Le Prix Alan Blizzard

Un prix qui récompense les projets en collaboration pour l'amélioration de l'apprentissage des étudiants

Présenté à l'université Ryerson, Toronto, ON

juin 2010

The Alan Blizzard Award

An Award for Collaborative Projects that Improve Student Learning

Presented at Ryerson University, Toronto, ON

June 2010

Sponsored by

McGraw-Hill Ryerson

Connect. Learn. Succeed.

STLHE SAPES

Alan Blizzard Award

Table of Contents

Introduction from John Thompson, Alan Blizzard Award Coordinator

The Alan Blizzard Award was created by the Society for Teaching and Learning in Higher Education (STLHE) to honour its former President, Alan Blizzard (1987-1995), on his retirement, for his significant contributions to the Society. Designed to recognize and stimulate collaborative efforts to strengthen and give greater visibility to effective university teaching and learning, the Award encourages and disseminates scholarship in outstanding collaborative teaching and learning. Each year, the project selected for the Alan Blizzard Award is presented by the team during a plenary session at the Society's annual conference. The monograph describing the project is circulated to all Canadian universities.

The concept for the Alan Blizzard Award was developed by a committee including Chris Knapper (President, 1982-1987), Alan Blizzard (President, 1987-1995), Pat Rogers (President, 1995-2000), and Dale Roy (Coordinator, 3M National Teaching Fellowships Program). The Award is sponsored by McGraw-Hill Ryerson's Higher Education Division. The Society is particularly grateful to Marlene Luscombe of McGraw-Hill Ryerson, for advice in the conceptual stages of the design of the Award and for McGraw-Hill Ryerson's ongoing support of this significant program through Patrick Ferrier, President of the Higher Education Division. McGraw-Hill Ryerson supports this Award as part of its focus on student learning and faculty teaching. For more information visit http://www.mcgrawhill.ca/

This year 15 applications were received from twelve Canadian universities. This monograph presents the 2010 Alan Blizzard Award submission, "The Communication and Cultural and Competence Website and Medical Literacy Project: A Professional Curriculum for International Medical Graduates." The collaborative project involves two teams of nine University of Toronto faculty: Lynn Russell (coordinator), Leila Lax, Laura Jayne Nelles, Catherine Smith, Lorena Dobbie, Kevin Hobbs, Jacquie Jacobs, Stan Rogal, and Colette Peters. Readers who are intrigued by the possibility of adapting this project to their own institutions are encouraged to contact the authors directly or visit the Communication and Cultural Competence (CCC) website at: http://www.img-ccc.ca

Two teams and projects, tied for second place, were awarded Honourable Mention this year.
"Mission-conseil – Histoire de Bois de veine," Pierrette Doré (project coordinator), Université du Québec en Abitibi-Témiscamingue; and, "Integrative Teaching and Learning to Bridge Pre-Clinical Sciences in Veterinary Medicine," Baljit Singh (project coordinator), University of Saskatchewan.

I also wish to recognize and thank the other 12 coordinators and teams who submitted Blizzard Award applications this year. Their imaginative projects represent significant investments of time, energy, pedagogical collaboration, and care on behalf of students that make a difference in their learning and their lives.

I thank Dr. Joy Mighty, STLHE President, Dr. Arshad Ahmad, Chair, STLHE Awards Committee, Sylvia Avery, STLHE Administrator, and the members of the 2010 Selection Committee. Their time, attention, care, and candid and careful deliberations honour and practice

the ideal of collaboration informing the Alan Blizzard Award and the outstanding collaborative projects of the Blizzard Award recipients since 2000.

