

Preparing New Medical Coders for SNOMED-CT in the Industry: An Implementation Proposal for Learning Path Creation and Training Enhancement

Victoria Obress | University of Victoria

INTRODUCTION



Abstract

With the primary objective of establishing a micro credentialing process in the Canadian College sector to serve the multitude of students pursuing career college programs in Health Information Management (HIM); this learning path development examines an implementation framework for integrating the SNOMED CT e-learning modules into course content of an HIM program.

The intent of this implementation is to have medical coding students train with industry prepared tools, providing an opportunity for recognition to employers and the HIM field of student skills on entering the industry.

Background & Purpose

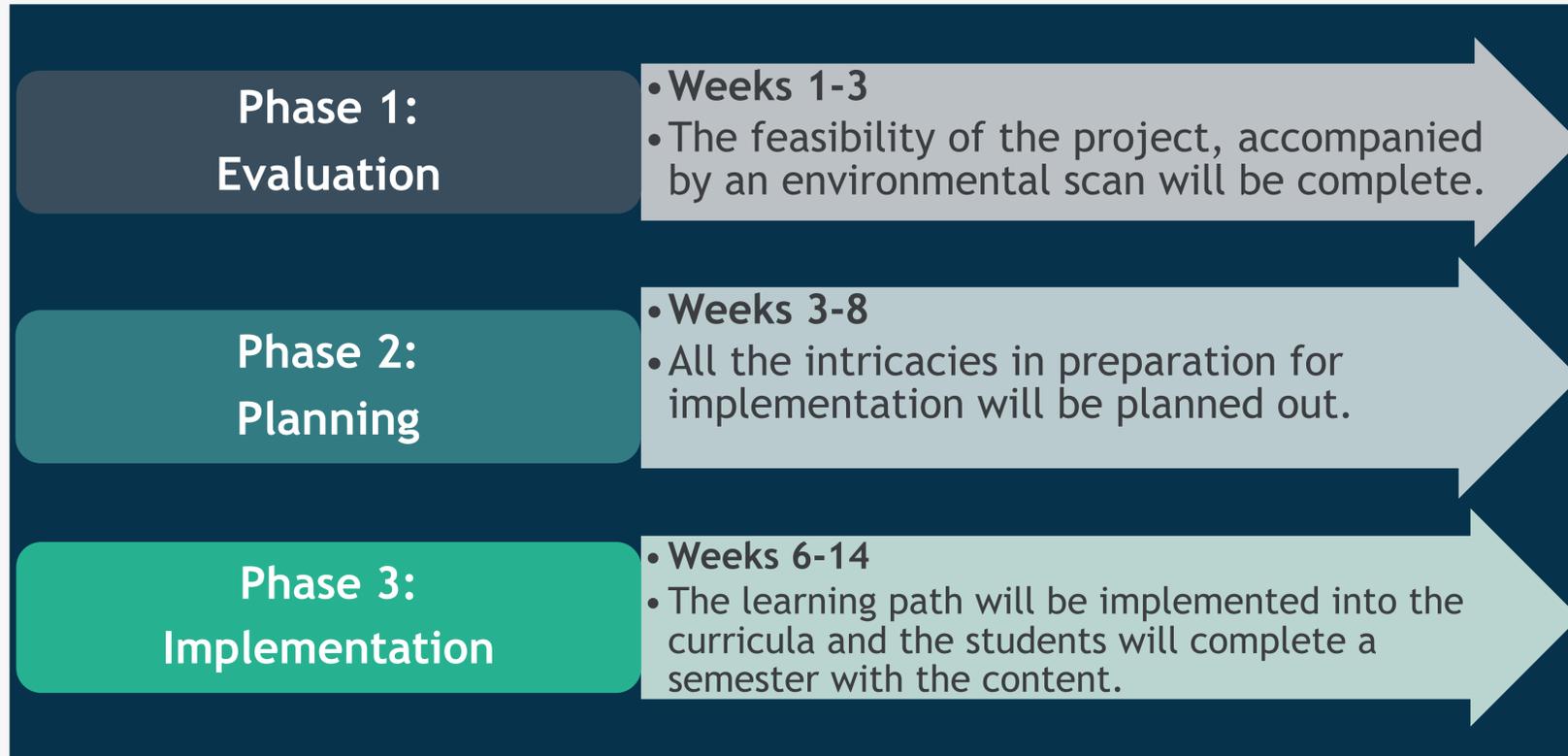
The intent of this project is to evaluate what is currently taught regarding SNOMED-CT within the college setting and examine the implementation requirements to integrate SNOMED-CT into the curricula of the Health Information Management (HIM) program at St. Lawrence College (SLC). The Learning Outcomes for HIM Professionals, released in 2010 (LOHIM,2010), mandate that accredited programs teach a particular set of learning competencies related to terminologies.

