (Red Seal) Program.....	10
1.6.1 Overview of Interprovincial Standards (Red Seal) Program.....	10
1.6.2 Designated Trades.....	11
1.6.3 Key Players and Administration.....	11
1.7 GERMANY - Dual Vocational Education and Training (VET) System.....	12
1.7.1 History and Purpose.....	12
1.7.2 Education and Training Specifications.....	12
1.7.3 Key Players and Administration.....	13
1.8 Summary.....	14
2.0 SKILLS AND KNOWLEDGE STANDARDS.....	15
2.1 Development Approach.....	15
2.1.1 CTHRC – emerit National Occupational Standards (NOS) for Line Cooks.....	15
2.2.2 Interprovincial Standards (Red Seal) Program – National Occupational Analyses (NOA) for the Cook Trade.....	16
2.2.3 VET System – National Guidelines.....	17

2.3	Comparison of Standards, Skills, Tasks and Guidelines.....	18
	NOA/NOS Comparison	19
	NOA/VET National Guidelines Comparison	20
	NOS/VET National Guidelines Comparison	21
3.0	TRAINING.....	21
3.1	CTHRC.....	22
3.1.1	Overview.....	22
3.1.2	Specifications	22
	Basis for Curriculum Development.....	22
	Curriculum Development Process.....	23
	Length of Program.....	23
	Delivery Formats	23
3.1.3	Candidate and Instructor Requirements.....	23
3.1.4	Assessment Process	23
3.1.5	Translation into Other Languages	24
3.1.6	Administration, Documentation and Accountability	24
3.2	Interprovincial Standards (Red Seal) Program.....	24
3.2.1	Overview.....	24
3.2.2	Specifications	25
	Basis for Curriculum Development.....	25
	Curriculum Development Process.....	25
	Length of Program.....	26
	Delivery Formats	26
3.2.3	Candidate and Instructor Requirements.....	27
3.2.4	Assessment Process	27
3.2.5	Translation into Other Languages	27
3.2.6	Administration, Documentation and Accountability	27
3.3	VET System	27
3.3.1	Overview.....	27
3.3.2	Vocational Training Specifications.....	27
	Basis for Curriculum Development.....	27
	Stakeholder Involvement.....	28
	Length of Program.....	28

Delivery Formats	28
3.3.3 Enterprise Training Specifications	28
Basis for Curriculum Development	28
Stakeholder Involvement	28
Length of Program	28
Delivery Formats	29
3.3.4 Candidate and Instructor Requirements	29
3.3.5 Assessment Process	29
3.3.6 Translation into Other Languages	29
3.3.7 Administration, Documentation and Accountability	30
3.4 Comparison of Training	30
4. TESTING	32
4.1 CTHRC	33
4.1.1 Final Theoretical Examination for Certification Development and Characteristics	33
Description of the Scope and Use of the Examination	33
Exam Development	33
Examination Specifications	33
Item Development	34
Examination Forms	35
Passing Score	35
Translation into Other Languages	36
Psychometric Properties of the Test: Reliability and Validity	36
Psychometric Properties of the Test: Item/Test Analysis	36
4.1.2 Final Performance Evaluation for Certification Development and Characteristics	37
Description of the Scope and Use of the Examination	37
Development of the Performance Evaluation	37
Examination Specifications	37
Passing Score	39
Translation into Other Languages	39
4.1.3 Examination Administration	39
Registration Procedures and Materials Provided to Candidates	39

Administration Procedures, Locations and Scoring.....	39
4.1.4 Examination Security.....	40
4.1.5 Documentation, Record Keeping and Accountability	40
4.2 Interprovincial Standards (Red Seal) Program.....	41
4.2.1 Overview.....	41
4.2.2 Final Theoretical Examination for Certification Development and Characteristics	42
Description of the Scope and Use of the Examination	42
Examination Specifications	42
Item Development	42
Examination Forms	43
Passing Score	44
Translation into Other Languages.....	44
Psychometric Properties of the Test: Reliability and Validity	44
Psychometric Properties of the Test: Item/Test Analysis	44
4.2.3 Examination Administration.....	45
Registration Procedures and Materials Provided to Candidates.....	45
Administration Procedures, Locations and Scoring.....	45
4.2.4 Examination Security.....	46
4.2.5 Documentation, Record Keeping and Accountability	46
4.3 VET System	47
4.1.4 Final Theoretical Examination for Certification Development and Characteristics.....	47
Description of the Scope and Use of the Examination	47
Examination Specifications	47
Item Development	48
Examination Forms	49
Passing Score	49
Translation into Other Languages.....	49
Psychometric Properties of the Test: Reliability	49
Psychometric Properties of the Test: Item/Test Analysis	49
4.1.5 Final Performance Evaluation for Certification Development and Characteristics.....	49
Description of the Scope and Use of the Examination/Examination Specifications	49

Passing Score	50
4.1.6 Examination Administration	50
Registration Procedures and Materials Provided to Candidates	50
Administration Procedures, Locations and Scoring.....	51
4.3.4 Examination Security	51
4.3.5 Documentation, Record Keeping and Accountability	52
4.4 Comparison of Testing	52
4.4.1 Final Theoretical Examination for Certification	52
Examination Development and Psychometric Properties of the Test.....	53
Examination Administration, Examination Security and Documentation, Record Keeping and Accountability	53
4.4.1 Final Performance Evaluation for Certification	54
Examination Development and Characteristics.....	54
Examination Administration, Examination Security and Documentation, Record Keeping and Accountability	54
5.0 CREDENTIAL	54
5.1 CTHRC – Certification	54
5.1.1 Overview.....	54
5.1.2 Level of Recognition and Mobility.....	54
5.1.3 Pre-Requisites	54
Training (In-class and on-the-job)	55
Certificates	55
5.2 Interprovincial Standards (Red Seal) Program – Certificate of Qualification... 55	
5.2.1 Overview.....	55
5.2.2 Level of Recognition and Mobility.....	55
5.2.3 Pre-Requisites	55
Training (In-class and on-the-job)	55
Certificates	55
5.3 VET System – Certificate of Vocational Training	56
5.3.1 Overview.....	56
5.3.2 Level of Recognition and Mobility.....	56
5.3.3 Pre-Requisites	56
Training (In-class and on-the-job)	56



Certificates	56
6.0 CONCLUSION AND RECOMMENDATIONS.....	57
6.1 Skills and Knowledge Standards.....	57
6.2 Training	58
6.2 Testing.....	58
APPENDICES (see attachment)	60
REFERENCES.....	637

DRAFT

1.0 INTRODUCTION

1.1 Project Outline

As Canada's population continues to age while birth rates steadily decline, labour and skill shortages are becoming an ever-increasing issue in all sectors nationwide. The Conference Board of Canada has indicated that the Canadian economy will face a shortfall of close to one million workers by 2020. With this, the net growth of the Canadian Labour force will depend entirely on immigration. This may be of particular concern to the tourism industry, as economic growth and ongoing industry development have lead to a steady increase in labour demand¹.

In order to address the challenges identified in the Canadian tourism industry, great importance has been placed on enhancing the quality of jobs in the industry, and facilitating the entry of those individuals who are under-represented in the labour force. The Canadian Tourism Human Resource Council (CTHRC) has identified that mobility and transferability from foreign countries can be facilitated by recognizing international skills and qualification levels.² Achieving joint/reciprocal recognition and credentials will play a significant role in responding to the upcoming shortfall of workers and the rising demand of labour.

In order to identify the feasibility of achieving joint/reciprocal recognition and credentials for Cooks, CTHRC has contracted Human Resource Systems Group (HRSG) Ltd. to conduct a comparative study between Canada and Germany's Cook apprenticeship programs. In Canada, both CTHRC and the Interprovincial Standards (Red Seal) Program are involved in delivering programs that are intended to provide a dependable process for identifying practitioners who meet particular standards. This study will therefore include a comparison of the qualifications required for obtaining the Line Cook credential offered through the *emerit* Line Cook Certification Program, the Red Seal designation for Cooks available through the Interprovincial Standards (Red Seal) Program, and the Specialized Worker Certificate: Cook, available through the apprenticeship program that is delivered by the German Dual Vocational Education and Training (VET) System. The comparative analysis focuses on the key factors that are relevant to the qualifications for these credential designations, including the in-school training requirements, the on-the-job training requirements, as well as other relevant criteria, such as successfully completing the assessment requirements. The skills and knowledge defining the expectations of Cooks or Line Cook are unique to each credentialing program and serve as the foundation of each component of the programs in helping define the training (both on-the-job and in-class) objectives and are used to create a blueprint for the assessment components. A comparison of the skills and knowledge is therefore the initial point of comparison.

It is important to note that a fundamental difference exists between a certification program and an apprenticeship program. While a certification program is designed to recognize individuals who meet a specified standard defining competence in a field, an

apprenticeship program is designed to recognize skilled crafts practitioners who have achieved a specified standard by undergoing various components of a training system. Given that both credentialing programs (the Interprovincial Standards (Red Seal) Program and the CTHRC *emerit* Line Cook Certification Program) are actively involved in finding solutions to address the human resource issues relevant to the Cook trade, CTHRC *emerit* Line Cook Certification is included in this analysis to foster a comprehensive understanding of the Cook trade in Canada. Furthermore, both programs are important in understanding how joint/reciprocal recognition can be achieved between Canada and Germany.

Section one provides an overview of the project methodology, Cook/Line Cook definitions, credentialing programs for the Cook trade, CTHRC, the Interprovincial Standards (Red Seal) Program and the VET System.

Section two discusses the development approach for CTHRC's *emerit* National Occupational Standards (NOS) for Line Cooks, the Interprovincial Standards (Red Seal) Program's National Occupational Analyses (NOA) for the Cook trade, as well as the VET System's National Guidelines. This section concludes with a comparison of the standards, skills, tasks and guidelines between the targeted programs and the identification of current gaps.

Section three examines the training components of the programs, including the basis for curriculum development, development format, requirements, assessment of previous credentials, instructor requirements, delivery format, credits obtained, number of hours required in the classroom and in the industry, and finally, the credential obtained upon completion. This section concludes with a comparison of the training component of the targeted programs and the identification of current gaps.

Section four covers the testing components for each of the three programs, and provides specific information about examination development and characteristics, administration, security, documentation, record keeping and accountability. This section also concludes with a comparison of the testing components between the targeted programs and the identification of current gaps.

Section five expands upon the credentials obtained through each program, and focuses specifically on elements that define the credentials and include information on pre-requisites that individuals must meet prior to challenging the credentialing exam.

Section six and seven conclude the study and include recommendations, as well as key process points to achieve joint/reciprocal recognition in terms of the curriculum, testing and credentials.

1.2 Methodology

1.2.1 Background Research

Initial information and material on CTHRC's *emerit* Line Cook Certification, the Interprovincial Standards (Red Seal) Program and the German Dual VET System was collected through direct communication (i.e., in-person meetings, telephone conversations, e-mail exchanges, etc.) with several employees and subject matter experts (SMEs) from various organizations such as CTHRC, the Canadian Council of Directors of Apprenticeship (CCDA), the German Chefs Association (VKD), the Federal Institute for Vocational Training (BIBB) and the Chamber of Industry and Commerce (IHK)-AKA Nürnberg, amongst others. Additional background documents were also collected via rigorous Internet searches. All of the documents and materials collected for this project were then thoroughly reviewed and analyzed for the purpose of identifying and recording valuable information.

1.2.2 Questionnaire Development

In order to effectively and efficiently obtain information, one standardized questionnaire was created with the objective of obtaining detailed information on the training components of the credentialing programs (see Appendix 1), and another questionnaire was created that centered on credentialing examinations (see Appendix 2). These were utilized as the frameworks for comparison.

1.2.3 Data Collection

SMEs were identified and invited to participate in the research process. Upon agreement, relevant questionnaires were sent electronically in preparation for interviews or in-person meetings. The following individuals contributed valuable information to the research:

- Bandoro, Dono - Human Resources and Social Development Canada (HRSDC)
- Bretschneider, Markus - Federal Institute for Vocational Training (BIBB)
- Braune, Peter - Chamber of Industry and Commerce (IHK) Frankfurt
- Clark, Darlene - Canadian Council of Directors of Apprenticeship (CCDA)
- Eller, Nancy – Interprovincial Standards and Examinations Committee (ISEC)
- Hall, Gail - Gail Hall Consulting
- MacDonald, Jennifer - Canadian Tourism and Human Resource Council (CTHRC)
- McCarthy, Stephen - Department of Post Secondary Education, Training and Labor, New Brunswick
- Meissner, Gabriele - Chamber of Industry and Commerce (IHK)-AKA Nürnberg
- Mifflin-Sills, Amy - Human Resources and Social Development Canada (HRSDC)
- Muir, Doug – Liaison to the Canadian Council of Directors of Apprenticeship (CCDA)
- Ngiau, Jobina - Human Resources and Social Development Canada (HRSDC)

- Schmidt, Michael – German Chefs Association (VKD)
- Stephen, Renee - Canadian Tourism and Human Resource Council (CTHRC)

Additional information was also obtained through a key secondary source: the information collected for the Cooks Qualification and Core Competency Mapping Project, which provided us with various frameworks that clearly summarized key aspects of apprenticeship training in Canada for the Cook trade (e.g.: the number of academic and industry hours required to complete apprenticeship training in each jurisdiction).

1.2.4 Framework Development

Various frameworks/comparative charts were created in order to successfully summarize key information, specifically for comparison purposes. The first framework (see Appendix 3) outlines similarities and equivalencies in tasks, sub-tasks and supporting knowledge, skills and abilities between the Interprovincial Standards (Red Seal) Program's National Occupational Analysis (NOA) for Cooks, CTHRC's National Occupational Standards (NOS) for Line Cooks and the Federal Institute for Vocational Training's (BIBB) Master Guidelines for Training at the Enterprise, which have been strategically incorporated into the Ministry of Education and Research's (BMBF) National Guidelines (see Appendix 4). The second framework summarizes the essential aspects of training within all three programs (see Appendix 5), and the final framework encompasses the critical testing components of the credentialing programs (see Appendix 6).

1.2.5 Validation

Content validation took place by forwarding specific information to CTHRC, the Canadian Council of Directors of Apprenticeship (CCDA), Human Resources and Social Development Canada (HRSDC), the Ministry of Education and Research (BMBF) and the Federal Institute for Vocational Training (BIBB) representatives via e-mail, as well as communicating with many of these individuals both in person and over the telephone in order to record any proposed recommendations/suggestions. Moreover, a one and a half day Steering Committee meeting took place with the following subject matter experts (SMEs) from across Canada:

- Cohoon, Diane – Saskatchewan Tourism Education Council (STEC)
- Dowden, Bob – Nova Scotia Community College (NSCC)
- Hall, Gail – Gail Hall Consulting
- Kennedy, Bonnie – Canadian Association for Prior Learning Assessment (CAPLA)
- MacNeil, Bruce – Nova Scotia Community College (NSCC)
- Muir, Doug – Liaison to the Canadian Council of Directors of Apprenticeship (CCDA)
- O'Connor, Rob – Holland College
- Rodriguez, Louis – Centro Caboto

- Townsend, Stanley – Northern Alberta Institute of Technology (NAIT)

These SMEs reviewed all aspects of the project and provided feedback, which was utilized to revise and update the information collected to date.

1.3 Cook Definitions

The organizations presented in this report have each adopted their own definitions of Cooks or Line Cooks. While these encompass similar characteristics when looking at the broader scope, minor differences do exist. It is essential to outline and understand these variations, as each of these definitions are utilized to drive the skills, knowledge, abilities, as well as the overall program components.