For more information and guidelines for submitting a nomination for the 2011 Alan Blizzard Award, visit the STLHE website at
http://www.stlhe.ca/en/awards/alan_blizzard/index.php

Introduction—John Thompson, Coordonnateur, prix Alan Blizzard

Le prix Alan Blizzard a été créé par la Société pour l'avancement de la pédagogie dans l'enseignement supérieur (SAPES) en l'honneur de son ancien président, Alan Blizzard (1987-1995), maintenant à la retraite, pour l'honorer de son immense contribution à la Société. Conçu pour reconnaître et stimuler le travail de collaboration qui a contribué à accroître le rayonnement et la visibilité de l'enseignement universitaire, le prix encourage et fait connaître la recherche en enseignement et en apprentissage. Chaque année, l'équipe de la SAPES présente le projet digne du prix Alan Blizzard durant une séance plénière de la conférence annuelle de la Société. La monographie décrivant le projet circule dans toutes les universités canadiennes.

Le concept du prix Alan Blizzard a été développé par un comité formé de Chris Knapper (président, 1982-1987), Alan Blizzard (président, 1987-1995), Pat Rogers (président, 1995-2000) et Dale Roy (coordonnateur, Programme de prix d'excellence en enseignement 3M). Le prix est financé par la Division de l'enseignement supérieur de McGraw-Hill Ryerson. La Société remercie Marlene Luscombe de McGraw-Hill Ryerson, pour ses conseils dans les étapes de conception du prix. La Société remercie également McGraw-Hill Ryerson, par l'intermédiaire de Patrick Ferrier, président de la Division de l'enseignement supérieur, pour son soutien continu à cet important programme. McGraw-Hill Ryerson finance ce prix dans le cadre de l'appui apporté à l'apprentissage chez les étudiants et à l'enseignement du corps professoral. Pour obtenir plus de renseignements, visitez le site www.mcgrawhill.ca/highereducation.

Cette année, nous avons reçu 15 candidatures provenant de douze universités canadiennes. La présente monographie décrit le projet ayant reçu le prix Alan Blizzard 2010 « The Communication and Cultural and Competence Website and Medical Literacy Project: A Professional Curriculum for International Medical Graduates » (projet de site Web sur la communication, la compétence culturelle et la littératie médicale). Ce projet de collaboration comprenait neuf membres du corps professoral de l'Université de Toronto répartis en deux équipes : Lynn Russell (coordonnatrice), Leila Lax, Laura Jayne Nelles, Catherine Smith, Lorena Dobbie, Kevin Hobbs, Jacquie Jacobs, Stan Rogal et Colette Peters. Les lecteurs intrigués par la possibilité d'adapter ce projet à leur propre établissement sont invités à communiquer directement avec les auteurs ou à visiter le site Web Communication and Cultural Competence (CCC) à : http://www.img-ccc.ca

Deux équipes et projets arrivés ex aequo en deuxième place ont reçu une mention honorable cette année. Il s'agit du projet « Mission-conseil – Histoire de Bois de veine », Pierrette Doré (coordonnatrice du projet), Université du Québec en Abitibi-Témiscamingue; et le projet « Integrative Teaching and Learning to Bridge Pre-Clinical Sciences in Veterinary Medicine » (enseignement et apprentissage intégratifs faisant le pont entre les sciences précliniques et la médecine vétérinaire), Baljit Singh (coordonnateur du projet), Université de Saskatchewan.

J'aimerais également honorer et remercier les douze autres coordonnateurs et équipes de projet ayant posé leur candidature au prix Alan Blizzard de cette année. Leurs projets imaginatifs représentent un investissement important en temps, en énergie et en collaboration

pédagogique, de même qu'un souci à l'égard des étudiants, et ils font une différence dans l'apprentissage et dans la vie de ces derniers.

Je remercie Mme Joy Mighty, présidente de la SAPES, M. Arshad Ahmad, président du comité des prix de la SAPES, Mme Sylvia Riselay, administratrice de la SAPES et les membres du comité de sélection de 2010. Grâce à leur temps et à leur attention ainsi qu'à leurs délibérations franches et consciencieuses, ces personnes mettent en pratique et honorent l'idéal de collaboration qui sous-tend le prix Alan Blizzard et qui influence les projets de collaboration remarquables des lauréats du prix Alan Blizzard depuis l'an 2000.