The implementation of a learning path utilizing the resources provided by SNOMED-CT presents the opportunity to provide micro-credentials in SNOMED-CT training to HIM Professionals within the structure of obtaining their diplomas.

Scope & Rationale

SCOPE: The primary objective is to create a strategic implementation plan for the implementation of SNOMED-CT into an education/training program for students of HIM within a post-secondary diploma level program.

RATIONALE: The rationale for developing a learning path to implement into the HIM Program as a micro-credential is that SNOMED-CT is noted as the “world’s leading healthcare terminology” (SNOMED CT, 2020). Due to this, SNOMED-CT will become increasingly significant to the world of medical coding. The program at SLC provides educational training to future medical coders, therefore, if the students of the SLC program become micro-credentialed in SNOMED-CT using the SNOMED-CT training resources, they would be more versatile for employment upon graduation, and better prepared to enter the workforce with more experiential learning than medical coders who are not micro-credentialed in the SNOMED-CT terminology.



Preparing New Medical Coders for SNOMED-CT in the Industry: An Implementation Proposal for Learning Path Creation and Training Enhancement



METHODS

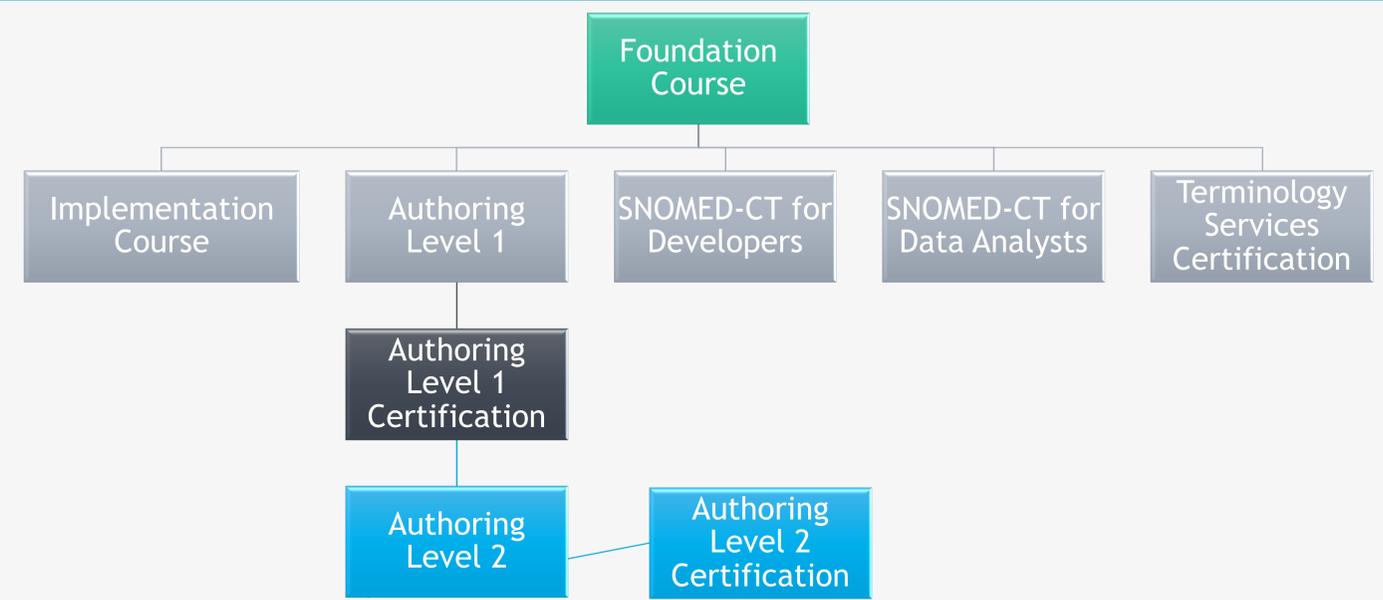
Victoria Obress | University of Victoria

