



Ontario
College of
Teachers

Ordre des
enseignantes et
des enseignants
de l'Ontario

Additional Qualification Course Guideline Integration of Information and Computer Technology in Instruction Specialist

(Previous Name: Computers in the Classroom)

Schedule D Teachers' Qualifications Regulation

July 2013

Ce document est disponible en français sous le titre *Ligne directrice du cours menant à la qualification additionnelle, Intégration de la technologie de l'information et communication dans l'enseignement, Spécialiste, juillet 2013*

Additional Qualification Course Guideline Integration of Information and Computer Technology in Instruction, Specialist

1. Introduction

Three-session specialist Additional Qualification courses identified in Schedule D (*Teachers' Qualifications Regulation*) are intended to:

- enhance professional practice, and extend knowledge and skills in the integration of Information and Computer Technology in Instruction (Part I)
- enhance professional practice, and extend and apply knowledge and skills in the design and integration of Information and Computer Technology in Instruction (Part II)
- enhance professional practice, and extend and apply knowledge and skills in the curriculum leadership related to the integration of Information and Computer Technology in Instruction (Specialist).

The Additional Qualification Course: Integration of Information and Computer Technology in Instruction, Specialist employs a critical lens to explore in a holistic and integrated manner theoretical foundations, the development of learners, program planning and implementation, instructional practices, assessment, the learning environment and ethical considerations related to teaching and learning across the divisions.

Critical to the implementation of this course is the modeling of a positive learning environment that reflects care, diversity and equity. This course supports the enhancement of professional knowledge, ethical practice, leadership and ongoing learning.

The Ontario College of Teachers recognizes that candidates working in the publicly funded school system, independent/private institutions or First Nations schools will have a need to explore in an integrated delivery model, topics and issues of particular relevance to the context in which they work or may work.

The French language and the English language communities will also need to implement these guidelines to reflect the unique contextual dimensions and needs of each community. Each of these language communities will explore the guideline content from distinct perspectives and emphasis. This flexibility will

enable both language communities to implement Integration of Information and Computer Technology in Instruction as understood from a variety of contexts.

The Integration of Information and Computer Technology in Instruction Specialist additional qualification course guideline provides a conceptual framework for the course. Course providers and instructors use the guideline to develop and facilitate the Integration of Information and Computer Technology in Instruction Specialist course. The guideline framework is intended to be a fluid representation of key concepts and direction associated with Integration of Information and Computer Technology in Instruction.

2. Regulatory Context

The College is the self-regulating body for the teaching profession in Ontario. The College's responsibility related to courses leading to additional qualifications includes the following:

- to establish and enforce professional standards and ethical standards applicable to members of the College,
- to provide for the ongoing education of members of the College,
- to accredit Additional Qualification courses and more specifically,

The program content and expected achievement of persons enrolled in the program match the skills and knowledge reflected in the College's "Standards of Practice for the Teaching Profession" and the "Ethical Standards for the Teaching Profession" and in the program guidelines issued by the College. (Reg. 347/02, Accreditation of Teacher Education Programs, Part IV Subsection 24).

Additional qualifications for teachers are identified in the *Teachers' Qualifications Regulation*. This regulation includes courses that lead to Additional Qualifications, the Principal's Qualifications and the Supervisory Officer's Qualifications. A session of a course leading to an Additional Qualification shall consist of a minimum of 125 hours of work that is approved by the Registrar. Accredited Additional Qualification courses reflect the *Ethical Standards for the Teaching Profession*, the *Standards of Practice for the Teaching Profession* and the *Professional Learning Framework for the Teaching Profession*.

The course developed from this guideline is open to candidates who meet the entry requirements identified in the *Teachers' Qualifications Regulation*.

Successful completion of the course leading to the Additional Qualification: Integration of Information and Computer Technology in Instruction Specialist, listed in Schedule D of the *Teachers' Qualifications Regulation*, is recorded on the Certificate of Qualification and Registration issued to the members of the College.

In this document, all references to candidates are to teachers enrolled in the Additional Qualification course. References to students indicate those in school programs.