Pour obtenir de plus amples renseignements ainsi que pour connaître les lignes directrices sur la présentation d'une candidature au prix Alan Blizzard de 2011, visitez le site Web de la SAPES à http://www.stlhe.ca/en/awards/alan_blizzard/index.php

The Communication & Cultural Competence Website (CCC) Team

Left to right: Cathy Smith, LJ Nelles, Leila Lax, Lynn Russell

The Medical Literacy Course Team

Back row: Kevin Hobbs, Stan Rogal
Front row: Colette Peters, Jacquie Jacobs, Lorena Dobbie, Lynn Russell, Cathy Smith

Section A—Collaborating Team

The Communication & Cultural Competence Website (CCC) Team

Dr. M. Lynn Russell MDCM, MHPE, FRCP(C)	Associate Professor of Medicine Faculty of Medicine University of Toronto
Prof. Leila Lax, PhD(c)	Assistant Professor Biomedical Communication University of Toronto
Laura Jayne Nelles, MFA, PhD(c)	ESL Instructor Studio Instructor, York University Associate Trainer, Standardized Patient Program University of Toronto
Catherine Smith, PhD	Lecturer Faculty of Medicine University of Toronto The Medical Literacy Course Team

The Medical Literacy Course Team

Dr. M. Lynn Russell, MDCM, MHPE, FRCP(C)	Associate Professor of Medicine Faculty of Medicine University of Toronto
Catherine Smith, PhD	Lecturer Faculty of Medicine University of Toronto
Lorena Dobbie	Educator/facilitator Faculty of Medicine University of Toronto
Kevin Hobbs, HBA	Educator/facilitator Faculty of Medicine University of Toronto
Jacquie Jacobs, AOCA	Educator/facilitator Faculty of Medicine University of Toronto

Stan Rogal, MA	Lecturer Faculty of Medicine University of Toronto
Colette Peters, MEd, PhD(c)	Ontario Institute for Studies in Education Curriculum, Teaching and Learning Second Language Education University of Toronto
Our students	International Medical Graduates

Acknowledgements

These projects were funded by the Government of Ontario. We are grateful to members of the Discovery Commons, University of Toronto for website design (Meaghen Brierley), and programming
(Ju Ho Park) and to the simulators from the Standardized Patient Program, University of Toronto.

Cover design—J. Jacobs

Section B—Nature and Features of Collaboration

The educational needs of professionals immigrating to Canada who speak English as a second language are complex, and differ from those of native-born students. To address the needs of International Medical Graduates (IMGs), the College of Physicians & Surgeons of Ontario asked Dr. Russell to form a team to develop a web site to illustrate the professional behaviors and competencies expected of physicians practicing in Canada. Dr. Russell and L.J. Nelles developed concept maps and wrote content. Prof. Lax, using principles of scaffolded knowledge building, collaborated in designing the website, based on the pedagogy of e-learning. Issues concerning content or design were addressed in discussion.

Video simulations are a key feature of the website. L.J. Nelles and C. Smith, with backgrounds in theater, multimedia and communication, multimedia production translated principles of live teaching to the electronic environment. All content and video materials were discussed and revised by the group before programming. As the site developed, IMGs provided feedback in focus groups and workshops.

Early in website creation, we realized that elements of the project could be enhanced by a face-to-face program of occupation-specific literacy training. Four colleagues (LD, KH, JJ, SR) were recruited, all experienced in teaching communication skills, and who had participated in the website filming. A consultant with expertise in applied linguistics and occupation-specific ESL instruction (CP) collaborated in both design and delivery. The Medical Literacy Course curriculum was developed by an iterative process in which the team reviewed the Canadian Language Benchmark (CLB) system and applied it to the medical domain. The course was taught by the entire team, each member providing an area of expertise (e.g. facilitation, feedback, language assessment). Regular team debriefings facilitated the interdisciplinary vision of the program, and provided for flexibility in immediate adaptation to individual learner needs.