In general, the act of cooking refers to the selection, measurement and combination of “ingredients in an ordered procedure in an effort to achieve the desired result. Factors affecting the final outcome include the variability of ingredients, ambient conditions, tools, and the skill of the individual doing the actual cooking.”³

CTHRC defines a Line Cook as “an individual who, under supervision, engages in organizing, preparing, assembling and presenting hot and cold food to order.”⁴

The Interprovincial Standards (Red Seal) Program utilizes the definition provided in the National Occupational Classification (NOC) system, which outlines that Cooks (NOC: 6242) “prepare and cook a wide variety of foods. They are employed in restaurants, hotels, hospitals and other health care institutions, central food commissaries, educational institutions and other establishments. Cooks are also employed aboard ships and at construction and logging campsites. Apprentice cooks are included in this unit group.”⁵

The Federal Institute for Vocational Training (BIBB) states that Cooks prepare a variety of dishes including appetizers, starters, main dishes, desserts, etc. They plan menus and are able to present products. They master all work and kitchen related processes, are knowledgeable about hygiene and consider nutritional, economical and environmental aspects. They further master the basics of calculation, provide guidance to customers and make food compatibility suggestions.⁶

While the above definitions are comparable to one another, the CTHRC Line Cook definition indicates that these individuals work under supervision, suggesting this is an entry-level position. Moreover, it is important to note that the NOC lists approximately 45 job titles encompassed in the term Cooks including apprentice cook, banquet cook, breakfast cook, line cook, restaurant cook, etc. As programs were developed to target occupations as defined above, differences in the skills and knowledge required to obtain the various credentials are likely to be noted.

1.4 Overview of Credentialing Programs for the Cook Trade

Various credentialing programs are available to individuals seeking to obtain recognition for gaining knowledge, skills and abilities in a particular occupation. The two programs being assessed throughout this study include certification and apprenticeship.

Certification programs are “designed to identify and recognize individuals who meet a specified standard defining competence in a field. A certified worker, on average, is more competent than a non-certified worker. Employers benefit from hiring those who meet accepted standards for the profession. Employees gain the recognition of having proven themselves competent, and increase their chances for job mobility and other opportunities. Certification is one way of promoting and recognizing a highly skilled workforce.”⁷ In the CTHRC certification model, individuals have the opportunity to challenge the final examination(s) once they meet the minimum requirements or prerequisites. Therefore, “there is no requirement for a candidate to complete any education, training, or professional development program, nor is there a requirement to become a member of an association in order to qualify. Certification is aimed at those already working in the profession.”⁸

Apprenticeship programs, on the other hand, are defined as training systems for a new generation of skilled crafts practitioners.⁹ This form of post-secondary education combines on-the-job with in-school training, where formal exams are often required at various levels throughout the training process. Upon completion of the program, individuals that satisfy the pre-established criteria can take a final examination in order to earn a Certificate of Qualification/Journeyman Certificate in Canada, and a Specialized Worker Certificate: Cook, in Germany.¹⁰

In Canada, apprenticeship programs are offered through in school (technical training) and on-the-job training. The technical training portion of the programs is generally administered through community colleges and private career colleges, while on-the-job training is administered through employers. Apprenticeship programs are “generally administered by provincial and territorial departments responsible for education, labour and training (under the direction of the provincial or territorial Director of Apprenticeship) with authority delegated from the legislation in each province and territory”.¹¹ Furthermore, various provincial and territorial apprenticeship training boards take on the role of policy-makers in terms of recommending trade designations and curriculum requirements, as well as overlooking regulatory aspects of trades and occupations.¹² The length of apprenticeship programs varies significantly in Canada.

In Germany, the VET System is regulated by various Federal and state government departments, and is supervised by chambers and school supervision bodies. The Federal Ministry of Education and Research (BMBF) is one of the largest regulatory bodies, which overlooks the central coordination of the VET Act, the VET policies and the training plans for different professions that allow the country to achieve uniform

National Guidelines. Apprenticeship programs in Germany are typically three years in length.¹³

In both Canada and Germany, apprentices typically earn while they learn; they may receive some type of allowance while they complete the in-school portion of their program. During their on-the-job training, apprentices earn wages from their employers; however, these wages are usually lower than those of fully certified employees.¹⁴

1.5 CANADA - Canadian Tourism Human Resource Council (CTHRC)

1.5.1 History, Role and Services

Established in 1993, CTHRC works collectively with its council members to promote professionalism and address labour market issues in the Canadian tourism sector. By fostering relationships among tourism businesses, labour unions, associations, educators and governments, this sector council coordinates human resource development activities to build the most professional tourism workforce possible.

CTHRC's broader goal is to strengthen Canada's tourism sector in the global marketplace by undertaking various initiatives such as the Discover Tourism and Ready-to-Work programs, as well as by capturing, documenting and disseminating Labour Market Information (LMI) to the tourism sector.

*1.5.2 Overview of *emerit**

CTHRC has developed its own training products and programs, all of which are based on industry-defined standards and have been branded as *emerit*. The council offers a broad range of services and products including workbooks, trainer's guides, career planning, professional certification, human resources and business planning tools, National Occupational Standards (NOS), National reports/studies, on-line occupational training and business planning tools, and training videos.¹⁵

*1.5.3 *emerit* Line Cook Training System*

emerit offers an Entry-Level Cooks Learning System (CLS); this system allows chefs to take the role of job coaches and provides trainees with various tools such as assignments and activities that are to be completed in an actual kitchen. With this, the CLS offers a hands-on training experience by making the kitchen become the classroom. In addition, the system is very flexible as it allows both the trainee and the job coach to determine the length of time required to complete the learning program.¹⁶

1.5.4 *emerit Line Cook Professional Certification*

CTHRC defines certification as a demonstration of competency, indicating that Certified Professionals have met the job standards set out by industry. "*emerit* Professional Certification is the pinnacle credential available to industry professionals, and is recognized across the country".¹⁷ Furthermore, it is provided on a voluntary basis, and focuses primarily on achievements, knowledge and skills. With this, individuals may enter the certification process at various points, depending on their level of knowledge and previous work experience.

In order to be recognized through *emerit* Line Cook Certification and thus to achieve a Tourism Certified Professional (TCP) designation, individuals must pass a knowledge exam, a practical evaluation of performance and have the required experience. Obtaining this designation provides individuals with several benefits including recognition with employers, potential hiring preferences, an enhanced ability to perform to the highest standards in the workplace, as well as enhanced skills and better workplace relationships.¹⁸

1.6 CANADA - Interprovincial Standards (Red Seal) Program

1.6.1 *Overview of Interprovincial Standards (Red Seal) Program*

The Interprovincial Standards (Red Seal) Program was developed over 50 years ago to encourage common standards for trade on a nationwide basis and to extend the benefits of training across all provinces and territories. "As well, [the Program] alleviates barriers to labour mobility for workers in the skilled trades. It also reduces the risk of skill shortages by allowing qualified workers to seek work in other provinces/territories".¹⁹

The Interprovincial Standards (Red Seal) Program provides apprentices who have completed their training and certified journeypersons, with the opportunity "to obtain a Red Seal endorsement on their Certificates of Qualification and Apprenticeship by successfully completing an Interprovincial Standards Examination"²⁰.

Some trades are designated by provinces and territories as compulsory, which entails that workers be certified or registered as apprentices in order to practice in the occupation. Although many compulsory occupations are also Red Seal trades, the Red Seal is only mandatory when indicated as such by jurisdictions in specific legislation.²¹ Line Cooks, on the other hand, are classified as a voluntary occupation; such occupations "will also have certification and apprenticeship to indicate the level of competency the holder has, however, workers are not required to be registered or certified in order to practice in the occupation."²²

The amount of work experience and in-class technical training required to obtain a Certificate of Qualification vary significantly by jurisdiction as well as by educational

institution (see Appendix 7 for the most up-to-date version of the Ellis Chart, a comparative chart of apprenticeship training programs in Canada).

1.6.2 Designated Trades

Under the terms of the Canadian Constitution, each province and territory is responsible for education and training, and also for designating which occupations include apprenticeships. The Provincial and Territorial Apprenticeship Acts outline and govern the regulations of designated trades. These Acts therefore oversee all matters related to the standards and conditions of training for specific trades including methods of registering apprentices, curricula, accreditation, etc. Employers, employer associations and unions can also partake in designating a new trade by petitioning to their provincial or territorial Director of Apprenticeship.²³

1.6.3 Key Players and Administration

Established over 40 years ago and supported by the Government of Canada, the Canadian Council of Directors of Apprenticeship (CCDA) is responsible for the administration of the Interprovincial Standards (Red Seal) Program. Although apprenticeship programs in general are administered by provincial and territorial departments, each of these departments operates under the direction of a provincial or territorial Director of Apprenticeship, and in accordance with the legislation of each province or territory.²⁴

Various advisory bodies such as Apprenticeship and Certification Boards, Local Advisory Committees and Provincial Advisory Committees, also play a role in supporting apprenticeship programs. The CCDA works with such advisory boards, as well as with other regulatory boards "in the development of a skilled labour force and in the facilitation of labour mobility throughout Canada. This is achieved by: developing, implementing and recognizing Red Seal occupations and credentials; promoting high standards in occupational training; fostering harmonization in training among jurisdictions; and increasing public awareness of apprenticeship training and certification".²⁵

Under the guidance of the CCDA, Human Resources and Social Development Canada (HRSDC) sponsors a program to develop a series of National Occupational Analyses (NOA). These "are considered the base document for the development of both the Interprovincial Standard Red Seal examinations and the related curriculum required for apprenticeship training in each of the Red Seal trades".²⁶ There are currently 49 trades that are included in the Interprovincial Standards (Red Seal) Program; each has their own NOA, Ellis Chart (a comparative chart of apprenticeship training programs in Canada – see Appendix 7) and where available, an Essential Skills Profile (a document that outlines the tasks and complexity levels of the Essential Skills – see Appendix 8 for the Essential Skills for Cooks). In order to obtain Red Seal designation, an individual must either graduate from a recognized provincial or territorial apprenticeship-training

program, or obtain a Journey person level certificate from a province or territory. In addition to these requirements, the individual must also pass the Interprovincial Standards Examination for the specific trade, which is administered through provincial and territorial certification and apprenticeship offices.²⁷

1.7 GERMANY - Dual Vocational Education and Training (VET) System

1.7.1 History and Purpose

Professional training schools have existed in Germany since the 19th century; trainees would visit these schools while working for their respective employers. Germany has therefore always been a country in which learning on the job has been a conventional component of the education system. "All vocational training is aimed at imparting comprehensive professional competence in the occupation."²⁸ The official 'dual' education term was first used in 1964 when the Vocational Education and Training Act (BBiG) was developed and implemented. From this point forward, the VET System has been regulated on a Federal basis.²⁹

The promotion of mobility is of growing importance to the German VET System, specifically with the rising presence of the European Union (EU). With this, effort is being focused on improving the permeability of the education system. Germany would like to ensure that qualifications and competencies acquired in the German VET System be put to use in labour markets and education systems in other countries and without any obstacles, specifically within Europe. An interdisciplinary National Qualifications Framework (NQF) is therefore being developed, in order to facilitate the recognition of qualifications and learning outcomes across all areas of education.³⁰

1.7.2 Education and Training Specifications

Within the VET System, training is conducted simultaneously in two places of learning including the vocational school as well as the enterprise. In-school training typically occurs one to two days a week, while in-company training takes place three to four days a week.³¹

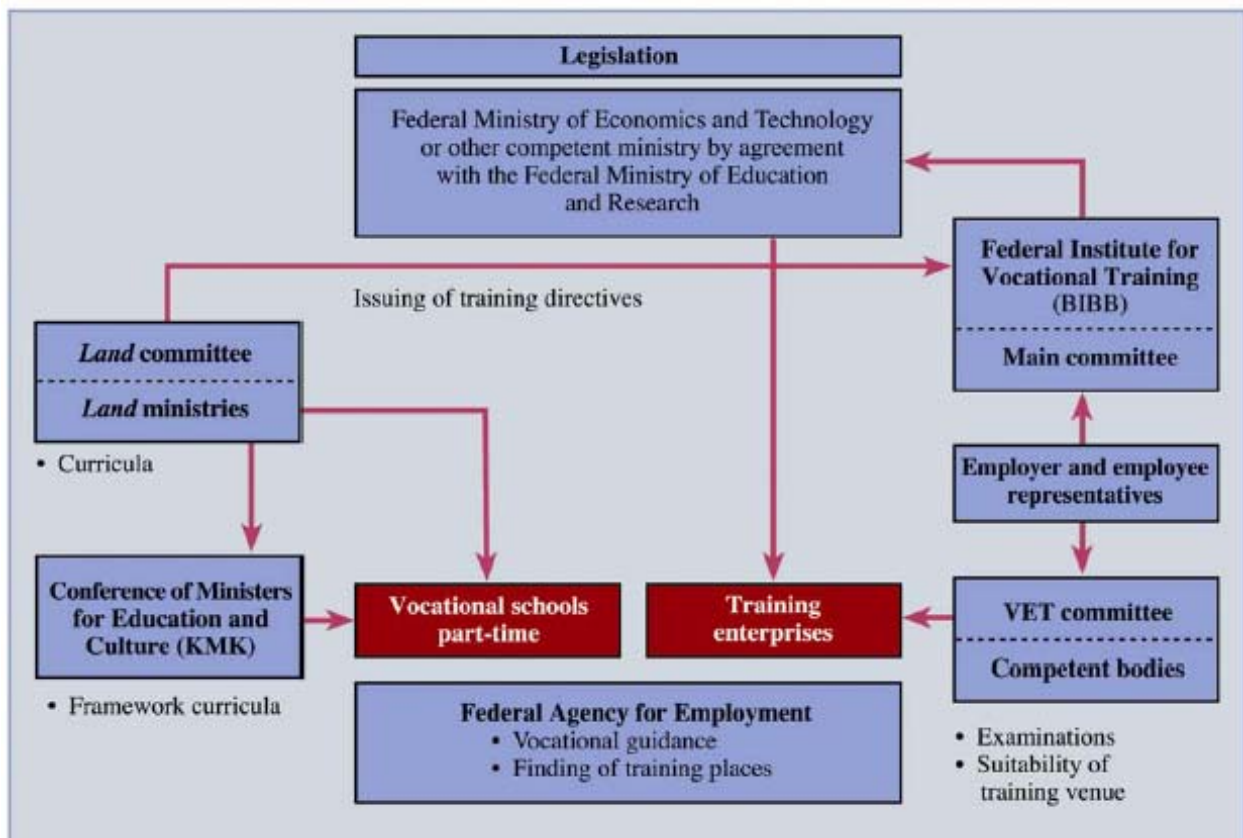
The enterprise bears the cost of the in-company training and pays the trainee during this period of time. The enterprise is also responsible for creating individual training plans based on the uniform National Guidelines (see Appendix 9), outlined by the Federal Ministry of Education and Research (BMBF). Furthermore, enterprises are monitored for their suitability and training by the Chambers of Commerce.

The vocational school, on the other hand, provides basic and specific education and extends previously acquired general education. Teaching must take place at least 12 hours a week, and must be divided amongst vocational subjects and general subjects, with an emphasis on teaching vocational subjects. Furthermore, the school is

responsible for allocating teaching in consultation with the training enterprise, the school inspectorate and competent industrial bodies. In order to be admitted to the VET System, an individual must have completed at least nine or ten years of previous schooling (otherwise known as full-time compulsory).³²

1.7.3 Key Players and Administration

Responsibility for the VET System is shared between both the public and private sector. The chart below illustrates the relationship of the key players:



At the Federal level, the Federal Institute for Vocational Training (BIBB) is responsible for developing the Master Guidelines for Training at the Enterprise (see Appendix 10), for carrying out research projects and for developing aspects of the in-company VET System. The BIBB is a federal government institution for policy, research and practice, and is recognized as "a centre of excellence for vocational policy research and for the progressive development of vocational education and training (VET) in Germany".³³ The Institute's current statutory basis is the Vocational Training Act of March 23, 2005; this Act sets out the BIBB's tasks which include, "conducting research on vocational education and training, developing vocational education and training, serving in an advisory capacity and providing services".³⁴

The Institute is supervised by the Federal Ministry of Education and Research (BMBF) on various points of law concerning its administrative activities. The BMBF, along with other Ministries, is primarily responsible for the in-company operations of the VET System, the central coordination of the VET Act (which provides the legal framework for the VET System), the fundamental issues of VET policy and the training plans for different professions. Furthermore, the Standing Conference of Ministers for Education and Cultural Affairs (KMK) oversees the development of curricula for education at vocational schools.