Phase 1: Evaluation

Category	Requirements Identified
Program	<ul style="list-style-type: none"> ✓ Support from Associate Dean/Dean, and Senior Vice President of Academics. Sr. Management and Signing Authorities. <input type="checkbox"/> IT supports to enable effective processing and access to the required websites <input type="checkbox"/> Competent supports and effective connections to SNOMED-CT and Terminologies Experience ✓ Curricula Outlines for Specific Program ✓ Curricula Requirements for Governing Body (CHIMA) ✓ Curricula Mapping for SNOMED-CT Competencies
Project	<ul style="list-style-type: none"> <input type="checkbox"/> Development Support from School of Contemporary Teaching and Learning (SCTL) ✓ Development Support and Expertise from Faculty ✓ Time Allotment to align rollout with appropriate student level ✓ Specific Stakeholder Support ✓ Signing-Authorities/Sr. Management Approval ✓ Curricula Space within HIM
Faculty	<ul style="list-style-type: none"> ✓ Access to SNOMED-CT Modules ✓ Laptop/Computers for accessing Modules ✓ Support for Curricula Development and implementation support ✓ Health Terminologies Training ✓ Creation of evaluative assessments for student comprehension.
Student	<ul style="list-style-type: none"> <input type="checkbox"/> Laptop/Computer for Accessing Modules <input type="checkbox"/> Guidance from Trained Faculty to allow for support and learning <input type="checkbox"/> Learning Outline and Syllabi to understand expectations and Outcomes <input type="checkbox"/> Proof of Completion for submission to Faculty

Assessment of available resources and resources required for implementation of SNOMED CT modules into course delivery.

Phase 2: Planning



*UPPER: SNOMED CT E-Learning Platform modules for use by member countries.
 LOWER: Learning Outcomes in HIM at the Diploma Level in Canadian CCHIM approved programs.*

LOHIM REF. #	DEFINITION	DIPLOMA COMPETENCY LEVEL
C-1-1(4)	Terminology, nomenclature, classification, abstraction, encoding, and coding systems.	Understand
C-1-1(9)	Commonly used terminologies, including but not limited to: SNOMED CT, LOINC, nursing terminologies.	Knowledge
C-1-1(10)	Uses and purpose of SNOMED CT, including but not limited to: direct patient care, decision support, statistical reporting, outcomes measurement, public health surveillance, health research, and cost analysis in the Canadian context.	Knowledge
C-1-1 (11)	SNOMED CT hierarchies, axis and the levels of granularity.	Knowledge

Preparing New Medical Coders for SNOMED-CT in the Industry: An Implementation Proposal for Learning Path Creation and Training Enhancement

Victoria Obress | University of Victoria



RESULTS

Phase 3: Implementation

Assessment Type	CLO*	VLO**	LOHIM***	Description (e.g. Frequency, details)	% of Grade
SNOMED-CT Training	1,3,6 8,11	1,5,7, 11	C-1-1(3) C 1-2-2 C 1-2-3 C-1-2(4) C 1-2(5) C 1-2-6 D11	Students will complete the training modules used in the industry to provide an introductory level to the usability of this Terminology	15%

The SNOMED CT Foundation Course introduces a broad range of SNOMED CT related topics, including the why, what and how of SNOMED CT.

30 hrs.

FOUNDATIONS OF SNOMED CT

The SNOMED CT Terminology Services Certification (TSC) course teaches the principles of using SNOMED CT terminology services to search and retrieve SNOMED CT content.