Section C—Abstract

Rationale

International Medical Graduates (IMGs) form a significant proportion of postgraduate trainees and practitioners in Canada. Their educational needs are quite different from Canadian-trained physicians, in that they experienced a different medical culture in a different language. The barriers they face are not necessarily a deficiency of biomedical knowledge, but rather lack of understanding of Canadian professional norms and genres, often coupled with deficiencies in occupation-specific language skills. The Medical Literacy Course and the Communication and Cultural Competence website (CCC) are companion programs with these goals:

- To illustrate and make explicit the professional behaviours, attitudes and competency standards expected in the Canadian healthcare.
- To provide recursive practice and feedback in professional behaviours requiring occupation-specific literacy.

Methodology

The CCC website is intended particularly for those who cannot access live educational programs, and has been widely accessed by IMGs. It consists of three parts: a language self-assessment, an Introduction to Communication Skills, and five multipart cases. The challenge of translating high-fidelity live teaching to a mid-fidelity web-based curriculum was accomplished using five strategies to scaffold knowledge building: video simulations, contextualized resources, concurrent feedback, reflective exercises prompting recursive thought, and commentaries providing nuanced feedback on decisions taken. All content material was based on the Medical Council of Canada C2LEO objectives (Communication, Culture, Legal, Ethical, Organizational), organized by the CanMEDS roles (Communicator Manager, Advocate, Scholar, Collaborator, Professional).

The Medical Literacy Course is a 40 hour face-to-face experiential course which provides IMGs with practice in professional tasks such as those illustrated in the CCC website. It targets occupation-specific literacy, through the Canadian Language Benchmark (CLB) skills of reading, writing, listening and speaking. Professional practice is largely a matter of communication, which requires the ability to access biomedical knowledge, to gather information from multiple sources (e.g. patients), the reasoning skills to determine the relevance of information, and the language ability to coherently transfer intended meaning orally or in writing. This is a much greater cognitive load than occurs in social situations, and requires a higher degree of language skill.

In the Medical Literacy course, scenarios are benchmarked to CLB task levels in the four skills. Professional genres learned tacitly by Canadians (e.g. oral report, interview techniques) are modeled in small and large group sessions. Simulator/educators portray patients or other health care workers, interacting with IMG learners and providing feedback specific to the language task, followed by opportunities for 'repractice' or revision.

Results

In the Medical Literacy course, pre-post assessment of communication and linguistic skills improved significantly (p >.01-.001/cohort). Learner confidence and understanding of professional behaviours increased, resulting in increased success in achieving postgraduate training positions (23% in cohorts 1-4). Currently we have a long waiting list for entry. For the website, tracking patterns in design research studies showed high levels of participation, recursion and revision, particularly in the reflective exercises. These patterns are concurrent with educational research on the importance of such practices for knowledge building and relational understanding. The website is viewed positively by IMGs for both language and cultural learning.

http://www.img-ccc.ca

Section D—Project Description

Institutional Context

Many International Medical Graduates (IMGs) and other health care professionals immigrate to Canada in the hope and expectation of practicing their profession in a new environment. Few are able to realize this goal due to numerous political, professional and cultural barriers. Almost all Canadian trained physicians are in active practice, but only half of IMGs, and many are working in occupations unrelated to their skills (Canadian Social Trends, 2008). In most provinces, there is a requirement for either postgraduate training or a period of supervised practice prior to licensure. The competition for these limited positions is increased by the additional cultural and language barriers faced by most IMGs (Wong & Lohfeld, 2008).

The CCC website and Medical Literacy Course were developed to address these barriers. The need for such programs was recognized by the College of Physicians & Surgeons of Ontario, who in 2004 charged the CCC team with the task of developing a website primarily for IMGs, illustrating the professional norms and behaviours of practicing physicians in Canada. Funding was received from the Government of Ontario, and a team from the University of Toronto Faculty of Medicine and Biomedical Communications was assembled who collaborated in content development, multimedia and website design. Additional funding in 2006 allowed the team to expand the website to include specialized modules on Aboriginal Health and Communication, which were identified by IMGs as particular concerns. The Aboriginal Health Module is the result of collaboration with First Nations elders and the Northern Medical Unit, University of Manitoba.