At the state (Länder) level, each Ministry of Education and Culture administers the development of curricula for education at vocational schools (though the Standing Conference of Ministers for Education (KMK) issues a Framework Teaching Plan (see Appendix 11) that is harmonized with the Federal Ministry of Education and Research's (BMBF) National Guidelines), while the Chamber(s) of Industry and Commerce (IHK) of each state monitors suitability of training enterprises, advises companies, registers trainees, certifies trainers' specialist aptitude and accepts examinations.

1.8 Summary

The certification and apprenticeship programs outlined above, allow us to both identify and understand the efforts taking place to define a trade and set predetermined standards that can be measured objectively in order to determine if a person can be deemed to have met the standards and therefore be granted a specific designation. The apprenticeship programs involve the collaboration and participation of many stakeholders, which is fundamental to ensure that the programs will be successful in facilitating mobility. It is important to recognize that differences do exist between each of the three programs, specifically in terms of the role of various regulatory bodies, levels of government (i.e. whether the programs are administered at the Federal, or provincial/territorial level), Ministries and educational and training institutions. Moreover, the extent to which unique definitions have been adopted for Cooks or Line Cooks, carries over to the knowledge, skills, abilities and responsibilities for this trade.

The proceeding sections of this report will focus on outlining, analyzing and comparing the competency/skills development approaches, as well as the overall training, testing and credentialing components of each of the three programs.

2.0 SKILLS AND KNOWLEDGE STANDARDS

2.1 Development Approach

2.1.1 CTHRC – *emerit* National Occupational Standards (NOS) for Line Cooks

To date, CTHRC has developed over 50 *emerit* occupational standards. The Line Cook NOS has undergone updates on numerous occasions, and the most recently created draft is presently undergoing validation (see Appendix 12).

The council defines standards as "the skills, knowledge, and attitudes an individual must demonstrate to be considered competent in his/her chosen occupation."³⁵ They are divided into various sections including major category, skill, subskill and details of the standard. CTHRC identifies that "standards must accurately reflect the industry needs in order to assure that successful completion of the certification process results in the skill and competency levels that employers expect."³⁶ Standards are considered National when they satisfy the following criteria:

- "the standards have been validated by a minimum of seven (or in special circumstances, a number to be determined by the CTHRC) provincial/territorial jurisdictions
- the standards have been endorsed by one or more National associations representing the sector concerned, if such an association exists
- the standards have been translated into the other official language"³⁷

CTHRC's Steering Committee oversees the development, review and update of all of the NOS. The development process first consists of recruiting subject matter experts (SMEs) across the country. These individuals are recruited for the purposes of serving on various working committees including industry committees, consisting of 8-15 members per occupation, and industry validation committees, consisting of 15-30 members per occupation. In order to be considered an SME, individuals must satisfy pre-established criteria outlined by CTHRC, which defines the amount of experience they must have prior to being considered an SME (including both industry experience and supervisory experience). Members of the industry committees begin the standards development process by participating in several formal job analysis meetings that involve brainstorming sessions, data sorting, work performed by small groups, etc., which result in the creation of a draft document. This document is then revised by the industry validation committees and industry stakeholders, in order to identify any necessary changes. Once this phase is complete, changes are accepted and added to the document, which is then sent to the industry validation committees for final review. Once validation occurs, the document is translated into the second official language.³⁸ In terms of reviewing and updating the NOS, the Steering Committee assesses each of the standards in detail while going through specific criteria to determine whether updates will be required at that time, or whether the updating process will be deferred (up to a

five year maximum). Once the standards that have been deferred reach the five-year point, they are reviewed again by the Steering Committee and generally, at that time updates to some degree are required. However, if the standards still satisfy the pre-established criteria, the updating process is deferred for another three years, where they will again appear on the council's list for update considerations.

The actual standards updating process varies from minimal to full-scale; minimal updates are typically addressed by the Steering Committee itself through either Boardroom meetings or virtual meetings. During these meetings, discussions amongst committee members take place on whether certain skills should be added, removed or changed, until a consensus is reached. Standards that require more significant updates are typically assessed through the use of focus groups. Approximately 10-15 voluntary SMEs (per standard) are recruited nationwide by local and national associations or by CTHRC itself, for sessions that last an average of two to three days. These focus groups are lead by an external facilitator and participants are encouraged to embark in detailed discussions about which skills are still valid and which skills require updating.

In some cases, once the results from the focus groups are obtained, validation is done through the use of online surveys. These surveys are distributed to approximately 200 CTHRC affiliates nationwide, including members, other councils, etc. Validation is also done through consultation with other SMEs that have been selected from either CTHRC's own database, or from the council's list of affiliates. Consultations typically take place via conference calls, and SMEs are probed on whether they believe that the results obtained from the focus groups are also valid.

2.2.2 Interprovincial Standards (Red Seal) Program – National Occupational Analyses (NOA) for the Cook Trade

The first National Conference on Apprenticeship in Trades and Industries was held in Ottawa in 1952; this conference resulted in requesting the Federal government "to cooperate with provincial and territorial apprenticeship committees and officials in preparing analyses of a number of skilled occupations."³⁹

The NOA are developed under the guidance of the Canadian Council of Directors of Apprenticeship (CCDA), through a program that is sponsored by Human Resources and Social Development Canada (HRSDC). The objectives of the NOA are as follows: "to identify and group the tasks performed by skilled workers in particular occupations; to identify those tasks that are performed by skilled workers in every province and territory; to develop instruments for use in the preparation of Interprovincial standards Red Seal examinations and curricula for training leading to the certification of skilled workers; to facilitate the mobility, in Canada, of apprentices and skilled workers; and to supply employers and employees, and their associations, industries, training institutions and governments with analyses of the tasks performed in particular occupations."⁴⁰ The Cook occupation was first designated as a trade in 1964 while the NOA for this trade

was developed in 2003 (see Appendix 13). An updated version of the Cook NOA is currently undergoing validation, and is projected to be released in June 2008.⁴¹

The NOA development process first begins with the creation of a draft analysis that identifies all of the tasks performed in the occupation. This draft is developed by a committee of subject matter experts (SMEs) and is lead by a team of facilitators. Once the draft is created, the development team provides a copy of the analysis and its translation to provincial/territorial authorities for review by SMEs in the particular field. These industry experts provide recommendations, which the development team and facilitators then assess and incorporate into the final draft.⁴²

The NOA is divided into several categories that include block, task, sub-task, supporting knowledge and abilities, trends, related components and tools and equipment (see Appendix 13, p. 286). The analysis also identifies common core tasks that are performed in the occupation. The criteria for identifying these tasks depend on the performance of sub-tasks. "If 70% of the responding jurisdictions perform a sub-task, it shall be considered common core. Interprovincial Red Seal examinations are based on the common core identified through the validation process. This process identifies what will be assessed through the Interprovincial examination."⁴³ The documents are published in both English and French, and are available free of charge through the Red Seal Secretariat at HRSDC.

2.2.3 VET System – National Guidelines

The Federal Ministry of Education and Research (BMBF) overlooks the development, review and update of a series of National, legal Guidelines (see Appendix 9), which are used for the development of both the Framework Teaching Plan (overlooked by the Standing Conference of Ministers for Education and Cultural Affairs (KMK)) (see Appendix 11), and the Master Guidelines for Training at the Enterprise (see Appendix 10) (overlooked by the Federal Institute for Vocational Training (BIBB)). While various enterprises and associations can propose changes to these guidelines, such changes must undergo thorough review and validation with industry representatives, the BIBB and other social partners, prior to being added or removed from the official guidelines.

The most recent version of the National Guidelines dates back from February 13, 1998. Discussions are currently taking place around revising and updating the document, specifically because of the ever-increasing presence, composition and importance of the European Union (EU); however, there has been no pre-determined date established for this initiative at this point. The 1998 document was developed on the basis of Section 25 of the Vocational Training Act of August 14, 1969, which was revised pursuant to Article 35 of the Ordinance of September 21, 1997. It is divided into ten sections, each of which outline rules and regulations on various topics such as the duration of training, the training framework plan, the intermediate and final examinations and the entry into the work force, amongst others (see Appendix 9). Section three (Training Occupation Description), lists the 22 skills and knowledge areas that must be covered in the development of both curricula and individual training plans.

Every vocational school abides by the Framework Teaching Plan when developing specific curricula. The plan is divided into three sections (one section per year), each of which outline the general goals, specific subject areas and time requirements (in hours) that must be included in the curricula. The Master Guidelines for Training at the Enterprise are organized in parallel to the Framework Teaching Plan (and in accordance with the general guidelines issued by the Federal Ministry of Education and Research (BMBF)). These guidelines are also organized into three sections (one section per year), and outline the amount of time that should be spent (in weeks) on each specific subject area at the training enterprise. Each enterprise must develop an individual training plan for its trainee(s), which have to be based on the Master Guidelines, but can be adjusted to meet specific circumstances (e.g.: geographic location, size of the enterprise, etc.).

2.3 Comparison of Standards, Skills, Tasks and Guidelines

A skills/standards framework summary (see Appendix 3) was created by identifying which performance and knowledge standards from the NOS were equivalent or similar to the supporting knowledge and abilities from the NOA, as well as by identifying which sub-tasks from the National Guidelines, encompassed one or several supporting knowledge and abilities from the corresponding sub-task of the NOA. This framework was created with the purpose of identifying similarities, equivalencies and gaps in tasks, sub-tasks and supporting knowledge, skills and abilities between the NOA for the Cook trade, the NOS for Line Cooks and the Federal Institute for Vocational Training's (BIBB) Master Guidelines for Training at the Enterprise, which have been strategically incorporated into the Ministry of Education and Research's (BMBF) National Guidelines.

Presented in the table below, are the levels at which comparisons amongst the three documents were made:

NOA	NOS	National Guidelines
Block A – Occupational Skills	Major Skills Category C – Kitchen Operation	
Task 3. Participates in production procedures	Skill C1. Identify Kitchen Tools and Equipment	Skills and Knowledge Areas 6. Using devices, machines and hardware, work planning
Sub-task 3.03 Maintains tools and equipment	Subskill C1.2 use kitchen tools and equipment	Sub-task 6.2&3.1 Initiate maintenance of devices and machines as well as repair of hardware
Supporting knowledge and abilities 3.03.03 knowledge of basic maintenance procedures	Performance and knowledge standards c) clean and maintain kitchen tools and equipment	

The Interprovincial Standards (Red Seal) Program's NOA was selected as the benchmark document, as the objectives of the study relate to comparing apprenticeship

in Canada and Germany and the NOA provided the greatest level of detail in terms of listing the supporting knowledge and abilities required for individuals in this trade. CTHRC's NOS was also included in this study and comparative analysis, as the Line Cook Certification Program plays an important role in creating national qualification standards that can improve worker mobility. CTHRC's Certification Program also provides a stepping stone for individuals in the Cook trade, as candidates have opportunity learn the basic skills required for this occupation and to receive a certain degree of recognition for doing so.

Given the varying degree of details between the three documents, and in particular the lack of specificity (supporting knowledge and abilities or subskills) outlined in the VET System's National Guidelines, there are limitations to the conclusions that can be drawn from the summary chart presented in Appendix 3. It is, however, important to note that a member of the Project Team consulted with one of the SMEs of the VET National Guidelines; after presenting and explaining the framework summary, the SME validated that the supporting knowledge and abilities from the NOA, were in fact comparable to those outlined by enterprises when preparing individual training plans. Moreover, the Project Team was informed that an initiative is currently underway in Germany, to develop competency-based National Guidelines that will provide greater detail in terms of supporting knowledge and abilities or subskills required by trainees.

NOA/NOS Comparison

The majority of the skills in the NOS were identified as being similar or equivalent to the tasks listed in the NOA.

A key gap between the NOA and NOS relates to the preparation of dairy and egg products, beverages, baked goods and desserts. The NOA includes a number of specific knowledge and skills required when preparing and/or serving dairy and egg products, beverages, baked goods and desserts, while the NOS does not.

On the other hand, the NOS includes the following additional skills that were not found in the NOA:

- A2.2 Work as a professional
- A3.1 Define effective communication
- A3.4 Listen effectively
- A4.1 Identify possible causes of stress
- A4.2 Manage stress
- A4.3 Solve problems
- B1.2 Identify Workplace Hazardous Materials Information System (WHMIS)
- B2.1 Understand fire safety
- B2.2 Practice fire safety
- B3.2 Use equipment safely
- B3.3 Follow electrical shock prevention guidelines
- B3.4 Identify components of knives

- B3.6 Respond to emergencies
- C2.3 Use proper cutting techniques
- C6.3 Identify components of an order

These differences were confirmed with the Steering Committee, who explained that they are present because of the fact that *emerit* Line Cook Certification provides entry-level recognition and targets Line Cooks who work under supervision, while the Red Seal endorsement is meant for those with more experience and training. It was suggested that *emerit* Line Cook Certification would compare to the expectations outlined for first year apprentices of provincial/territorial apprenticeship training. A qualifications framework is presently being developed for Cooks in Canada, which clearly illustrates the Red Seal designation as being at a higher level than *emerit* Line Cook Certification. (For further details please reference the Cooks Qualification Articulation and Core Competency Mapping Project⁴⁴).

NOA/VET National Guidelines Comparison

Through initial comparison of the framework summary, as well as through the verbal validation of supporting knowledge and abilities from our German counterpart, it has been confirmed that there are several links between the NOA and the National Guidelines. Both documents cover areas related to customer service, sanitary standards, using/cleaning kitchen equipment, placing/receiving orders and preparing various meals such as soups, meats, hors d'oeuvres, desserts, etc. by following recipes, to name a few.

Key gaps were identified between the VET National Guidelines and the NOA. The following additional skills were included in the VET National Guidelines, however, they were not found in the NOA:

- 1.1 Explain significance of the training agreement, in particular graduation, duration and termination
- 1.2 Indicate mutual rights and obligations arising from this training agreement
- 1.3 Indicate opportunities for vocational further training
- 2.1 Explain structure and tasks of the training establishment
- 3.3 Describe conduct in the case of accidents and introduce initial measures
- 3.4 Apply regulations concerning preventative fire safety; describe conduct in the case of fire and discuss measures for fire fighting
- 4.1 Explain potential environmental pollution by the training establishment and its contribution to environmental protection by way of examples
- 4.3 Utilize options for economical and environmentally-friendly energy and material use
- 4.4 Avoid waste; dispose of substances and materials in an environmentally-friendly manner
- 5.1.2 Understand capacity as host

- 5.1.3 Ascertain expectations of guests in respect of advice, support and service
- 5.1.5 Receive and advise guests
- 5.1.6 Apply foreign language terms specific to the job
- 5.1.7 Inform guests about the selection of services and products
- 5.2&3.3 Receive and handle complaints, and propose solutions oriented to guests and the company
- 7.2 Use disinfectant and cleaning agents economically
- 9.1.1 Examine sales potential of products
- 9.1.5 Utilize company cash desk system
- 10.1.2 Register and file written material
- 10.1.4 Apply statutory and operational regulations for data protection
- 11.3.1 Give reasons for cost-conscious use of materials and hardware
- 12.3.1 Play active role in sales-promoting measures
- 12.3.2 Provide decorations to suit the occasion
- 12.3.3 Compile effective advertising offers
- 14.2.3 Prepare pulses

NOS/VET National Guidelines Comparison

Due to the fact that the majority of the skills found in the NOS were deemed as equivalent or similar to those found in the NOA, almost all of the gaps identified in the comparison above, are gaps that have been identified between the NOS and the VET National Guidelines as well.