3. Foundations of Professional Practice

The *Foundations of Professional Practice* conveys a clear vision of what it means to be a teacher which is at the core of teacher professionalism. The *Ethical Standards for the Teaching Profession* and the *Standards of Practice for the Teaching Profession* (Appendix 1) provide the focus for ongoing professional learning and are the foundation for the development of the Additional Qualification course: Integration of Information and Computer Technology in Instruction Specialist. In addition, the *Professional Learning Framework for the Teaching Profession* is underpinned by the standards, articulates the principles on which effective teacher learning is based and acknowledges a range of options that promote continuous professional learning. The ongoing enhancement of informed professional judgment, which is acquired through the processes of lived experience, inquiry, and reflection, is central to the embodiment of the standards and the Professional Learning Framework within this AQ course and professional practice.

Teacher-Education Resources

The College has developed resources to support the effective integration of the standards within Additional Qualification courses. These teacher education resources explore the integration of the standards within professional through a variety of educative and inquiry-based processes. This guideline has been designed to reflect the *Ethical Standards for the Teaching Profession* and the *Standards of Practice for the Teaching Profession* and the *Professional Learning Framework for the Teaching Profession*. A list of these resources can be found in Appendix 2 and are available through the College web site (www.oct.ca). These

resources support the development of professional knowledge and professional judgment through reflective practice. The lived experiences of Ontario educators are illuminated in the resources and serve as AQ course support for teacher education.

4. Course Components

The design, course content and implementation of the Additional Qualification Course Guideline: Integration of Information and Computer Technology in Instruction Specialist support effective teacher education practices. These course guideline components provide a conceptual map for the development of a holistic and integrated course. The following course components of this guideline support and inform effective professional knowledge, judgment and practice within the Additional Qualification Course: Integration of Information and Computer Technology in Instruction Specialist.

A) *The Ethical Standards for the Teaching Profession and the Standards of Practice for the Teaching Profession:*

The *Ethical Standards for the Teaching Profession* and the *Standards of Practice for the Teaching Profession* represent a collective vision of professional practice. At the heart of a strong and effective teaching profession is a commitment to students and their learning. Members of the Ontario College of Teachers, in their position of trust, demonstrate responsibility in their relationships with students, parents, guardians, colleagues, educational partners, other professionals, the environment and the public.

The holistic integration of the standards within all course components supports the embodiment of the collective vision of the teaching profession that guides professional knowledge, learning, and practice. The following principles and concepts support this holistic integration within the AQ course.

- understanding and embodying care, trust, respect and integrity
- fostering commitment to students and student learning
- integrating professional knowledge
- enriching and developing professional practice
- supporting leadership in learning communities
- engaging in ongoing professional learning.

Through professional dialogue and collaborative reflection, course candidates will continue to inquire into and refine professional practice through the lens of the standards.

B) Overall Expectations

The *Ethical Standards for the Teaching Profession* and the *Standards of Practice for the Teaching Profession* are embedded within the overall expectations of this guideline.

This Additional Qualification course has the following overall learning expectations for candidates:

- providing leadership in the implementation of Ontario’s curriculum, policies, frameworks, strategies and guidelines
- modelling the integration of First Nations, Métis and Inuit ways of knowing and perspectives into practice
- facilitating the application of theoretical understanding to support the design, implementation and assessment programs and/or practices related to Integration of Information and Computer Technology in Instruction at the local and district level
- providing leadership regarding the implementation of strategies and assessment practices linked to expectations in response to the individual needs of students, and the promotion of student success
- exploring leadership in the creation of learning environments conducive to the intellectual, social, emotional, physical, environmental, linguistic, cultural, spiritual and moral development of students
- fostering collaborative leadership with in-school personnel, parents/guardians and the community
- facilitating the use of a variety of appropriate resources, including technological and communication resources, to enhance professional knowledge in support of student learning
- supporting others to enhance professional practice through ongoing collaborative inquiry, dialogue and reflection
- supporting colleagues in the development of a culture of ethical practices related to the use of information and computer technology

- supporting others in understanding and applying legal considerations related to working with digital resources
- facilitating the development of professional learning communities to enhance professional knowledge and support student learning
- modeling innovative approaches of integrating environmentally respectful perspectives and practices
- facilitating critical dialogue related to the integration of innovative strategies for creating and sustaining safe, healthy, equitable and inclusive learning environments that honour and respect diversity
- guiding colleagues and districts in deepening an understanding the impact of emerging technologies on learning
- supporting others in the understanding of varying comfort levels in the use of technologies to support instruction
- providing leadership in the development of curriculum and programs at school and district levels that integrate digital technologies to support, extend and enrich student learning
- supporting colleagues in planning instructional strategies to integrate information and computer technology tools through reflection, active engagement and collaboration
- developing strategies to encourage and promote a variety of creative approaches for the integration of information and computer technology in instruction
- facilitating critical reflection on the integration of qualitative and quantitative research into professional practice.