Based on the experience of working with IMGs on the website development, it became clear that a face-to-face course could provide complementary benefits, particularly in occupation-specific language improvement for those IMGs applying to training programs. Additional collaborators, who had participated in the website filming, and who are experienced in teaching communication skills, became the Medical Literacy course team. An additional member from the field of applied linguistics contributed specialized language expertise. Funded by another government grant, the Medical Literacy team developed a curriculum based on their previous experience in teaching communication, but focused specifically on occupation-specific language and culturally appropriate use of professional norms and genres. Five iterations of the course, free to IMGs, were delivered in 2008-2009.

Goals of the Project

Most IMGs adapt well to the social differences of a new country, but many are unaware of the difference between social and professional language and behaviour. Given that language and cultural issues can interfere with an IMGs ability to access training, as well as effectiveness during training and in subsequent practice (Hoekje, 2007), a major goal of both the CCC website and Medical Literacy course is to explore the norms and genres of medical culture, providing authentic illustrations and/or experience of the Canadian health care environment. Further,

learners then can apply the reasoning and decision-making required in dealing with different problems, and can practice specific communication and language skills, being provided with feedback from web-based commentaries or 'live' facilitators. The intended outcomes are a better understanding of how to function in our health care system, and improved occupation-specific language skills appropriate to the task. Increased confidence gives IMGs the best opportunity to demonstrate their professional competence when applying to training programs or in practice. The health care system will acquire physicians functioning at the expected standard, reducing educational costs and, ultimately improving patient care.

In developing the website, the major challenge was to design a customized program to deliver a complex, interactive curriculum on professional behaviours. The team worked collaboratively, each contributing specific expertise in content development (LR), multimedia and concept maps (LJN), principles of communication (CM), and the pedagogy of e-learning (LL). The goal was to create an interactive website based on the educational principles of scaffolded knowledge building suited to that environment (Scardamalia & Bereiter, 2006; Lax et. al., 2009).

Since video simulation is such a large part of the website, it was vital to film scenarios that are realistic in behaviours and language. Translating the high fidelity communication skills teaching done in Canadian faculties to the mid-fidelity of an electronic medium was a particular challenge in the module 'Introduction to Communication Skills'. That collaboration, led by CM and LJN, turned the experience of teaching patient-centred communication and additional written material into a program that can stand alone as a teaching module for any learners (Nelles, et. al. 2010).

The Medical Literacy course grew out of the website experience. In working with IMGs on website development and in teaching communication skills, it became apparent that occupation-specific language was a major issue. There were no resources available to address this, especially since language is often a sensitive issue that is avoided by both IMGs and educational programs. The goal and challenge in creating a live course was shifting the focus of high fidelity teaching of communication to high fidelity teaching of occupation-specific language skills. This required that the team members become familiar with the Canadian Language Benchmark (CLB) system, and develop new skills in facilitation and feedback related to language. The twelve CLB benchmarks are reference points in this Canadian, standardized descriptive scale of communicative proficiency in English as a second language. It is a general scale, which requires adaptation to specific purposes, such as medical literacy (Pawlinkowska-Smith, 2000).

The CCC website is also an integral part of the Medical Literacy curriculum. There is both quantitative and qualitative evidence that learners experiencing either or both components of the project improve their understanding of the Canadian health care system, professional behaviours, and occupation-specific language. The increased skill and confidence shown by these learners has resulted in a gratifying success rate of those applying to training programs (23% of cohorts 1-4).

Project Description

Rationale

Many assume that health care practice is the same everywhere. However, although biomedical knowledge may transfer well, the application of it in complex health care settings is highly culturally determined. The norms, genres and professional behaviours learned tacitly during training are part of a medical culture, and these differ. Also, much of professional practice involves communication, a complex skill which differs from the social use of language. The increasing importance of professional ethics, accountability, patient-centred attitudes and other so-called 'soft skills', point to the need for high level occupation-specific language skills (Hall, et. al. 2006).