Trainees in the VET System are required to demonstrate a number of skills in addition to those required to obtain *emerit* Line Cook Certification. In particular, the NOS does not outline skills related to advertising and sales promotion, preparing dairy produce and eggs, preparing pastries and mixtures, as well as preparing desserts or sweet dishes, all of which are required by trainees in the VET System.

On the other hand, the NOS outline specific skills related to identifying possible causes of stress, managing stress, Identify Workplace Hazardous Materials Information System (WHMIS), etc. which are not included in the VET National Guidelines.

3.0 TRAINING

As previously mentioned, various credentialing programs are available to individuals seeking to obtain recognition for gaining knowledge, skills and abilities in a particular occupation. The two programs being assessed throughout this study include certification and apprenticeship.

Certification programs are “designed to identify and recognize individuals who meet a specified standard defining competence in a field. A certified worker, on average, is more competent than a non-certified worker. Employers benefit from hiring those who

meet accepted standards for the profession. Employees gain the recognition of having proven themselves competent, and increase their chances for job mobility and other opportunities. Certification is one way of promoting and recognizing a highly skilled workforce.”⁴⁵ Through such programs and the CTHRC certification model in particular, individuals also have the opportunity to challenge the final examination(s) once they meet the minimum requirements or pre-requisites. Therefore, “there is no requirement for a candidate to complete any education, training, or professional development program, nor is there a requirement to become a member of an association in order to qualify. Certification is aimed at those already working in the profession.”⁴⁶ With this, however, CTHRC recognizes the importance of training in developing qualified individuals. For this reason, CTHRC offers a number of training tools such as manuals and workbooks; although it is not mandatory, the training program is analyzed in this study as it could potentially be an important factor in future discussions on how to achieve joint/reciprocal recognition and credentials between Canada and Germany.

Apprenticeship programs, on the other hand, are defined as training systems for a new generation of skilled crafts practitioners.⁴⁷ This form of post-secondary education combines on-the-job with in-school training, where formal exams are often required at various levels throughout the training process. Upon completion of the program, individuals that satisfy the pre-established criteria can take a final examination in order to earn a Certificate of Qualification/Journeyman Certificate in Canada, and a Specialized Worker Certificate: Cook, in Germany.⁴⁸

3.1 CTHRC

3.1.1 Overview

emerit's most recent Line Cook Learning System was published in March 2008, and contains both a Coach's Field Guide and Trainee Workbook, both of which include various training tools such as assignments, activities and checklists (see Appendix 15). The learning system is divided into four modules including Professionalism, Safety and Sanitation, Kitchen Operation and Preparation and Cooking. Furthermore, each module contains learning objectives, on-your-own practice exercises, demonstration activities and add-on activities, etc. While the learning system component of certification has been developed to guide individuals through a structured process, the system is not a pre-requisite for challenging the certification examination.

3.1.2 Specifications

Basis for Curriculum Development

The content in the March 2008 version of Line Cook Learning System is based entirely on the 2007 Line Cook NOS.

Curriculum Development Process

The CTHRC Steering Committee and various industry experts are involved with developing, reviewing and updating the NOS, while the Standing Committee on Issues (SCI) is responsible for program policy and direction.

Length of Program

There is currently no time established for the completion of the learning. Together, the job coach and the trainee have the flexibility to integrate training into the kitchen schedule, and the completion of the program is therefore completely at their discretion.

Delivery Formats

The Line Cook Learning System can be purchased online at the Workbooks and Trainer's Guide's section of *emerit's* on-line store. The system is delivered in PDF format and it can also be shipped by mail. Learning can take place anywhere, as there is no in-class teaching involved.

3.1.3 Candidate and Instructor Requirements

As the learning system is based on the Line Cook NOS, trainees should be familiar with this document and understand how these standards impact their training. Furthermore, candidates are encouraged to familiarize themselves as much as possible with their job coach (i.e. his/her experience, credentials, etc.). Candidates must satisfy no other requirements to purchase and utilize the Line Cook Learning System.

Instructors (job coaches) should have a significant amount of industry experience, as they are the ones responsible for guiding trainees through the learning system. With this, however, there is no other pre-established criterion that must be referred to when identifying and selecting job coaches.

3.1.4 Assessment Process

Trainees have the opportunity to be assessed throughout their learning in a variety of ways. First, on-your-own practice exercises are available with each module, which trainees can complete in their own time. These exercises vary significantly, from matching terms with proper definitions, to completing charts by filling in the blanks, to responding to various scenario-type questions. The correct responses and solutions to these practice exercises are also included at the end of each module.

Second, the learning system involves an assessment of skills where job coaches can conduct demonstration activities or other add-on activities with their trainee; this provides trainees with the opportunity to either observe tasks, or to perform them with their job

coach. Furthermore, each module also includes a checklist that allows trainees to assess how much they have learned.

Finally, exam preparation and final review (which includes a practice examination) is also available at the end of the workbook; this allows trainees to determine how well they have acquired the knowledge and skills required to be competent, professional Line Cooks.

3.1.5 Translation into Other Languages

The Line Cook Learning System is available in both English and French. CTHRC follows a rigorous translating process to ensure that cultural linguistic attributes and occupation-specific or industry jargon are accurately represented. All translated tools are ratified by job incumbents and an industry committee can make recommendations and/or approve industry-specific terms and concepts. All translation services are overlooked and managed by a French-language editor employed by the *Conseil québécois des ressources humaines en tourisme* and in accordance with guidelines established by CTHRC.⁴⁹

3.1.6 Administration, Documentation and Accountability

The Line Cook web-enabled Learning Management System is managed through provincial and territorial tourism Human Resource Offices (HROs), which use the system to track and monitor candidates, compile statistics and otherwise manage the entire process. Furthermore, candidates are provided with application and registration forms, invigilation packages, correspondence templates, reporting forms, marketing collateral, administration manuals and certification evaluator/assessor training programs.

3.2 Interprovincial Standards (Red Seal) Program

3.2.1 Overview

Although apprenticeship programs in general are administered by provincial and territorial departments, each of these departments operates under the direction of a provincial or territorial Director of Apprenticeship, and in accordance with the legislation of each province or territory.⁵⁰ Therefore, there is no formal training administered through the Interprovincial Standards (Red Seal) Program; training is administered by apprenticeship authorities in each jurisdiction and it is at the provincial/territorial level that apprenticeship varies.

In order to establish some degree of standardization across the country, an Interprovincial Program Guide (IPG) Working Group was created with the purpose of developing a guide that could be used as a basis for curriculum development; representatives from participating provinces/territories participate in this working group.

As previously indicated, the general purpose of the IPG is to provide "a list of validated technical training outcomes, based upon those sub-tasks identified as common core in the National Occupational Analysis, and validated by industry in the provinces and territories as incorporating the essential tasks, knowledge and skills associated with a given trade."⁵¹ Although the IPG includes a recommended leveling structure to facilitate the mobility of apprentices, it does not impose a delivery model or teaching format, nor is it prescriptive of teaching materials/textbooks, learning activities, etc. to be used in the jurisdictions. Furthermore, each Red Seal trade for IPG development is assigned to a host jurisdiction; this jurisdiction is responsible for ensuring that the draft IPG is developed according to established guidelines, and also for ensuring that all timelines are met.⁵²

3.2.2 Specifications

Basis for Curriculum Development

The document used as a basis for IPG development is the National Occupational Analysis (NOA). All other available curricula are used as references in order to determine how materials and learning requirements are grouped together, as well as to identify any subject areas that may be new, different and/or outdated. The Ellis Chart (see Appendix 7) and other related materials are also used for comparison and analysis purposes.

Curriculum Development Process

During fall of 2007, a draft version of the IPG for the Red Seal occupation of Cook was created by a Joint Planning Committee, an IPG Working Group, industry and instructional representatives, as well as by various federal, provincial and territorial representatives (see Appendix 14). The purpose of the IPG is to provide "a list of validated technical training outcomes, based upon those sub-tasks identified as common core in the National Occupational Analysis, and validated by industry in the provinces and territories as incorporating the essential tasks, knowledge and skills associated with a given trade."⁵³

The IPG was developed based on the NOA and extensive industry consultation, as well as with the purpose of identifying and agreeing upon the "minimum common core content for the development of jurisdictional training standards and outlines"⁵⁴. With this, however, each jurisdiction still has the flexibility to adapt the IPG to their own curricula development process (i.e.; use of IPG as the foundation of curricula development is not mandatory).

The IPG is structured in such a manner that each of the sub-tasks from the NOA are covered in one or several of the IPG units. These units are then classified into a leveling structure; this structure recommends a means of facilitating mobility for apprentices that may be moving from one province/territory to another. In addition, outcomes are

specified for each IPG unit, which identify the specific performances that should be evaluated, whether through theoretical or practical assessments.

The IPG Coordinator is primarily responsible for draft curriculum development according to a determined structure and format, while the host jurisdiction assigned to the trade oversees the entire IPG development process. Once an initial draft is created, it is forwarded to the IPG Working Group, who briefly examines the document before the curriculum development workshop takes place. These workshops last five days and all logistics are overlooked by the IPG Working Group, as well as by HRSDC.

Generally speaking, each workshop consists of approximately ten participants, seven of which are usually industry people (Certified Cooks) that have been selected by members of the apprenticeship branch. Other participants typically include instructors (selected from various locations across the country), a facilitator, a co-facilitator, a recorder, IPG Working Group members and other observers.⁵⁵

During each workshop, an official draft curriculum is created for validation, which is then sent to the host jurisdiction and the IPG Coordinator for review, editing and formatting. Once the document is revised, the draft curriculum is forwarded to each Interprovincial Standards Examination Committee (ISEC) representative across the country for review and validation with industry. Any suggested changes must be sent back to the host jurisdiction via the IPG Coordinator in the form of an action report, which specifies the rationale for any recommended alterations. The host jurisdiction then reviews these action reports, and decides on whether to accept or reject the proposed changes. The IPG Coordinator then finalizes the results for publishing.⁵⁶

Length of Program

Based on data obtained from the Apprenticeship Mapping framework of the Cooks Qualification Articulation and Core Competency Mapping Project, as well as by the Ellis Chart, it was identified that the number of hours required for the completion of apprenticeship programs varies significantly nationwide. For example, the length of the Cook apprenticeship program in Newfoundland is 5,400 hours, whereas the length of the program in Nova Scotia is 6,000 hours, spanning over a three-year period.

Delivery Formats

As further outlined in the Apprenticeship Mapping Framework of the Cooks Qualification Articulation and Core Competency Mapping Project, as well as by the Ellis Chart, each institution nationwide has a variety of delivery formats available to apprentices; some offer distance/flexible learning such as Nova Scotia, while other jurisdictions, such as Alberta and Saskatchewan, require students to attend in-class learning only.

3.2.3 Candidate and Instructor Requirements

As with delivery formats, candidate and instructor requirements also vary between jurisdictions. Some jurisdictions have specified that pre-employment training is voluntary; all jurisdictions now offer Prior Learning Assessment and Recognition (PLAR). Moreover, overlapping experience can be recognized and other (previous) credential recognition is also available.

3.2.4 Assessment Process

Apprentice assessment is also jurisdiction-specific. Based on the Ellis Chart (see Appendix 7), it has been identified that jurisdictions typically utilize unit-level testing that includes both performance assessments as well as knowledge testing.

3.2.5 Translation into Other Languages

The IPG is first created in English; however, French translation and validation workshops take place with industry and a technical language officer at HRSDC to ensure the equivalency in content.

3.2.6 Administration, Documentation and Accountability

The procedures used for processing applications, administering candidates and maintaining the security of candidate records are jurisdiction-specific.

3.3 VET System

3.3.1 Overview

There are two types of curricula utilized within the VET System; the first is for vocational training, while the second is for enterprise (or in-company) training.

3.3.2 Vocational Training Specifications

Basis for Curriculum Development

Vocational school curricula are developed by the Standing Conference of Ministers for Education and Culture (KMK), based entirely on the National Guidelines issued by the Federal Ministry for Education and Research (BMBF). Each vocational school can further customize the curricula; however, they must always remain in accordance with the Framework Teaching Plan issued by KMK. The guidelines for non-vocational general subjects are provided by the Ministry of Education and Culture of each state.

Stakeholder Involvement

The Ministers of Education and Culture of each state partake in the development process for vocational school curricula (framework teaching plans).

Length of Program

While the entire program takes place over a three-year period, trainees attend vocational school learning approximately one to two days a week, which amounts to an estimated total of 2,400 hours.

Delivery Formats

While the curricula are available online as well as in paper-format, trainees do not have the option of learning online or through distance education. Each trainee must present themselves at the vocational school to complete the in-class learning requirements in person.

3.3.3 Enterprise Training Specifications

Basis for Curriculum Development

The Federal Institute for Vocational Training (BIBB) develops Master Guidelines for Training at the Enterprise, which are based entirely on the National Guidelines issued by the Ministry of Education and Research (BMBF). Each enterprise then develops individual training plans for trainees, based on these Master Guidelines.

Stakeholder Involvement

Employer, employee and teacher representatives collectively partake in the development of curricula (personalized training plans).

In addition, three agencies presently act as regulatory bodies, including the Health Authority (who monitors general hygiene issues), the Labour Inspectorate (who surveys the abidance of the law for minors), and finally, the Worker's Compensation Board (who monitors overall workplace security issues). Curricula are therefore also developed in accordance with the policies and procedures outline by these regulatory bodies.

Length of Program

While the entire program takes place over a three-year period, trainees attend enterprise training approximately three to four days a week, which amounts to an estimated total of 3,600 hours.

Delivery Formats

While the Master Guidelines for Training at the Enterprise are available online as well as in paper-format, trainees do not have the option of learning online or through distance education. Each trainee must present themselves at the training enterprise to complete the industry training requirements in person.

3.3.4 Candidate and Instructor Requirements

Prior to entering the program, candidates must complete at least nine to ten years of schooling. There are no additional regulations that mandate specific requirements to entering or completing the apprenticeship program. Formal agreements are currently in place with both Austria and Switzerland to recognize each others Certificate of Specialized Worker: Cook.

Instructors at the training enterprise must have both professional and pedagogical training and furthermore, they must be certified by the Chamber of Industry and Commerce (IHK) of their respective state. Vocational school instructors, on the other hand, must have a university degree.

3.3.5 Assessment Process

After the first year of both in-class and industry training, candidates must pass an intermediate examination which is comprised of both written and practical evaluations. Trainees are tested on the skills and knowledge they were taught at both the vocational school and the training enterprise.

During the three-hour examination, trainees are required to work on a practical subject question, where they must prove that they are able to plan work steps, apply various work techniques, and present the final products. Trainees must also demonstrate that they are familiar with hygiene regulations, environmental protection and cost effectiveness and furthermore, that they are guest-oriented.

Throughout the program, trainees must record their learning activities and practical training experience in a report notebook, which must be regularly inspected by the educator.

3.3.6 Translation into Other Languages

Both the Framework Teaching Plan and the Master Guidelines for Training at the Enterprise are only available in German.

3.3.7 Administration, Documentation and Accountability

Graduates from different types of schools that are interested in vocational training have the option to attend private information sessions offered by career counselors. After these sessions, candidates can apply to a training enterprise by sending a CV and current school diploma. Occasionally, they may be required to write an entrance test, have a practical session and a job interview before being accepted into the program.