C) Ontario Curriculum, Policies and Resources

The Additional Qualification Course: Integration of Information and Computer Technology in Instruction Specialist is aligned with current Ontario curriculum, relevant legislation, government policies, and resources. These documents inform the development and implementation of the Additional Qualification Course: Integration of Information and Computer Technology in Instruction Specialist. These resources can be viewed at www.edu.gov.on.ca.

Course candidates are also encouraged to critically explore the policies, practices and resources available at school and board levels that may also inform

Integration of Information and Computer Technology in Instruction teaching and learning.

D) Theoretical Foundations of Integration of Information and Computer Technology in Instruction Specialist

- fostering leadership in the application of theories of child and adolescent development
- providing leadership in the understanding and application of conceptual frameworks for the integration of information and computer technology in instruction
- modeling the implementation of current Ontario curriculum and government policies relevant to the integration of information and computer technology in instruction
- fostering critical reflection and professional dialogue on the relationship of theory and practice in the integration of information and computer technology in instruction
- promoting professional leadership reflective of the *Ethical Standards for the Teaching Profession* and the *Standards of Practice for the Teaching Profession* within the context of the Additional Qualification: integration of information and computer technology in instruction
- supporting others in understanding the significance of the Ontario Human Rights Code, Ontarians with Disabilities Act, and the Accessibility for Ontarians with Disabilities Act (AODA) and associated responsibilities within professional practice.

E) Program Planning, Development and Implementation

- promoting leadership related to creating and sustaining positive, equitable, accepting and safe learning communities
- fostering leadership in the exploration and development of program planning frameworks that reflect the *Ethical Standards for the Teaching Profession* and the *Standards of Practice for the Teaching Profession*
- facilitating critical inquiry into the development and implementation of programs that are sensitive to society's diverse and changing nature and its influence on students

- connecting to students' authentic information and computer technology experiences and interests
- cultivating school and district leadership in program planning, development and implementation that reflect the rapid changes in information and computer technology
- providing leadership in program planning, development, implementation strategies and frameworks for the integration of information and computer technology in instruction
- facilitating dialogue related to differentiating instruction and applying universal design in the program planning, development and implementation related to the integrating of information and computer technology in instruction
- fostering a shared commitment to identifying, accessing, integrating and assessing community, collegial, print and electronic resources related to the integration of information and computer technology in instruction
- supporting colleagues in using and adapting information and computer technologies to support ministry expectations across the curriculum
- developing strategies to assist colleagues and district to assess and evaluate the potential use of key software applications such as graphic, video, audio, database, word processing and spreadsheets when applied to specific curriculum initiatives
- developing strategies to assist colleagues and district to assess and evaluate the potential use of key online applications (for example, social media, email, search engines, directories, collaborative tools) when applied to specific curriculum initiatives
- modelling the use of e-learning services and resources and Ontario's e-Learning Strategy in the delivery of curriculum initiatives (for example, Ontario Educational Resource Bank)
- leading and assisting in the development of hardware distribution models that promote the integration of information computer technology in instruction
- providing leadership in the understanding and use of supportive and assistive technologies
- supporting colleagues and district in accessing information and computer technology software and hardware to promote the integration of information and technology across the curriculum

- modeling the integration of culturally responsive pedagogy within program planning and development
- fostering a culture of inquiry related to the mental health needs of students and the implications for teaching and learning.

F) Leadership in the Instructional Setting

- fostering leadership capacity related to creating and sustaining collaborative professional learning communities
- fostering leadership in the relevant use of information and computer technology to support student learning
- facilitating a culture of inquiry related instructional strategies that support the integration of information and computer technology in instruction
- promoting leadership in the application of strategies for adapting, modifying and accommodating instruction to meet the needs of all learners
- promoting knowledge-creation and mobilization related to inclusive learning environments that reflect the ethical standards and standards of practice and affirms the need to respect and conserve resources in the environment
- facilitating dialogue and inquiry related to critical pedagogies that reflect the professional identity of educators as described in the ethical standards, the standards of practice and in the *Foundations of Professional Practice*.