Professional communication requires the ability to access learned biomedical knowledge, to relate it to information gathered in unique and challenging contexts (e.g. patient interviews), to determine the relevance of information in specific contexts, to integrate this material, and to communicate decisions orally or in writing. For those with English as a second language, this is a much greater cognitive load than social communication, and thus many IMGs who have adequate language skills in everyday life, fall below expected standards in Canadian medical settings (Russell & McIlroy, 2002).

These language and cultural barriers make it difficult for IMGs to demonstrate their true professional competence. Further, there is very little information available to IMGs about Canadian medical norms, attitudes and communication patterns. These are not the subjects of books, and to our knowledge there are no suitable courses available to those considering immigrating to Canada, preparing to apply to programs, or for those struggling in practice (Zulla, et. al., 2008).

Component Description

The Communication and Cultural Competence Website— http://www.img-ccc.ca

The website was developed to be used as a freely accessible curriculum illustrating the real world practice of physicians, and the expected standards of medical literacy and behaviours. It is available to anyone worldwide with access to the internet. All necessary software can be downloaded from within the program. Users register, choose a private password, and can use it anytime, anywhere. The purpose of the website was to illustrate nuanced professional behaviours and prompt scaffolded self-assessment through embedded formative feedback and explicit commentaries. The content is based upon the Medical Council of Canada (MCC) C_2LEO Objectives (Communication, Culture, Legal, Ethical, and Organizational). These objectives, as well as those related to biomedical knowledge, are the basis of the evaluation of professional competence required of every practicing physician, and are used by Canadian training programs in development of curriculum. They are organized, as are current Canadian training programs, using the CanMEDS roles (Communicator, Advocate, Manager, Collaborator, Scholar, Professional, Medical Expert), which set out the societal expectations of every physician. Trainees and practicing physicians are expected to understand and demonstrate high standards of all these roles and objectives.

It is clear that the MCC objectives and CanMEDS roles require much more than knowledge or technical expertise. They require an understanding and ability to apply knowledge in a particular cultural context: the Canadian health care system. Thus, although the website content is grounded in authentic medical issues, teaching biomedical knowledge is not the intent. Each C_2LEO objective is lined online to an illustrative behaviour or discourse, clearly setting out the expectations of Canadian professional practice.

The website has three main sections: a language self-assessment; a large module designed as a teaching tool—Introduction to Communication Skills; and five multipart cases.

Figure 1—Home Page of Website

It begins with a general orientation to the Canadian health care system, with links to important information such as Codes of Ethics. The language self-assessment has four listening and four reading tasks, designed to provide participants with their level of medical literacy based on the Canadian Language Benchmarks (Russell, et. al, 2008). Each case has a medical theme, and deals with different C_2LEO objectives and CanMEDS roles. Because patient-centred communication is such an important component of Canadian health care practice (Stewart, et. al, 2003), a separate module, 'Introduction to Communication Skills', is included, based on both undergraduate instruction at the University of Toronto and the Medical Literacy course curriculum.

Five design strategies were used in the creation of a website intended to support learner engagement and knowledge building:

- Video vignettes simulating authentic professional situations and contexts.
- Reflective Exercises requiring commitment to a possible course of action.
- Knowledge Checks, the content of which is related to the C_2LEO objectives, not biomedical knowledge.
- Evidential supporting literature available at point of need (e.g. not in a separate library)
- Feedback commentaries, available after the learner has engaged the material.