Candidates who fail the intermediate examination have the option of continuing their vocational and enterprise training and challenge the final examination. Those who fail the final examination have the option of repeating it no more than twice. There are no official waiting periods; however, candidates only have the option of writing the final examination at the pre-determined dates (twice a year). Furthermore, they can request to continue their training at the enterprise and at the vocational school, while waiting for the next final examination date.

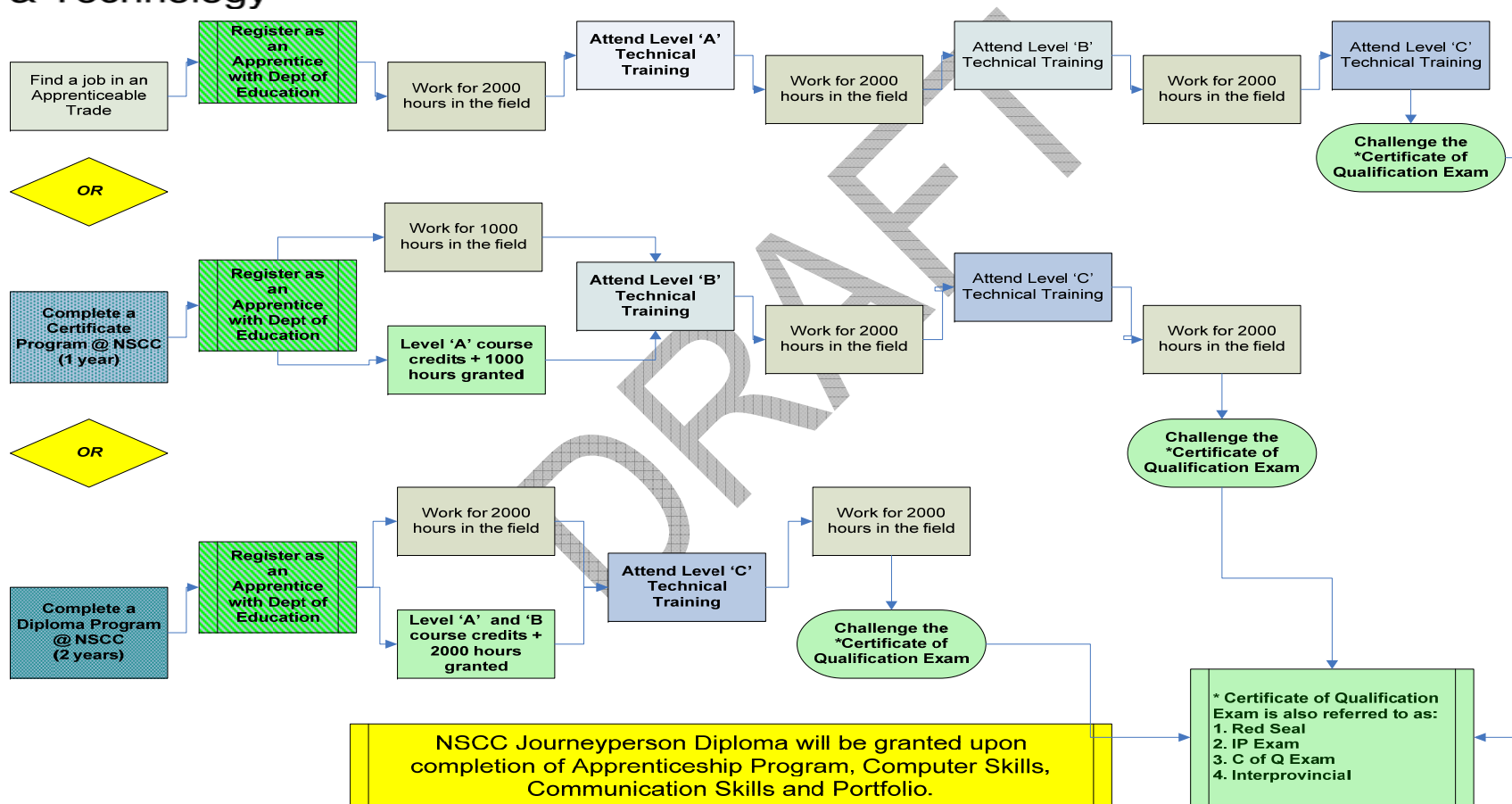
3.4 Comparison of Training

A training framework summary (see Appendix 5) was created in order to identify similarities, equivalencies and gaps in training curriculum development, training prerequisites, availability/use of assessment tools, translation into other languages and administration, documentation and accountability.

The key difference identified between the training components of all three programs is the fact that academic training, in particular, is not a mandatory requirement to obtain both the Red Seal endorsement, as well as the *emerit* Line Cook Certification, while it is a mandatory requirement to obtain the Certificate of Specialized Worker: Cook in Germany. The primary reason for this difference is due to the fact that various options are available to individuals seeking to obtain the Red Seal endorsement on their Certificate of Qualification. For example, Cooks that have significant industry experience can challenge the Red Seal Examination without completing in-class training. This option is also applicable to the *emerit* Line Cook Certification. On the other hand, those seeking to obtain the Certificate of Specialized Worker: Cook, in Germany, must fulfill the academic and industry training requirements, prior to challenging the final examination.

Presented below is a diagram that illustrates the various options or pathways available to apprentices at the School of trades and Technology in Nova Scotia, in order to obtain a Certificate of Qualification:

nscC
 School of Trades
 & Technology



Another key difference between the programs relates to the fact that the *emerit* Line Cook Learning System and the vocational school curricula in Germany (developed based on the National Guidelines), are both standardized documents, while the Interprovincial Program Guide (IPG) does not impose a delivery model or teaching format, nor is it prescriptive of teaching materials/textbooks, learning activities, etc. Therefore, although it is a national initiative, not all jurisdictions have agreed to participate in utilizing the IPG for curriculum development. In addition, each institution (whether they make use of the IPG or not) has the flexibility to utilize their own preferred learning materials and to establish their own respective learning outcomes (in accordance with provincial/territorial requirements). As well, the training enterprises and vocational schools of each state in Germany also have a degree of flexibility in tailoring the content of both the Framework Teaching Plan and Master Guidelines for Training at the Enterprise; content can be customized so long as it remains aligned with the National Guidelines.

Several areas were deemed as equivalent or similar amongst the training components of the three programs during discussions that took place amongst the Project Team and Steering Committee members. These include the extent of subject matter expert (SME) involvement in the training curriculum development process, the assessment process (in terms of assessing skills in a theoretical and practical manner), the procedures used to translate the training curricula (in Canada); some aspects of the administration, documentation and accountability of the training were also identified as being similar (specifically the application and administration procedures).

4. TESTING

"The development of an assessment tool is a multifaceted task that leads to the measurement of individuals' knowledge, skills, abilities, interests, attitudes, or other characteristics (e.g., personality traits, work values) using a set of questions designed according to a specific plan (e.g., assessment tool specifications or blueprint).

Assessment tools can be designed for various reasons such as helping predict job performance, identifying a level of competence or if the candidate meets a pre-determined level of standard, identifying managerial abilities, or evaluating job satisfaction. An assessment tool can take different forms (e.g., multiple-choice examinations, structured interviews, work simulations) and can be administered as paper and pencil tests, work samples, or computer simulations.

The development of a reliable, valid and fair assessment tool involves multiple steps and tasks, as well as the contribution of many people. In fact, the success of such a project largely depends on the level of involvement of people in the industry, subject matter experts (SME), and professional organizations in the industry. In addition, the development of an assessment tool requires the involvement of experts in testing and measurement, facilitation, and project management."⁵⁷

4.1 CTHRC

4.1.1 *Final Theoretical Examination for Certification Development and Characteristics*

Description of the Scope and Use of the Examination

The written knowledge exam is comprised of 100 multiple choice questions and examinees are provided with ample time to write the exam, as National certification examinations have no actual time limit. With this, however, a four-hour time limit on written examinations has been identified as a fair restriction to set in order to facilitate planning and administration. While the average time to complete the exam varies between two to three hours, candidates do have the opportunity to make arrangements with the administering tourism Human Resource Office (HRO) to request more time.⁵⁸

Exam Development

The council must also ensure that the written examinations are developed and conducted according to legally defensible and generally accepted psychometric principles and standards. With this, five key sources of accepted measurement-industry testing guidelines are used, including:

- *Standards for Education and Psychological Testing* (1999), American Education Research Association, American Psychological Association and National Council on Measurement in Education
- *Principles of Fairness: An Examination Guide for Credentialing Boards* (2002), Council on Licensure, Enforcement, and Regulation and National Organization for Competency Assurance
- *NCCA Standards for the Accreditation of Certification Programs* (2003), National Organization for Competency Assurance's National Commission for Certifying Agencies (NOCA)
- *Code of Fair Testing Practices in Education* (1988), Joint Committee on Testing Practices
- *Conformity Assessment – General Requirements for Bodies Operating Certification of Persons* (2003), ISO/IEC 17024, International Standard

Examination Specifications

The examination is based on the NOS for Line Cook. An important element of the test development is setting specifications or blueprint parameters. Doing so serves many important purposes:

- It ensures that the written questions are directly related to the NOS;
- It ensures that the exam content coverage is consistent from one form to the other;

- It informs candidates prior to writing the exam about how many questions will be in the exam; and,
- It provides specific information as to how many questions will be asked from each category

The test specifications guide the test development process. They provide information on the purpose of the test, a definition of the target population of candidates, the type of item format, the length of the exam in terms of number of items and actual time allotted to complete the exam, content outline (what will be covered in the exam), scoring procedures, acceptable statistical characteristics and delivery mechanism.

An industry validation committee is responsible for validating and approving the testing specifications. They confirm what will be assessed in the exam and to what extent.

The content areas for the 2008 written knowledge examination for Line Cooks are as follows:

- professionalism (5%-15% of questions)
- safety and sanitation (15%-25% of questions)
- kitchen operation (30%-40% of questions)
- preparation and cooking (30%-40% of questions)

Item Development

All items are developed based on test blueprints/specifications that have been established for each occupational certification program. These blueprint documents are comprised of structural and contextual variables, and they help ensure that each test item is related to the NOS; furthermore, they establish how items are selected or sampled for inclusion on an examination.

CTHRC follows a series of rules to develop multiple-choice test items including the development of stems, alternatives and distractors. The council also works with four broad taxonomy levels for the item banks including knowledge recall and basic comprehension, application and interpretation of skills, analysis and problem solving, synthesis and evaluation.⁵⁹

Each multiple-choice exam is developed by testing experts that construct the items to assess/measure a specific skill, ability, or characteristic, as defined in the NOS and in accordance with strict testing methodology. Pilot testing is then conducted for both newly developed test items and rewritten test items; the pilot form is written by individuals in the tourism sector and by a group of individuals that are not familiar with the skill area or in the sector industry.⁶⁰ While the examination is written under normal conditions, writers are asked to record answers and comments directly on the examination form. Statistical analyses are performed and qualitative data is generated. Results are used to guide the Industry Validation Committee members that complete a final review and approval of all items.⁶¹

Various criteria also exist for the complete item bank. “The principal requirements are:

- The bank should be a minimum of double the size of a form of the examination, with an appropriate proportion of questions to meet the blueprint requirements
- The bank, where possible, should mirror the blueprint document
- Correct answers must be randomly placed among the distractors, so that the position of where the correct answer is situated is evenly distributed
- Questions should not provide clues to other multiple-choice questions
Anchor items, which are a subset of test items that are contained on all exam forms derived from that bank, will represent 20 to 30 percent of any given bank⁶²

The number of items (unduplicated count) that are in the item bank for the Line Cook examination is 250 active, usable items.

New items are developed when there are changes or updates made to the NOS. Minor revisions are made periodically based on available statistical analyses.

Examination Forms

There is presently one examination form in use, which has been built to the Table of Specifications. Examination forms are generated through examination generation software that holds all item banks; each form is based on the Line Cook Certification program's test specifications.

Passing Score

Each examination has a unique passing score, as questions are selected from a larger item bank. All questions are reviewed and rated by an expert industry committee to determine their level of difficulty. Therefore, since each examination is made up of a different mix of questions, the passing score tends to vary between 65% and 85%. The base method to establish this passing score is done through setting a level of performance (LOP). This approach allows decisions about examination performance to be linked to criteria for acceptable practice of the profession. CTHRC has come to adopt the Angoff criterion-reference method, which requires a group of job experts to pass judgment and set a score on each test item within the bank. These individuals estimate how many minimally competent examinees would answer each item on the exam correctly and the estimated performance standard is then determined by averaging the judgments. The mean of the sum of the ratings is computed, which represents the cut score that an examinee must achieve in order to pass the examination.⁶³

All examinations are computer scored and verified; however, scores that are within a few points of the passing mark are routinely verified and hand scored for the purpose of ensuring accuracy.

Translation into Other Languages

The examination is available both in English and in French. CTHRC follows a rigorous translating process to ensure that the terminology used is accurate and reflects the workplace terminology.

All new test items are first adapted and translated into the other official language and the adaptation is then ratified by job incumbents and reviewed by a psychometrician. Validation frequently involves a pilot of the adapted written examination.. An industry committee can also make recommendations and/or approve industry-specific terms and concepts. All translation services are overlooked and managed by a French-language editor employed by the *Conseil québécois des ressources humaines en tourisme* and in accordance with guidelines established by CTHRC.⁶⁴

Psychometric Properties of the Test: Reliability and Validity

CTHRC ensures that when examinations are developed, they are both valid and reliable. In order to ensure reliability, assessment procedures and methods are developed/conducted in such a way that competency standards are applied consistently, and potential influential variables (assessor bias, variances in the application of standards, etc.) are avoided. Other psychometric principles such as fairness, respect and efficiency are also considered when developing examinations.⁶⁵

Moreover, validity is achieved by ensuring that the exam adequately covers the domain to be measured (the NOS), by constructing exam items to test what they are intended to test, and at an appropriate level and application.⁶⁶ Subject matters experts (SMEs) review and approve each item, confirming that they assess the skills and knowledge element intended and they confirm that there is only one correct answer.

Psychometric Properties of the Test: Item/Test Analysis

CTHRC utilizes two of the most common methods for evaluating test items including item difficulty (or p-value/proportion-endorsing) and item discrimination (point biserial correlation coefficient). In terms of item difficulty, the proportion or percentage of respondents selecting the correct response is identified. If this value is low, the test item is considered to be more difficult, whereas if the value is high, the test item is considered to be easier. These p-values are assessed and appropriate changes are made based on suggestions by Ebel and Frisbie (e.g., “the item is probably too difficult if less than 30% of the population selected the best answer”).⁶⁷ Item discrimination statistics are used to identify how many high scorers answered the test item correctly, which provides an indication of how well the item is able to separate higher scoring examinees from lower scoring ones. The point biserial, which ranges from -1.00 to +1.00, is computed and analyzed to determine whether discrimination exists, and if so, whether it is positive or negative.⁶⁸

An item/test analysis is typically conducted once 100 examinees have written the test, or if a particular test item is identified as having a potential performance problem (the mean, standard deviation, and Chronbach's alpha are computed. Committee members review the results and make any required changes that allow the item banks to become more precise so that fair and effective examinations are created.⁶⁹

4.1.2 *Final Performance Evaluation for Certification Development and Characteristics*

Description of the Scope and Use of the Examination

The purpose of the practical evaluation is to test candidates' abilities to apply specific terms, rules, principles, concepts and procedures in a practical/workplace setting. The evaluation is based on a selected range of skills from the standards (and is informed by the examination blueprint), and can be under the form of an in-person observation, structured interview/simulations, a case study, or a portfolio. For Line Cooks in particular, the examination is under the form of a direct observation.