G) Assessment and Evaluation

- fostering a culture of fair and equitable assessment and evaluation practices that honour the dignity, emotional wellness and cognitive development of all students
- fostering leadership in the implementation of assessment, evaluation and reporting methods that align with the principles, practices and expectations reflected in Ontario's policy documents
- fostering a culture of assessment in which assessment is used for the following three purposes: to provide feedback to students and to adjust instruction (assessment *for* learning); to develop students' capacity to be independent, autonomous learners (assessment *as* learning); to make judgements about the quality of student learning (assessment *of* learning)

- fostering leadership in the integration of multiple assessment methods that are ongoing, varied in nature and implemented over a period of time to support student learning
- modeling leadership in the integration of multiple assessment methods to support student learning: diagnostic, formative, and summative
- supporting colleagues and district in integrating information and computer technology tools to support assessment and evaluation.

H) Shared Support for Learning

- facilitating shared leadership related to continuous, meaningful, detailed and supportive communication with parents/guardians and the community
- creating opportunities to implement and affirm professional collaboration that supports student learning
- facilitating shared responsibility and partnership as conveyed in the *Foundations of Professional Practice*
- planning and providing professional learning opportunities to support colleagues or district in integrating information and computer technology in instruction.
- fostering and sustaining a positive, welcoming school climate in which all parent perspectives are encouraged, valued and heard.

I) Legal and Ethical Issues

- Leading colleagues in the consideration of ethical issues and responsibilities related to the integration of information and computer technologies in instruction when planning school or district curriculum initiatives
- modeling the use of relevant school, board and provincial guidelines, procedures, policies and regulations for the use of Internet information and computer technology when designing school or district curriculum initiatives
- developing strategies to heighten awareness of the safe and equitable use of electronic resources with peers, students, and parents/guardians
- modeling adherence to Intellectual Property rights in the use of information and computer technology when planning school or district curriculum initiatives.

J) Research and Development

- facilitating a critical examination of current practices in relation to past, present and evolving practices in Integration of Information and Computer Technology in Instruction
- exploring professional practice through ongoing inquiry into theory and pedagogy/andragogy
- engaging in professional learning through research, scholarship and leadership
- integrating research and the scholarship of pedagogy/andragogy into teaching practice
- collaborating in research and the scholarship of pedagogy/andragogy
- facilitating the implementation of knowledge-creation and mobilization within professional practice.

5. Instructional Practice in the Additional Qualification Course: Integration of Information and Computer Technology in Instruction Specialist

In the implementation of this Additional Qualification course, instructors use strategies that are relevant, meaningful and practical in providing candidates with learning experiences about program, instruction, pedagogy and assessment and evaluation. These include but are not limited to small group interaction, action research, presentations, independent inquiry, problem solving, collaborative learning and direct instruction.

Instructors model the standards, honour the principles of adult learning, recognize candidates' experience and prior learning and respond to individual needs. Important to the course are opportunities for candidates to create support networks and receive feedback from colleagues and instructors and share the products of their learning with others. Opportunities for professional reading, reflection, dialogue and expression are also integral parts of the course.

Instructors model effective instructional strategies and formative and summative assessment that can be replicated or adapted in the candidate's classroom.

A. Experiential Learning

Candidates will be provided with opportunities to engage in experiential learning related to key concepts and aspects of Integration of Information and Computer Technology in Instruction as collaboratively determined by both the instructor and course candidates. The intent of the experiential learning opportunities is to support the application and integration of practice and theory within the authentic context of teaching and learning. Candidates will also engage in critical reflection and analysis of their engagement in experiential learning opportunities related to Integration of Information and Computer Technology in Instruction. The professional judgment, knowledge and pedagogy of candidates will be enhanced and refined through experiential learning and, inquiry.

The College's standards resources (Appendix 2) can be integrated into AQ courses to help support experiential learning through professional inquiry.

6. Assessment and Evaluation of Candidates

At the beginning of the course, candidates are provided with the specific learning expectations and forms of assessment and evaluation that will be used throughout the course. Instructors will provide opportunities for regular feedback regarding candidates' progress throughout the course.