This educational approach is based on situated learning and scaffolded knowledge building to engage the learner in understanding complex subject matter (Lave & Wenger, 1991; Scardamalia & Bereiter, 2003). The many exercises in the website require active participation by the learner to access feedback in Commentaries. For instance, in the Reflective Exercises, learners are presented with several options for action at stages in the case. As in most professional situations, there is no 'right' answer, but rather more effective or less effective decisions and actions. The deliberate omission of a 'right' answer is frustrating for some learners, but is important in developing tolerance of ambiguity and uncertainty in practice (Schön, 1987). The learner must commit to what she feels is the best option, then can access Commentaries on the possible consequences of all options. The content and language are intentionally set at a high level to authentically reflect that of the practicing professional. Learners are expected to work recursively and reflectively online to continually improve their knowledge and understanding of the complex material presented. The Knowledge Checks,

which are designed as MCQ 'tests', are also used as teaching tools, in that the answers to items are accompanied by Commentaries and literature support. Overall, the website provides the background knowledge of material that Canadian trainees learn tacitly. Learners can, and do, access the website freely and repeatedly, often engaging the cases and exercises repeatedly in recursive learning.

The website has been assessed in a number of ways. Three design research studies were conducted with IMGs at strategic points during website development. These studies examined usability and relevance. Outcomes were used in the educational design of subsequent iterations, with feedback from IMGs used in revision (Lax et. al., 2009). Two workshops and a focus group with IMG users provided additional ideas for improvement—such as the inclusion of the Communication Skills module. The workshops were also the genesis of the Medical Literacy course idea. The Language Assessment, as an independent instrument, has been validated through use by almost 300 IMGs (Russell, et. al. 2008). The website is able to track usage patterns of participants, and two years of collected data from users across Canada and internationally supports the initial findings in the design research: that of recursive and deep engagement with the subject matter. In particular, usage patterns indicate that the embedded, concurrent feedback, which goes beyond 'right-wrong' answers, supports knowledge building and relational understanding of the complex subject matter (Lax, et. al., 2009).

The Medical Literacy Course

This course developed from the experience of the team in working with IMGs on the CCC website. It became clear that a major barrier to success was a lack of adequate occupation-specific language skills. The website provides illustrations of appropriate language, but focuses on professional behaviours. An experiential language and communication program was needed, where learners could receive precise, immediate feedback: the Medical Literacy course.

The website team recruited colleagues who had participated in filming the website videos, and who were experienced in teaching communication skills in health care settings, including teaching IMGs. This team then worked collaboratively to adapt previous curricular strategies to include occupation-specific language skills. The team familiarized itself with the Canadian Language Benchmark system, then benchmarked all parts of the curriculum to CLB levels (Table 1), reaching consensus by discussion. The team adapted or developed new curriculum to include all four CLB language tasks (reading, writing, speaking, and listening), using as content the norms and genres of medical literacy unfamiliar to IMGs (e.g. patient-centred dialogue, oral reports, chart notes, consultation etiquette). Because the team's experience in working with IMGs indicated that occupation-specific language skills were at a lower CLB level than social skills, curricular components were initially set at a lower level than social English benchmarks, with flexibility to adjust to individual learner needs as the course progressed.

Iterations one and five of the course were offered to IMGs with English as a second language, and who were planning to apply for entry to a postgraduate program. Iterations two, three and four were offered to IMGs of varying readiness and language level. Class size was limited to 18 learners/cohort, in order to provide individual attention to all. The 40 hours of contact time was distributed in three hour sessions over six weeks. The classes took place in the educational site of a teaching hospital, where there were clinic rooms with one- way mirrors for

viewing by senior staff. This technology provided an authentic setting for learners, and was useful in providing additional information both to learners and to facilitators and simulators on their work.

The course begins with an extensive language assessment, followed in each session by large and small group work with all team members teaching in each session. Emphasis is on combined listening and speaking skills, although all four CLB skills are addressed in the sessions.