Development of the Performance Evaluation

The council must ensure that the practical evaluations are developed and conducted according to legally defensible and generally accepted psychometric principles and standards. With this, five key sources of accepted measurement-industry testing guidelines are used, including:

- *Standards for Education and Psychological Testing* (1999), American Education Research Association, American Psychological Association and National Council on Measurement in Education
- *Principles of Fairness: An Examination Guide for Credentialing Boards* (2002), Council on Licensure, Enforcement, and Regulation and National Organization for Competency Assurance
- *NCCA Standards for the Accreditation of Certification Programs* (2003), National Organization for Competency Assurance's National Commission for Certifying Agencies (NOCA)
- *Code of Fair Testing Practices in Education* (1988), Joint Committee on Testing Practices
- *Conformity Assessment – General Requirements for Bodies Operating Certification of Persons* (2003), ISO/IEC 17024, International Standard⁷⁰

Examination Specifications

The practical examination is also based on the Line Cook NOS. The performance evaluation consists of the following content areas (this particular performance evaluation is scheduled for release in May 2008):

- Maintain professional appearance
- Work efficiently
- Respond to dietary restrictions
- Use knives safely
- Apply cooking methods
- Use proper cutting techniques
- Convert recipes
- Cook food to order
- Prepare soups
- Prepare sauces or compound butters
- Cook meat to required temperature
- Prepare salads

To develop the performance evaluation, the “industry committee considers all of the performance-based skills from the standards and selects those that are best assessed using a performance evaluation, that is through direct observation. The assessment tool is developed to ensure that the observation will occur under optimal condition to allow for the most accurate assessment.⁷¹ Once a draft strategy is developed, the tool is pilot tested to future testing conditions in an actual working environment, and information collected through the exercise is used to revise and finalize the tool. The council has outlined minimum criteria that performance evaluation and testing tools must conform to, including:

- “the standards will serve as the foundation
- the tools will primarily test the practical competence of the candidate
- the scope will address pertinent questions about the job and be responsive to the needs and interests of the specified audience
- evaluation outcomes must be easily interpreted
- the methodology will be practical so that, when applied, disruption is kept to a minimum and information can easily be obtained
- the methodology should be cost effective
- the methodology ensures that the rights and welfare of the candidates are respected and protected⁷²

There is presently one performance evaluation form being utilized; new evaluations are developed when changes and/or updates are made to the NOS.

A trained certification evaluator/assessor generally conducts the performance evaluation while the candidate is working. Many evaluators/assessors are volunteers that have been recognized for their past achievements and dedication to the process; however, professional evaluators/assessors are also hired on an occasional basis.⁷³ Another form of assessment often completes the certification assessment. It consists of a self assessment where the candidate and supervisor both confirm that the person has demonstrated the skills and knowledge identified in the NOS.

Passing Score

As with the written knowledge examinations, the performance evaluation also has a unique passing score. A procedure based on the modified Angoff standard setting procedure is used to establish the pass mark.

Translation into Other Languages

The performance evaluation is available both in English and in French. CTHRC follows a rigorous translating process to ensure that cultural linguistic attributes and occupation-specific or industry jargon are accurately represented.

All new performance evaluations are first adapted and translated into the other official language and the adaptation is then ratified by job incumbents. Validation frequently involves a pilot of the adapted performance evaluation. An industry committee can also make recommendations and/or approve industry-specific terms and concepts. All translation services are overlooked and managed by a French-language editor employed by the *Conseil québécois des ressources humaines en tourisme* and in accordance with guidelines established by CTHRC.⁷⁴

4.1.3 Examination Administration

Registration Procedures and Materials Provided to Candidates

Candidates writing the written knowledge examination in paper-and-pencil format are provided with an Examination Booklet that outlines all of the required information. Those candidates who choose to write an on-line knowledge examination are provided with Internet access, personal login information, and support or reference materials.

The procedures used for processing applications and scheduling candidates vary between tourism Human Resource Offices (HROs). Various testing centers use different methods and time frames to schedule candidates for the examinations.

Accommodations can be made for candidates that have problems reading and/or writing (i.e., the exam can be completed orally).⁷⁵

Administration Procedures, Locations and Scoring

The examination is administered through local certifying organizations (HROs), each of which abide by their own criteria/regulations pertaining to testing dates, frequency of testing, and retake policies/recommendations.

Various tools such as administration manuals and certification evaluator/assessor training programs are also used in the certification process. Both HROs and national industry associations are entirely responsible for hiring, training and monitoring proctors, and HROs are further responsible for the recruitment or hiring and training of certification

evaluators/assessors.⁷⁶ Training and orientation sessions, hosted by HROs, typically take place over a two-day period, and cover such topic areas as the program overview and program objectives, the roles and responsibilities of evaluators/assessors and the administrative responsibilities and requirements, to name a few.⁷⁷ In its Certification Program Policy and Procedures Manual, CTHRC has outlined the process by which proctors must administer examinations. These procedures have been put in place in order to ensure that examinations are administered in a uniform and fair manner.⁷⁸

4.1.4 Examination Security

All parties involved with the management and handling of examination materials, candidate information, communications and other administrative activities, “are advised of:

- Client confidentiality and privacy requirements
- The requirements to handle test materials in a secure fashion
- Protocols for storing and shipping examination materials
- Responses to security breaches”⁷⁹

Moreover, “all materials used in the development of examinations are subject to security measures. These documents include waste materials from exam development, item banks, level of performance setting materials, statistical analyses, answer booklets or responses from candidates, computer scoring software, and all related electronic files.”⁸⁰

4.1.5 Documentation, Record Keeping and Accountability

In its Certification Program Policy and Procedures Manual, CTHRC states that “candidates are to be supplied with accurate and timely information, have the certification process explained to them, and be told of requirements, of their right to appeal, how to contact the TEC, and any other pertinent information”⁸¹ such as their results, along with feedback and recommendations, as well as how to interpret the exam results.

Typically, candidates who fail either the theoretical examination or performance evaluation can view a breakdown of the score they received in each Major Category, through the Learning Management System. Moreover, the procedures in place for candidates to appeal their written knowledge examination scores and their performance evaluation scores are such that an appeal must be filed in writing within 30 days after receiving the written knowledge examination results, and within 60 days of receiving the performance evaluation results; all appeals must be filed directly to the HROs. Candidates also have the option of re-writing their exam as often as required; however, a re-writing fee may apply.

Each HRO is responsible for following stringent security measures to uphold the integrity of the examination. “During the examination:

- Unauthorized individuals will have no access to the examination materials; only those with proper identification will be allowed to enter the examination room
- No papers, books, or calculators are to be on the examination tables or desks, unless specifically authorized
- Each candidate will receive only one test book
- Candidates may not take notes or paper into the examination; if necessary, they may use the margins of the test book for draft work or to make notes, or note paper may be handed out
- Only one candidate at a time, and accompanied by a proctor, may leave the examination room during the examination
- Examination materials will be guarded at all times
- All a candidate's examination materials will be collected before the candidate is permitted to leave the room
- Examination materials will be kept together in a locked location to which no unauthorized individuals have access"⁸²

Moreover, in terms of managing candidate information, CTHRC "abides by the Personal Information Protection and Electronics Documents Act, generally known as privacy legislation, which was enacted on April 13, 2000 and implemented in January 2001. The act establishes rules for the management of personal information by organizations involved in commercial activities."⁸³ With this, all candidates' paper files are preserved for a minimum of four years, while candidates' electronic files are kept perpetually unless a request is processed by the candidate to destroy the data.⁸⁴

Proctors are provided with incident report forms for the purpose of tracking and recording any incidents that may arise. Certification coordinators are then responsible for reporting all candidate and/or employer concerns to the CTHRC office, where all correspondence and follow-up is tracked. Candidates are also periodically invited to provide comments on the overall process and service experience.

4.2 Interprovincial Standards (Red Seal) Program

4.2.1 Overview

Holders of provincial and territorial Certificates of Qualification can write the Interprovincial Standards Red Seal Examination, in order to obtain a Red Seal endorsement. Some jurisdictions may require candidates to first write a provincial/territorial examination and/or undergo a performance evaluation, prior to challenging the Red Seal Examination; however, such evaluations are the responsibility of each institution/jurisdiction. Therefore, the final written examination for certification focuses solely on assessing candidates' knowledge of the skills and abilities required for a particular trade as defined in the NOA.

4.2.2 *Final Theoretical Examination for Certification Development and Characteristics*

Description of the Scope and Use of the Examination

Red Seal examinations can include between 100 and 150 operational (scored) questions; however, most typically include 125, all of which are in the multiple choice format. Examinees are provided with a total of three hours to complete the examination; however, accommodations may be made if required.

Examination Specifications

The entire examination is based on the NOA for Cooks.

A Table of Specifications is developed and validated by industry, which is used to link the skills and standards with the development of examination specifications. This table is specifically created based on the inputs of workers in each jurisdiction; these workers collectively assign percentages to the sub-tasks of each block, which they feel should represent the amount of questions included on the examination. The provincial/territorial percentages are then forwarded, compiled and averaged nationally.

The content areas for this examination consist of the following:

- Occupational Skills (12%)
- Stocks, Soups and Sauces (12%)
- Vegetables and Fruit (9%)
- Pastas and Farinaceous Products (Starches) (7%)
- Game, Meats and Poultry (13%)
- Fish and Seafood (10%)
- Garde-Manger (9%)
- Dairy and Egg Products (7%)
- Convenience Foods and Beverages (5%)
- Baked Goods (7%)
- Desserts (9%)

Item Development

The Testing Policy and Procedures Manual contains a list of approximately 20 rules for item writing procedures. The facilitators that attend the item writing workshops are provided with this document. Item writing workshops typically consist of five tables, one facilitator, an instructor from a jurisdiction and two industry people across the country.

Each item is referenced to the Table of Specifications and the method used to confirm correct responses is by consulting the NOA for the Cook trade, which is a published document. New items are developed during item bank workshops, which can occur

between eight to ten times in any given year, depending on how often the NOA review takes place.

In addition, item review also occurs through the course of the item bank workshops; time is allotted for reviewing any new or edited items that have been developed. Items are reviewed and new items are created based on a five-year plan with several criteria. Often times, items are assessed every three years to determine whether they are still directly reflective of the NOA.

After items are developed and reviewed, they are forwarded to the host jurisdiction, which makes any alterations necessary for improving the grammatical content and structure of the items. Once these changes are implemented, the host jurisdiction forwards the items to all other jurisdictions for a peer-review process that spans approximately three months. Each jurisdiction has the opportunity to contact the trade advisory committee to review the items in the bank. Once reviewed, suggested changes are then forwarded back to the host jurisdiction in the form of an action report; the host then accepts or rejects the changes/recommendations.

All new items are field-tested prior to use on the examination. Field-testing varies in each jurisdiction, for example, the province of New Brunswick may contact three to four recently certified Cooks and have them write the test, whereas other jurisdictions may contact 15 industry people for field-testing. In the end, however, the results from field-tests are forwarded back to the host jurisdiction in the form of an action report and the host then reviews the suggested changes.

The number of items (unduplicated count) that are in the item bank for Red Seal examinations varies with every trade; however, there is a minimum of 375 active, usable items at all times.

Examination Forms

There are three alternate forms of the examination presently in use; all three forms are built to the Table of Specifications and these are computer adaptive tests. All of the questions are tagged to certain areas within the computerized examination system, and the system will generate three unique examinations upon request, and it will also generate two unique examinations against an existing version to ensure that there is no duplication of items.

As every examination is built to the Table of Specifications, this ensures that each candidate is tested on items that represent the entire table; if, for some reason, items are not activated or the bank is not full to the pre-determined amount (375 items), then the system will not allow you to generate an examination because it will not be Red Seal compliant.

There is no pre-determined standard in regards to the make-up of this form of the examination as the computerized system generates items on a random basis. Each

sub-task has at least three items assigned to it and the computerized system selects one of these items (sub-tasks) for each exam.

There is currently a five year cycle for implementing alternate or new forms of the examination that is based on several criteria including usage, high risk, technological change, etc. Accommodations are also made to address issues in the interim if needed.

Passing Score

The passing score for any Red Seal examination has been 70% since its inception.

Translation into Other Languages

Each Red Seal examination is originally written in the English language; however, each test is also available in French. After items are field-tested, they are first forwarded to a technical language officer for translation, and are then reviewed during translation workshops. These workshops consist of French or bilingual subject matter experts (SME)s that convene with the host jurisdiction, with a translator and with an HRSDC representative, to go through any issues on the technical side. These workshops also help identify any inconsistencies in trade jargon and things of that nature, to make certain that the meaning, content, and outcome all are the same.

From the translation workshops, the items are taken back to HRSDC for side-by-side quality control checks to ensure consistency. Once this takes place, the host jurisdiction approves that all steps have been completed, and sends a notification to the Interprovincial Standards Examination Committee (ISEC) Chair who informs industry across the nation.

The methods undertaken to ensure that tests in languages other than English are administered in a uniform way vary by jurisdiction; however, specific rules and guidelines are established through the Testing Procedures and Policy Manual that outlines administrative rights related to downloading and printing the examinations, as well as security guidelines for storing, counting and administering the examinations.

Psychometric Properties of the Test: Reliability and Validity

The evidence of reliability of the total score and content validity are both generated statistically.

Psychometric Properties of the Test: Item/Test Analysis

An item test analysis is conducted for each examination, once a substantial amount of exams has been written. Fairly reliable statistics can be obtained with as little as 50 writers; however, the more writers there are, the more accurate the data will be.

A software solution is utilized for test analysis purposes; the specific statistical indicators obtained are the standard deviation, the alpha, and the standard area of measurement. Individual items are also examined in terms of the low and high scoring percentages, as well as the discrimination index.

The mechanisms for candidates to provide comments on items at the examination administration sites vary between jurisdictions. Some testing centers have an item concern form that invigilators will have on hand, as issues do arise from time to time. Typically, however, any issues that arise are because candidates do not read the question properly (they either misinterpret the question or do not read all of it). Moreover, although security breaches are detected by the computerized system, other processes related to security are jurisdiction-specific, and the national security regulations are outlined in the Testing Policy and Procedures Manual.

4.2.3 Examination Administration

Registration Procedures and Materials Provided to Candidates

Candidates are typically provided with a complete handbook or bulletin; however, these materials vary with each jurisdiction. With this, all candidates that go through the formal apprenticeship program are informed of the examination content and trade qualifiers can sometimes go to training sessions as well. Generally, up-front (support) material is provided to all candidates.

The procedures used for processing applications and scheduling candidates also vary in each jurisdiction. Various testing centers use different methods and time frames to schedule candidates for the examinations.

Administration Procedures, Locations and Scoring

The invigilators that administer the examination have to be approved by every apprenticeship authority across the country, in every jurisdiction. Each jurisdiction then establishes their own testing centre (which may be located at university theatres, college classrooms, etc.).

In most jurisdictions testing dates are pre-determined and are typically based on when the technical training period ends. Most apprenticeship field offices also have monthly testing dates (once a month or so), for those that are taking the tradesperson route.

A confidential examination administration procedures manual has been developed, which outlines various rules and regulations related to administration and security, amongst others. Each jurisdiction also has their respective guidelines related to candidate administration, candidate identification verification, and administrator and proctor training in administration and security procedures.

The typical procedures for accommodating candidates with disabilities include providing interpreters and readers for those who may have hearing or vision impairment, as well as dyslexia. For those who have other disabilities, accommodations are made ahead of time.

Scoring accuracy and verification of scoring accuracy is done through the computerized examination system. The keys are housed in this system, and they must match the Table of Specifications. A company, independent of government, is contracted to monitor the system and to conduct daily assurance checks to ensure that all everything is operating error-free.

4.2.4 Examination Security

All areas related to examination security are covered in the confidential Testing Policy and Procedures Manual.