TERMINOLOGY SERVICES CERTIFICATION (TSC)

SELF PACED

Author 1
Developers
Data Analytics

FUTURE OPPORTUNITIES

Future for expansion of this pilot and offerings

Results & Current Standing

Goal	Deliverable(s)
Increase Experiential learning with SNOMED-CT for HIM students	SNOMED-CT Integrated into HIM Courses at SLC. Hands-on practice with SNOMED-CT from a trained Terminologist.
Enhance HIM Program curricula by adding specific SNOMED-CT modules to training	SNOMED-CT Integrated into HIM Courses at SLC. Evaluate LOHIM requirements and integrate teaching practices to execute.
Create Micro-Credential Opportunity for students of HIM	Show learning path that HIM students will take. <input type="checkbox"/> Measure industry specific skills gained from integrating SNOMED-CT Modules. <input type="checkbox"/> Ability to offer HIM students at SLC an opportunity to complete a certificate in SNOMED-CT training.

Preparing New Medical Coders for SNOMED-CT in the Industry: An Implementation Proposal for Learning Path Creation and Training Enhancement

DISCUSSION



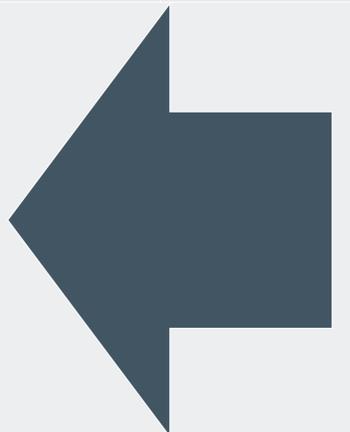
Victoria Obress | University of Victoria

Conclusions & Implementation Close Out

ID	ACTION	DESCRIPTION	RESPONSIBILITY
1	Review and Update for QA	Ensure changes to SNOMED CT modules, links and resources are updated as required with course delivery per semester.	Faculty of HIM (Program Coordinator)
2	Review Pilot Outcomes for Micro-Credential	A review of the benefits to students upon completion will be required to demonstrate value and impact on industry.	Multiple stakeholders; Faculty/PC, AD, Sr.VPA
3	Industry Assessment	An assessment of students who complete modules will be required from industry partners to demonstrate value and improvement in students	Faculty and Industry/Community Partners
4	Partnership Exploration	SLC as an Institution needs to further explore partnership before offering Micro-Credential	Faculty/PC, AD, Sr.VPA

RECOMMENDATIONS

- Maintain momentum for planning and execution
- Explore administrative processes at institution prior to implementation (pre-phase if possible)
- Perform Needs Analysis within community prior to engagement



LIMITATIONS

- Admin. Processes take extremely long time; finite timeline for project completion
- Access for students to SNOMED CT Browser and appropriate hardware due to COVID-19 and remote learning.
- Waitlist on SNOMED CT courses opening anticipated to align with semester
- No pilot group



Future Directions

Measure and Assess

- Measure industry specific skills gained from integrating SNOMED-CT Modules.

SNOMED CT Training In-Class Delivery

- Ability to offer HIM students at SLC an opportunity to complete a certificate in SNOMED-CT training.

Quality Assurance and Program Development

- Maintenance will be monitored through PD at SLC to ensure alignment with LOHIM and Curricula.

Faculty Expertise & Responsibility

- who teach course where the module completion occurs will be responsible for scheduling and development.

References

1. Canadian College Health Information Management (CCHIM). (2016). Retrieved from <https://infocentral.infoway-inforoute.ca/en/resources/docs/921-canadian-terminology-stds-certification-competencies-final-201603/view-document>
2. Education.vic.gov.au. Improvement Cycle. (2020). Retrieved from <https://www.education.vic.gov.au/school/teachers/management/improvement/PaPag/improvement-cycle.aspx>
3. Kuru, K. (2020). The University of Northern Finland to provide SNOMED CT education through new delivery agreement with SNOMED International. Retrieved from: <https://www.globenewswire.com/news-release/2020/02/26/1991027/0/en/The-University-of-Eastern-Finland-to-provide-SNOMED-CT-education-through-new-delivery-agreement-with-SNOMED-International.html>
4. SNOMED Home page. (2020). SNOMED. Retrieved from <http://www.snomed.org/>
5. St. Lawrence College: Health Information Management . (2020). Stlawrencecollege.ca. Retrieved from https://www.stlawrencecollege.ca/programs-and-courses/full-time/programs/a_m/health-information-management/kingston/