A balanced approach to candidate assessment and evaluation is used. It includes the combination of self and peer assessment and instructor evaluation, and models effective practices. A variety of assessment approaches will be used that enable candidates to convey their learning related to course expectations. The course provides opportunities for both formative and summative assessment and evaluation.

Central to candidates enrolled in Additional Qualification courses is the opportunity to be engaged in relevant and meaningful work. Assignments, artefacts and projects enable candidates to make connections between theory and practice. At the same time, assignments must allow candidates flexibility, choice, and individual inquiry opportunities.

Part of the evaluation process may include a major independent project or action research component over the duration of the course. This project is an opportunity for candidates to illustrate a high level of professional knowledge, communication skills, pedagogy, ethical practices and instructional leadership.

Similarly, if a portfolio assignment is used, it will also include reflections and analysis of a candidate's learning over time.

A final culminating experience in the course is recommended. This experience may take the form of a written assessment, a research paper, a performance, an inquiry project or a product that is genuinely new, meaningful and practical.

The following list of assessment strategies which are reflective of experiential learning is not exhaustive; it is intended to serve as a guide only.

- a) Performance assessment: designing a sample unit which includes a culminating activity and appropriate assessment and evaluation tools, incorporates a variety of technologies and resources relevant to the study of Integrating Information and Computer Technology in Instruction and is based on Ministry of Education curriculum expectations
- b) Written assignment: reflecting critically on issues arising from articles, publications, research and/or other resources related to the Integration of Information and Computer Technology in Instruction
- c) Presentation: developing a digital story, presenting an issue related to the Integration of Information and Computer Technology in Instruction
- d) Portfolio: creating a portfolio of practical resources, artefacts, photographs and recording critical reflections for one or several components related to the Integration of Information and Computer Technology in Instruction
- e) Action research: engaging in action research by reflecting and acting upon a specific inquiry related to the Integration of Information and Computer Technology in Instruction
- f) Independent project: addressing any aspect of the course that is approved by the instructor
- g) Instructional resource: developing a meaningful resource that will support instruction and pedagogy related to the Integration of Information and Computer Technology in Instruction
- h) Reflective writing: reflecting on professional practice through journal writing, or writing a case or vignette that will support instruction and pedagogy related to the Integration of Information and Computer Technology in Instruction
- i) Case inquiry: writing or exploring a case related to collaboration and shared partnerships, with parents, colleagues, and community organizations.

- j) IEP development: collaboratively develop an IEP related to Integration of Information and Computer Technology in Instruction with the family, student and school team
- k) Facilitating a Learning Experience: developing and implementing an engaging learning experience that reflects differentiated instruction and universal design.

Appendix 1

The Ethical Standards for the Teaching Profession

The *Ethical Standards for the Teaching Profession* represent a vision of professional practice. At the heart of a strong and effective teaching profession is a commitment to students and their learning. Members of the Ontario College of Teachers, in their position of trust, demonstrate responsibility in their relationships with students, parents, guardians, colleagues, educational partners, other professionals, the environment and the public.

The Purposes of the Ethical Standards for the Teaching Profession are:

- to inspire members to reflect and uphold the honour and dignity of the teaching profession
- to identify the ethical responsibilities and commitments in the teaching profession
- to guide ethical decisions and actions in the teaching profession
- to promote public trust and confidence in the teaching profession.

The Ethical Standards for the Teaching Profession are:

Care

The ethical standard of *Care* includes compassion, acceptance, interest and insight for developing students' potential. Members express their commitment to students' well-being and learning through positive influence, professional judgment and empathy in practice.

Respect

Intrinsic to the ethical standard of *Respect* are trust and fair-mindedness. Members honour human dignity, emotional wellness and cognitive development. In their professional practice, they model respect for spiritual and cultural values, social justice, confidentiality, freedom, democracy and the environment.

Trust

The ethical standard of *Trust* embodies fairness, openness and honesty. Members' professional relationships with students, colleagues, parents, guardians and the public are based on trust.

Integrity

Honesty, reliability and moral action are embodied in the ethical standard of *Integrity*. Continual reflection assists members in exercising integrity in their professional commitments and responsibilities.