4.2.5 Documentation, Record Keeping and Accountability

While the examination results information provided to candidates is jurisdiction-specific, the majority of provinces/territories issue a pass/fail letter and typically, those candidates who fail have the opportunity to schedule an interview and review diagnostic information that pertains solely to the section(s) they did poorly on. Candidates are not able to view the specific questions they answered wrong.

The procedures in place to ensure that candidates are provided their test results within a reasonable time from test administration also vary by jurisdiction; in New Brunswick, for example, they issue the results within roughly one week of the exams being challenged. Other jurisdictions issue examination results within three to even five weeks.

Because of the Freedom of Information and Protection of Privacy Act, there are stringent regulations surrounding the release of any score reports and/or statistical information. Even to conduct the item analysis, there had to be a special function built into the computerized examination system to ensure that client information would not be released with test score.

Finally, there are procedures in place for candidates to appeal their marks as all candidates have appeal rights and can legally challenge their grade if they are not satisfied. Appeals are first sent to the candidate's respective jurisdiction (HRO), where the matter is usually resolved.

4.3 VET System

4.1.4 *Final Theoretical Examination for Certification Development and Characteristics*

Description of the Scope and Use of the Examination

The written knowledge exam consists of three large questions, divided into three to four sub-questions each that centre on technology, 30 questions that relate to merchandise management and 30 questions that focus on economics and social studies.

Examinees are given 90 minutes to complete the technology questions, 60 minutes to complete the merchandise management questions, and 60 minutes to complete the economics and social studies questions.

The item formats that are used on this examination include short answer questions (for both the technology and some of the merchandise management questions) as well as multiple-choice (for some of the merchandise management questions) and for all of the economics and social studies questions.

Examination Specifications

The current examination is based on the National Guidelines provided by the Federal Institute for Vocational Training (BMBF), which were last changed 1998. Enterprises, federations, the Ministry of Education and Research (BIBB) and other organizations can request changes to these guidelines as they deem necessary; however, such changes must undergo thorough review and validation with industry representatives and other social partners, prior to being added or removed from the official guidelines. A committee from the German Chefs Association (VKD) is presently working on a very explicit modular grid that will likely consist of 32 competency areas and six performance levels; however, it will take approximately three years before this grid can be adopted into the VET System.

The process used to link the skills and standards with the development of examination specifications consists of discussions during bi-annual committee meetings. The 12 person Testing Committee includes employer, employee and teacher representatives from various geographical locations in Germany. During these meetings, committee members analyze the results of past examinations and make suggestions for future examinations, which are then sent forth to the Chamber of Industry and Commerce (AKA-IHK) Nürnberg.

The content areas for the written knowledge examination include the following:

- Technology (100 points)
 - o 15% = Health and safety at work; Environmental protection; Using devices, machines and hardware, work planning; Hygiene; Office organization and communication;
 - o 65% = Kitchen area; Applying work and culinary methods; Preparation of plant-based foods; Creating soups and sauces; Preparing fish, shellfish and crustaceans; Processing meat and offal; Processing game and poultry; Preparing hors d'oeuvres and presenting cold buffets; Preparing dairy produce and eggs; Preparing and processing pastries and mixtures; Preparing sweets;
 - o 20% = Dealing with guests, advice and sales; Service area; Advertising and sales promotion
- Merchandise Management (100 points)
 - o 75% = Materials management; Office organization and communication;
 - o 25% = Materials management (cost of sales)
- ESS (100 points)
 - o Vocational training, labor and collective agreement law;
 - o Structure and organization of the training establishment

Item Development

The Testing Committee consisting of employer, employee and teacher representatives meets in Germany twice a year for a period of one to two days in order to alter existing questions and develop new ones. The committee sends suggestions to the Chamber of Industry and Commerce (AKA - IHK) Nürnberg, who is responsible for examination development used across Germany.

Each item is developed based on the material covered in the Master Guidelines for Training at the Enterprise and the Framework Teaching Plan for vocational schools. With this, correct responses are identified based on the content found in the both of these documents.

Item review procedures, including procedures for bias/sensitivity review do not exist, other than the reviewing that takes place during the Testing Committee meetings. Furthermore, new items are not field-tested prior to use on this examination. Only the Board of Examiners of the Chamber of Industry and Commerce (AKA - IHK) Nürnberg decides if new items are included. These decisions are based solely on the Board's knowledge and work experience. The appropriateness of the reading level of the examination is also determined by the Board of Examiners.

The rules and recommended policy on item exposure entail that a question cannot be reused in the same form, and it therefore has to be worded/formulated differently or other changes have to be made (e.g. measurements, numbers). A completely identical question can be reused only four years later at the earliest.

Examination Forms

Currently there is only one form of the examination that is used across Germany. The make-up of this form consists of using 60% new items and 40% from previous tests, but these items are altered as described above. A new form is developed twice a year (after each examination is administered).

Passing Score

The actual method used to set the standard was not readily available at the time of data collection.

Translation into Other Languages

Currently, the examination is only available in German.

Psychometric Properties of the Test: Reliability

This information was not readily available at the time of data collection.

Psychometric Properties of the Test: Item/Test Analysis

The only mechanism available for candidates to provide comments is in a comment box located at the end of the written examination. This box, however, refers primarily to whether candidates agreed with the time that was allocated to them for the completion of the exam. Candidates can, however, send a complaint to the Chamber of Commerce (IHK) where they were being tested.

4.1.5 Final Performance Evaluation for Certification Development and Characteristics

Description of the Scope and Use of the Examination/Examination Specifications

The purpose of the performance evaluation is to ensure that candidates are able to create a work plan, use consumer goods in a cost effective and environmentally friendly way, use machines in an efficient and environmentally friendly way, consider and keep in mind security, health protection and hygiene, as well as provide advice to customers.

The practical evaluation consists of preparing a three course dinner for six people, based on a given food basket. The content of the food basket is announced four weeks prior to the evaluation, and at that point, trainees must submit a draft proposal of their menu plan. The Chambers of Industry and Commerce (IHK) of each state assemble new food baskets after every examination.

The final performance evaluation is evaluated based on the following criteria:

- Work preparation:
 - Work schedule (10 points)
 - Customer-oriented conversation (10 points)
- Preparation:
 - Mise en place (10 points)
 - Cleanliness, hygiene, environment (10 points)
 - Operational method (use of materials) (40 points)
- Finished product (dish)
 - Taste (10 points)
 - Look, presentation, general impression (10 points)

The total evaluation lasts up to a maximum of six hours, and as indicated above, trainees must ensure that they engage in a 15-minute customer-oriented conversation, either during the evaluation or at the end of the evaluation.

Passing Score

The practical evaluation counts towards 50% of the final grade. Trainees can earn a total of 100 points during their practical evaluation, and they must obtain a minimum of 50 points to pass this evaluation. Three examiners (industry experts) evaluate the trainee independently based on specific criteria. The results are combined and are divided by three to determine the final grade.

4.1.6 Examination Administration

Registration Procedures and Materials Provided to Candidates

The Chambers of Industry and Commerce (IHK) overlook candidate administration, and inform them of the examination process, scheduling and scoring. While a complete candidate handbook or bulletin is not available to all candidates, they do have the opportunity to purchase published examinations from former years. As well, an appeals process is not available for the written examination; however, it is available for the practical examination. Examinees can take a 15-minute oral test on one content area that they failed.

The procedures used for processing applications and scheduling candidates is such that the examinations take place twice a year, on the same day, across Germany (in November and in May). The deadline for registration is four months prior to the examination date. The IHK informs eligible candidates and sends out registration forms.

Administration Procedures, Locations and Scoring

The written examination is administered at the Chamber of Industry and Commerce (IHK) of each state, where the dates and sites are always pre-determined. The practical examinations, on the other hand, take place at an enterprise or centre of learning; the only criterion for selection of the practical examination site is that the site must have an appropriate, functional kitchen.

An examination administration procedures manual has not been developed; however, a document at the Chamber of Industry and Commerce (IHK) Frankfurt entitled 'Examination Regulations for Final Examinations' is available, which outlines the dates and sites of the written examination.

Test administrator and proctor training in administration and security procedures occurs twice a year, where these individuals become certified by the Chamber of Industry and Commerce (IHK) and receive an instructor's card, indicating they have the adequate knowledge and skills to both administer examinations and follow security procedures.

The only method used to verify that the procedures described in the administration manual are carried out as prescribed, is by having all Board members sign the examination protocol developed by the Chair Person of the Board of Examiners. As well, the methods used to verify each candidate's identity consist of having candidates show their identification card and registration form/invitation, prior to being able to write the examination.

Procedures for accommodating candidates with disabilities have only been developed for the hearing impaired and for those that have difficulties with reading; these candidates are accompanied by a sign language specialist, or are read the examination out loud. To date, there have been no procedures developed for testing linguistic minorities.

Lastly, the procedures used for ensuring scoring accuracy and verification of scoring accuracy are simply that these are guaranteed through the evaluation sheet that has been prepared by the Board of Examiners.

4.3.4 Examination Security

The security procedures currently in place consist of having any individuals (Board members) involved in the examination process, sign statements of secrecy towards third persons, while item bank security is administered by data protection methods through the Chambers of Industry and Commerce (IHK).

Printing companies must also sign secrecy statements and must deliver the examinations in sealed envelopes. In addition, test keys are only sent to the examination location in encrypted form, the day before the examination. There is no inventory or

examination destruction that takes place, as examinations are published after they are completed for anyone to purchase these documents if they choose.

4.3.5 Documentation, Record Keeping and Accountability

The written examination results are sent to candidates by mail and include the point score in each of the three fields. The practical examination results are provided to candidates immediately after the exam (whether they passed or failed), while the exact details are provided later by mail, with their certificate. The maximum time allotted from test administration to the candidate's receipt of a score report is two weeks.

Furthermore, those candidates who fail the written examination are informed that the passing mark was not achieved; they can then send a request to the Chamber of Industry and Commerce (IHK) to see their examinations. Those candidates who fail the practical examination are explained which areas they did not do well in (e.g.: failed to demonstrate a satisfactory level of hygiene).

If candidates receive a grade below 'satisfactory' in up to two areas of the performance evaluation, but successfully pass the written knowledge examination, they may challenge the performance evaluation by undergoing a 15-minute oral test. This test must be based on one of the content areas that the candidate did poorly on (during the practical evaluation); the content area examined is to be determined by the candidate. With this, the results of the written examination and the oral supplementary test are weighted in a ratio of 2:1 when ascertaining the results of the area examined.

The security of candidate records is maintained through the Privacy and Data Protection Law. In addition, the organization's policy on legal challenges relating to the reliability, validity, or fairness of the examination are such that candidates can only challenge the practical examination, whereby the individual notes of all three examiners will be compared and re-assessed. Candidates who present legal challenges and who wish to appeal their examination must go before the Administrative Court with the presence of a lawyer.

4.4 Comparison of Testing

Two framework summaries were created (one for the written knowledge examination for certification and the other for the performance evaluation for certification), in order to identify equivalencies, similarities and gap in examination development, psychometric properties of the test, examination administration, examination security and documentation, record keeping and accountability (see Appendix 6) .

4.4.1 Final Theoretical Examination for Certification

It is important to note that the research conducted cannot be considered an audit of the various testing programs. However, the information was collected by utilizing several

questions developed by the *Buros Center for Testing*. In future research, a full review and assessment of all relevant documentation is recommended.

Examination Development and Psychometric Properties of the Test

Each program includes a multiple-choice examination, while the VET System includes an additional short-answer component. Furthermore, all credentialing programs involve subject matter experts (SMEs) in the validation of the items, therefore contributing to establishing the content validity evidence of the exam.

For the most part, the test development process identified for the Interprovincial Standards (Red Seal) Program and the CTRHC *emerit* Line Cook Certification Program as consistent with the accepted testing and measurement guidelines and practices in the area of testing specifications and item development. Given the lack of detailed information on the examination development and specifications for the VET System, the same conclusion cannot be drawn at this time. For example, it is not clear whether test specifications are utilized as the foundation for test development nor if guidelines are used to ensure the development of test items.

Standard setting procedures vary between the three programs. While CTRHC uses a modified Angoff standard setting process that is consistent with well accepted testing industry standards, the other two programs use an overall percentage. This method of setting a standard is unlikely to help determine if individuals meet an expected standard of performance. Legislative bodies sometimes attempt to legislate a cut score, such as a score of 70%. Arbitrary numerical specifications of cut scores are unhelpful for two reasons. First, without detailed information about the test, job requirement and their relationship, sound standard setting is impossible. Second, without detailed information about the format of the test and the difficulty of items, such numerical specifications have little meaning.⁸⁵

For the most part, the processes described in establishing the psychometric properties of the examinations are appropriate. However, the specific psychometric properties of individual exams were not collected.

Examination Administration, Examination Security and Documentation, Record Keeping and Accountability

All three credential programs present sound and acceptable practices as they relate to the examination administration, examination security, documentation, record keeping and accountability. There is an apparent underlying concern to protect the security of the exams and the privacy of candidate records.

In all programs, candidates have the opportunity to appeal and challenge the exam results.

4.4.1 Final Performance Evaluation for Certification

Examination Development and Characteristics

The key gap identified between the three credentialing program relates to the inclusion of a performance evaluation assessment tool. There is no national performance evaluation required to obtain the Red Seal designation, while a performance evaluation is embedded in CTHRC *emerit* Line Cook Certification and the VET System.

A key difference between the performance evaluation assessments relates to the qualifications of the assessors used to assess the performance of the candidates.

Examination Administration, Examination Security and Documentation, Record Keeping and Accountability

All three credential programs present sound and acceptable practices as they relate to the examination administration, examination security, documentation, record keeping and accountability. There is an apparent underlying concern to protect the security of the exams and the privacy of candidate records.

In all program, candidates have the opportunity to appeal and challenge the exam results.

5.0 CREDENTIAL

5.1 CTHRC – Certification

5.1.1 Overview

The Tourism Certified Professional (TCP) designation is available to front line employees (Line Cooks).

5.1.2 Level of Recognition and Mobility

As stated by CTHRC, “*emerit* certification is a professional credential recognized by tourism employers across Canada. Certification is a demonstration of competency, which means that Certified Professionals meet job standards set by industry.”⁸⁶ All *emerit* certifications are transferable and recognized across Canada.

5.1.3 Pre-Requisites

In order to become certified, however, candidates must have 600 hours or six months of relevant work experience, pass the knowledge and practical examinations, and have both a Food Safety certificate, as well as a WHMIS certificate.

Training (In-class and on-the-job)

There is no minimum education requirement to obtain the TCP designation. Candidates are encouraged to utilize the *emerit* Line Cook Learning System; however, they may challenge the written exam and practical evaluation by demonstrating that they have an adequate amount of work experience.

In order to become certified, candidates must demonstrate that they have achieved 600 hours or six months of relevant job experience. Experience is considered relevant when the skills listed in the NOS match the tasks that one performs on the job. Occasionally, back-up documents/records may be requested in order to verify that the information submitted by the candidate is accurate.⁸⁷

Certificates

Each Human Resource Office (HRO) is responsible for issuing a National pin (Line Cook), a certificate and a designation (Tourism Certified Professional (TCP)).

5.2 Interprovincial Standards (Red Seal) Program – Certificate of Qualification

5.2.1 Overview

All candidates that satisfy the pre-determined criteria are eligible to receive a Certificate of Qualification with a Red Seal.

5.2.2 Level of Recognition and Mobility

Certificates of Qualification with a Red Seal are recognized across the country; however, each jurisdiction may have additional requirements for candidates interested in transferring to another province/territory.

5.2.3 Pre-Requisites

Training (In-class and on-the-job)

These requirements are jurisdiction specific; however, the minimum requirement in Canada at the time of this research was 4,680 hours of academic and industry experience.

Certificates

Each jurisdiction is responsible for issuing a Certificate of Qualification in accordance with their respective regulations.