The Standards of Practice for the Teaching Profession

The *Standards of Practice for the Teaching Profession* provide a framework of principles that describes the knowledge, skills, and values inherent in Ontario's teaching profession. These standards articulate the goals and aspirations of the profession. These standards convey a collective vision of professionalism that guides the daily practices of members of the Ontario College of Teachers.

The Purposes of the Standards of Practice for the Teaching Profession are:

- to inspire a shared vision for the teaching profession
- to identify the values, knowledge and skills that are distinctive to the teaching profession
- to guide the professional judgment and actions of the teaching profession
- to promote a common language that fosters an understanding of what it means to be a member of the teaching profession.

The Standards of Practice for the Teaching Profession are:

Commitment to Students and Student Learning

Members are dedicated in their care and commitment to students. They treat students equitably and with respect and are sensitive to factors that influence individual student learning. Members facilitate the development of students as contributing citizens of Canadian society.

Professional Knowledge

Members strive to be current in their professional knowledge and recognize its relationship to practice. They understand and reflect on student development, learning theory, pedagogy, curriculum, ethics, educational research and related policies and legislation to inform professional judgment in practice.

Professional Practice

Members apply professional knowledge and experience to promote student learning. They use appropriate pedagogy, assessment and evaluation,

resources and technology in planning for and responding to the needs of individual students and learning communities. Members refine their professional practice through ongoing inquiry, dialogue and reflection.

Leadership in Learning Communities

Members promote and participate in the creation of collaborative, safe and supportive learning communities. They recognize their shared responsibilities and their leadership roles in order to facilitate student success. Members maintain and uphold the principles of the ethical standards in these learning communities.

Ongoing Professional Learning

Members recognize that a commitment to ongoing professional learning is integral to effective practice and to student learning. Professional practice and self-directed learning are informed by experience, research, collaboration and knowledge.

Appendix 2

Standards-Based Professional Resources

Information pertaining to the following standards resources which support learning through professional inquiry is available through the College web site at www.oct.ca.

Allard, C.C., Goldblatt, P.F., Kemball, J.I., Kendrick, S.A., Millen, K.J., & Smith, D.M. (2007). Becoming a reflective community of practice. *Reflective Practice* (8)3, 299-314.

Cherubini, L., Smith, D., Goldblatt, P., Engemann, J., & Kitchen, J. (2008). *Learning from Experience: Supporting beginning and mentor teachers*. Toronto, ON: Ontario College of Teachers.

Ciuffetelli Parker, D., Smith, D., & Goldblatt, P. (2009). Teacher education partnerships: Integration of case studies within an initial teacher education program. *Brock Education*, 18(2), pp. 96-113

Goldblatt, P.F., & Smith, D. (2004). Illuminating and facilitating professional knowledge through casework. *European Journal of Teacher Education* (27)3, 334-354.

Goldblatt, P.F., & Smith, D. (2005). (Eds.). *Cases for teacher development: Preparing for the classroom*. Thousand Oaks, CA: Sage Publications.

Ontario College of Teachers. (2003). *Standards in practice: Fostering professional inquiry*. [Resource kit 1]. Toronto, ON: Author.

Ontario College of Teachers. (2006). *Foundations of professional practice*. Toronto, ON: Author.

Ontario College of Teachers. (2008). *Living the standards*. [Resource kit 2]. Toronto, ON: Author.

Ontario College of Teachers. (2010). *A self-reflective professional learning tool*. Toronto, ON: Author.

Ontario College of Teachers. (2010). *Voices of wisdom* [DVD]. Toronto, ON: Author.

- Smith, D., & Goldblatt, P.F. (Eds.). (2006). *Casebook guide for teacher education*. Toronto, ON: Ontario College of Teachers.
- Smith, D. & Goldblatt, P. (Eds.). (2009). *Exploring leadership and ethical practice through professional inquiry*. Québec City, QC: Les Presses de l'Université Laval.
- Smith, D. (2010). Developing leaders using case inquiry. *Scholar-Practitioner Quarterly*, 4(2), 105-123.
- Smith, D. (2012). Supporting new teacher development using narrative based professional learning. *Reflective Practice*, (13)1, 149-165.
- Smith, D. (2012). *Teaching and learning through e-learning: A new additional qualification course for the teaching profession*. In, Barbour, M. (Ed.) *State of the nation: K–12 online learning in Canada*. Victoria, BC: Open School BC.