5.3 VET System – Certificate of Vocational Training

5.3.1 Overview

All candidates that successfully complete the VET program are eligible to obtain a Specialized Worker Certificate: Cook.

5.3.2 Level of Recognition and Mobility

While discussions are currently taking place on fostering a higher level of recognition and mobility of VET System graduates within the EU, official and formal agreements are currently in place with both Austria and Switzerland, allowing holders of the Certificate of Specialized Worker: Cook, to transfer to these countries for work opportunities and be recognized at the same level as in Germany.

5.3.3 Pre-Requisites

Training (In-class and on-the-job)

Prior to being administered into the VET System, candidates must complete nine to ten years of schooling. Moreover, in order to be fully certified, trainees must complete the entire program, which consists of three years of vocational training (one to two days a week).

Trainees are not required to demonstrate proof of previous work experience (prior to completing the program and becoming certified); experience is gained directly throughout the three-year program (candidates learn/work in a kitchen approximately three to four days a week).

Certificates

The Chamber of Industry and Commerce (IHK) of each state is responsible for issuing certificates.

6.0 CONCLUSION AND RECOMMENDATIONS

The research findings provide evidence that future opportunities to explore joint/reciprocal recognition and credentials are fully warranted. It is most important to note that each credentialing program can build from each others strengths to improve the overall quality of their unique program. The research collected to date is an important first step in gaining a comprehensive understanding of the credential programs that have developed dependable processes for identifying practitioners (Cooks) that meet pre-determined national standards.

6.1 Skills and Knowledge Standards

The research identified that there are sufficient similarities between the skills and knowledge standards of the three credentialing programs that a number of recommendations to bridge the existing gaps can already be proposed. The following list of preliminary recommendations is intended to initiate future discussions:

- a. It is recommended that the first step in achieving joint/reciprocal recognition and credentials between Canada and Germany is to clarify the roles and responsibilities of the key credentialing programs in Canada in leading this important initiative. At the onset, a discussion between the Interprovincial Standards (Red Seal) Program and CTHRC might be beneficial in order to acknowledge the differences between the level of qualifications of the NOA and the NOS. The most important factor is that the NOS defines a Line Cook as a person working under supervision, and consequently, the tasks assigned in a kitchen are different that the Cook as defined by the NOA, which uses the NOC definition. It was also suggested that the Line Cook title be reviewed to help eliminate any confusion as to which 'level' of the occupation was being targeted. Furthermore, the qualifications framework being developed for Cooks in Canada could be used as a tool to guide the discussions.
- b. It is recommended that more detailed information be collected on the skills and knowledge defining the Cook practice in Germany, in order to validate the comparison conducted in this research.
- c. It is recommended that future discussions on reciprocity include solutions on how the assessment of key content areas that are extremely important and unique to Canada (likely similar areas in the German credentialing program) will be conducted. The following areas were noted at this time: legislation (e.g., Canadian Privacy Act, Human Rights Act), safety and sanitation. For example, it is possible that a simple online training program be offered to train newcomers about these areas, and that training be combined with a Certificate of Completion. All other reference to these areas in the various testing assessment components would be adjusted accordingly.

- d. It is recommended that future work in the development of skills and knowledge in Canada includes the skills and knowledge underlying the following work areas, listed in the VET System: business, the broader context of the industry (e.g., serving clients), use of technology and environmental sensitivity.

6.2 Training

The research identified that there are critical differences on key aspects of the training requirements between the three credentialing programs. The following list of preliminary recommendations is intended to initiate future discussion:

- a. It is recommended that the training requirements to obtain the CTHRC Tourism Certified Professional designation be discussed in light of future joint/reciprocal recognition and credentials. It appears reasonable to assume that if the *emerit* Line Cook Certification designation is adopted as the Canadian national credential for the purposes of joint reciprocity/recognition, then the training requirements might need to be revised to better match those of the VET System.
- b. It is recommended that opportunities to achieve a greater degree of standardization of curricula be explored. In this case, the VET System provides an interesting model that combines flexibility while ensuring that the foundation of each curricula reflect the National Guidelines. Although this is likely to be a greater challenge in the context of the Interprovincial Standards (Red Seal) Program, this is already being pilot tested in Canada using the NOS as the foundation of curricula in designated college programs. Similar opportunities for the Line Cook NOS might be explored

6.2 Testing

The research identified that there are critical differences on key aspects of the testing program of each of the three credentialing programs. Although this review is not an audit of the testing programs, the questionnaire used to collect data was intended to collect information on the components that are most critical to ensure that the program meets generally accepted testing standards. It covered area examination development, examination administration and examination security. However, with the information collected to date, it is important to note that a review of documentation to support the information collected was not completed and therefore, it is not possible to make any final conclusion as to the integrity of the testing programs. With this, however, information that was collected indicates that the processes used to identify and validate the skills and knowledge areas allow us to conclude that they are those necessary for effective practice. The examination administration practices and the measures used to protect the examination security and confidentiality of the results that we reported, do

reflect generally accepted best practices. The following list of preliminary recommendations is intended to initiate future discussion:

- a. It is recommended that an audit of the testing programs be completed. Additional information to be collected on the testing programs could include the purpose of the testing program, the structure and resources of the testing program and the scoring and score interpretation. Furthermore, the submission of documentation for review on data collected to date would be critical. This would provide the opportunity to confirm that the programs meet testing standards.
- b. It is recommended that both the Interprovincial Standards (Red Seal) Program and the VET System review their standard setting process. The Standards for Educational and Psychological Testing clearly outline that setting an arbitrary cut score of a specific percentage is not helpful because it does not establish the relationship between the test and the job requirement. Furthermore, it does not take into consideration the item difficulty and therefore, the value has little meaning.
- c. It is recommended that a review of the selection criteria for assessors of the performance evaluation be conducted to ensure that the assessors possess the most relevant credentials of their profession. For example, assessors for the CTHRC Certification Program might have a Red Seal designation.

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APPENDICES (see attachment)

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REFERENCES

- ¹ Industry Canada. (2008, January 10). *Challenges and Opportunities Facing Canada's Tourism Industry*. Retrieved March 3, 2008 from <http://www.ic.gc.ca/epic/site/dsib-tour.nsf/en/qg00135e.html>
- ² Skill Solution Group. (2005, December). *A Comparative Study of the Canadian Tourism Human Resource Council and the Australian Tourism and Hospitality Training Packages*. p.1.
- ³ Wikipedia, The Free Encyclopedia. (2008, March 20). *Cooking*. Retrieved March 25, 2008 from <http://en.wikipedia.org/wiki/Cooking>
- ⁴ emerit Certification at a Glance. (2006, March). *Line Cook Certification*. Retrieved March 25, 2008 from http://www.emerit.ca/eng/pdf/line_cook.pdf
- ⁵ Human Resources and Social Development Canada. (2006, February 1). *Cooks*. Retrieved March 25, 2008 from <http://www23.hrdc-drhc.gc.ca/2001/e/groups/6242.shtml>
- ⁶ Bundesinstitute für Berufsbildung (BIBB). (1998, February 18). *Description of the Profession of Cook*. Retrieved March 25, 2008 from <http://www.bibb.de/redaktion/aweb/1998/koch.htm>
- ⁷ Canadian Tourism Human Resource Council. (2006, May). *Certification Program Policy and Procedures Manual*. p. 10.
- ⁸ Ibid. p. 10-11.
- ⁹ Wikipedia, The Free Encyclopedia. (2008, February 25). *Apprenticeship*. Retrieved February 29, 2008 from <http://en.wikipedia.org/wiki/Apprenticeship>
- ¹⁰ Canadian Apprenticeship Forum. (2008, March 2). *Frequently Asked Questions*. Retrieved March 2, 2008 from <http://www.caf-fca.org/english/faq.asp>
- ¹¹ The Interprovincial Standards Red Seal Program. (2006, October 31). *Red Seal Program*. Retrieved March 5, 2008 from http://www.red-seal.ca/Site/trades/index_e.htm
- ¹² Ibid.
- ¹³ Bundesinstitute für Berufsbildung (BIBB). (2005, April 25). *The Dual Vocational*

-
- Education and Training System in Germany*. Retrieved February 29, 2008 from www.bibb.de/dokumente/pdf/a23_internationales_dybowski-taiwan_april-05.pdf
- ¹⁴ Service Canada. (2008, March 2). *Training and Careers*. Retrieved March 2, 2008 from http://www.jobsetc.ca/content_pieces.jsp?lang=e&category_id=345
- ¹⁵ CTHRC. (2005). *About Us*. Retrieved January 28, 2008 from http://www.cthrc.ca/eng/page.aspx?_id=about_us.htm
- ¹⁶ emerit – Tourism Training. (n.d.). *emerit Line Cook Training Resources and Professional Certification*. Retrieved March 4, 2008 from http://www.emerit.ca/eng/page.aspx?_id=line_cook.htm
- ¹⁷ emerit Certification at a Glance. (2006, March). *Line Cook Certification*. Retrieved March 4, 2008 from http://www.emerit.ca/eng/pdf/line_cook.pdf
- ¹⁸ Ibid.
- ¹⁹ Canadian Apprenticeship Forum. (2007, March 27). *The Interprovincial Standards (Red Seal) Program*. Retrieved March 3, 2008 from <http://www.apprenticetrades.ca/EN/displayContent/default.asp?userAction=LOADARTICLE&txtArticleID=1024>
- ²⁰ The Interprovincial Standards Red Seal Program. (2006, October 31). *Red Seal Program*. Retrieved March 4, 2008 from http://www.red-seal.ca/Site/trades/index_e.htm
- ²¹ Ibid.
- ²² Ibid.
- ²³ Ibid.
- ²⁴ Ibid.
- ²⁵ Human Resources and Social Development Canada. (2007, March 27). *Trades and Apprenticeship*. Retrieved March 3, 2008 from http://www.hrsdc.gc.ca/en/workplaceskills/trades_apprenticeship/index.shtml
- ²⁶ The Interprovincial Standards Red Seal Program. (2007, January 18). *Red Seal Trades*.

-
- Retrieved March 3, 2008 from http://www.red-seal.ca/Site/trades/index_e.htm
- ²⁷ Ibid.
- ²⁸ Hippach-Schneider, Krause and Woll. (2007). *Vocational education and training in Germany*.
Retrieved March 5, 2008 from [http://www.bibb.de/dokumente/pdf/VET-in-Germany\(1\).pdf](http://www.bibb.de/dokumente/pdf/VET-in-Germany(1).pdf)
- ²⁹ Berufsinformationszentrum. (n.d.). *Historic Roots of the VET System*.
Retrieved March 4, 2008 from
<http://www.berufsinformationszentrum.org/duale-ausbildung-historische-wurzeln-des-dualen-ausbildungssystems/>
- ³⁰ Hippach-Schneider, Krause and Woll. (2007). *Vocational education and training in Germany*.
Retrieved March 5, 2008 from [http://www.bibb.de/dokumente/pdf/VET-in-Germany\(1\).pdf](http://www.bibb.de/dokumente/pdf/VET-in-Germany(1).pdf)
- ³¹ Ibid.
- ³² Ibid.
- ³³ Bundesinstitute für Berufsbildung (BIBB). (2007, March 27) *Tasks of the BIBB*.
Retrieved March 3, 2008 from <http://www.bibb.de/en/1420.htm>
- ³⁴ Ibid.
- ³⁵ Canadian Tourism Human Resource Council. (2006, May). *Certification Program Policy and Procedures Manual*. p. 34.
- ³⁶ Ibid.
- ³⁷ Ibid., p. 34.
- ³⁸ Ibid., p. 34 – 43.
- ³⁹ The Interprovincial Standards Red Seal Program. (2007, January 30). *Development History of the National Occupational Analyses*. Retrieved March 6, 2008 from
http://www.red-seal.ca/Site/trades/analys_e.htm
- ⁴⁰ Ibid.
- ⁴¹ The Interprovincial Standards Red Seal Program. (2007, January 30). *National Occupational Analyses*. Retrieved March 6, 2008 from http://www.red-seal.ca/Site/trades/analist_e.htm

-
- ⁴² The Interprovincial Standards Red Seal Program. (2007, January 30). *Development History of the National Occupational Analyses*. Retrieved March 6, 2008 from http://www.red-seal.ca/Site/trades/analysis_e.htm
- ⁴³ Ibid.
- ⁴⁴ Gail Hall & Associates. (31 March 2008). *Cooks Qualification Articulation and Core Competency Mapping*. Prepared for the Canadian Tourism Human Resource Council (CTHRC).
- ⁴⁵ Canadian Tourism Human Resource Council. (2006, May). *Certification Program Policy and Procedures Manual*. p. 10.
- ⁴⁶ Ibid. p. 10-11.
- ⁴⁷ Wikipedia, The Free Encyclopedia. (2008, February 25). *Apprenticeship*. Retrieved February 29, 2008 from <http://en.wikipedia.org/wiki/Apprenticeship>
- ⁴⁸ Canadian Apprenticeship Forum. (2008, March 2). *Frequently Asked Questions*. Retrieved March 2, 2008 from <http://www.caf-fca.org/english/faq.asp>
- ⁴⁹ Canadian Tourism Human Resource Council. (2006, May). *Certification Program Policy and Procedures Manual*. p. 54-55.
- ⁵⁰ Ibid.
- ⁵¹ Interprovincial Program Guide for the Red Seal Occupation of Cook (DRAFT). (2007, Fall). *User Guide*. p. 5.
- ⁵² Interprovincial Program Guide. (2007, November). *Process Document*. Prepared by the Interprovincial Program Guide Working Group
- ⁵³ Interprovincial Program Guide for the Red Seal Occupation of Cook (DRAFT). (2007, Fall). *User Guide*. p. 5.
- ⁵⁴ Ibid., p. 5.
- ⁵⁵ Ibid.
- ⁵⁶ Ibid.

⁵⁷ Concept Paper: Developing an Assessment Tool. (9 November 2006). *Prepared by HRSG Ltd.*

for the Information and Communications Technology Council (ICTC).

⁵⁸ *Ibid.*, p. 58.

⁵⁹ *Ibid.*, p. 63-65.

⁶⁰ *Ibid.*, p. 31.

⁶¹ *Ibid.*, p. 70.

⁶² *Ibid.*, p. 61.

⁶³ *Ibid.*, p. 74.

⁶⁴ *Ibid.*, p. 54-55.

⁶⁵ *Ibid.*, p. 26.

⁶⁶ *Ibid.*, p. 28.

⁶⁷ *Ibid.*, p. 72.

⁶⁸ *Ibid.*, p. 73.

⁶⁹ *Ibid.*, p. 77.

⁷⁰ *Ibid.*, p. 13.

⁷¹ *Ibid.*, p. 77.

⁷² *Ibid.*, p. 78.

⁷³ *Ibid.*, p. 25.

⁷⁴ *Ibid.*, p. 54-55.

⁷⁵ *Ibid.*, p. 132.

⁷⁶ *Ibid.*, p. 104-105.

⁷⁷ *Ibid.*, p. 87.

⁷⁸ *Ibid.*, p. 84.

⁷⁹ *Ibid.*, p. 33.

⁸⁰ *Ibid.*, p. 85.

⁸¹ *Ibid.*, p. 89.

DRAFT

⁸² Ibid., p. 82.

⁸³ Ibid., p. 90.

⁸⁴ Ibid., p. 91.

⁸⁵ Standards for Educational and Psychological Testing

⁸⁶ emerit Certification at a Glance. (2006, March). *Line Cook Certification*.

Retrieved April 17, 2008 from http://www.emerit.ca/eng/pdf/line_cook.pdf

⁸⁷ Canadian Tourism Human Resource Council. (2006, May). *Certification Program Policy and Procedures Manual*. p. 134.

DRAFT