Speaking / Listening Exercises

Speaking and listening in a medical context require the highest and most complex language skills, and are most problematic for ESL learners (see Rationale). Inability to predict unfamiliar cultural 'scripts' creates increased anxiety and probability of error (Gudykunst, 2004). Therefore, an additional curricular change taken in order to work with language and cultural differences, was to break down the speaking/listening genres to 'micro-scripts'. For instance, instead of working on an entire patient interview, in which learners typically default to diagnostic reasoning, the initial focus is on the introduction and first one-two minutes of a conversation. Many IMGs do not have confidence in their ability to do a simple introduction, and the interview breaks down. Providing feedback and practice on digestible chunks of these tasks reduces task level and complexity and limits 'linguistic indigestion'.

The team members give large group modeling of professional behaviours, then facilitate small group practice in speaking and listening. Simulators from the Standardized Patient Program of the University of Toronto were trained to portray patient scenarios at a determined CLB level, and to provide feedback particularly on the language use of the learner. They work with the team member facilitators and groups of three learners. Each student has the opportunity to practice, receive feedback, and 'repractice' in each session. Learners also practice skills such as participation in seminars (e.g. turn taking), and summarizing orally. All tasks are benchmarked and learners receive individualized feedback. Simulators and facilitators debrief as a group after every session. The collaborative input from the larger group helps in planning future sessions tailored to learner needs. In learners in which technical language proficiency is a particular challenge, the applied linguist provides diagnostic and therapeutic support and/or appropriate referral.

Examples of Reading Exercises

Each task taps into a different reading domain and CLB level. Feedback was quantitative (see Impact on Student Learning).

- Journal article on EBM (~ CLB 8).
- Excerpt from cross-cultural ethics essay (~CLB 11).
- Chart note (understanding of medical genre).
- Orientation manual (skim/scan strategy)

Additional reading/writing exercises involved reading and writing summaries of journal articles. Feedback was written and qualitative.

Example of Writing Exercises

Task—Chart note of observed videotaped interview. Learners were provided with written feedback on relevance, organization and language proficiency, using a four item, four point scale (A= high, D=low), in which a "B" is required for effective communication (Russell & McILroy, 2002).
Results from this initial assessment were as follows:

- 64% scored below "B" in content, indicating wrong information, or inability to distinguish relevant from non-relevant information.
- 44% scored below "B" in coherence/organization, indicating interference with the reader's understanding.
- 24% scored below "B" in technical proficiency, again requiring assumptions on the reader's part.

Learners used this information to:

- understand their level of proficiency in occupation-specific writing
- better understand the genre of clinical summaries
- use the item categories as a scaffold for writing practice

Written narrative feedback was provided in additional writing practice involving summaries and chart notes.

Self-Reflection Exercises

An important component of the curriculum was regular practice in self-assessment. Self-regulation is a required characteristic of professional practice (Eva, et. al., 2005), and is a component of all CanMEDS roles and C_2LEO objectives. However, without an understanding of what that means in the Canadian medical context, IMGs tend to fall back on assessment driven by biomedical knowledge. By scaffolding and modeling the skills presented in the Medical Literacy course, learners began to develop self-reflection skills. The major learning tools were written, individual and group discussion of learning goals and gap analysis. Written reflection was valuable in that it was not ephemeral, and provided ongoing self-assessment. Learners created portfolios, containing individual plans for improving literacy in the future.

To date, five cohorts (n=85) have completed the course. In 40 hours, the intent is not to provide ESL instruction, but to give learners sufficient tools and understanding to proceed with self-directed learning. Nevertheless, the individualized and intensive curriculum results in significant student learning, as measured by pre and post-assessments and qualitative evaluation. These results are presented in the next section.

Impact on Student Learning

The evidence of impact upon learning differs in the two parts of the project. The Medical Literacy course provides more conventional outcomes, whereas the design of the website lends itself to questions such as: How are knowledge and understanding improved in a web-based learning environment?

The CCC Website

The website is used in the Medical Literacy course, particularly as an adjunct in discussions of the patient-centred method and as illustrations of language behaviours, such as introductions. Therefore, some website impact is embedded in the outcomes related to the course. Of course, many more learners access the website. Tracking data over two years suggests that 300-400 users accessed the site on multiple occasions. Usage patterns show unprompted, recurrent engagement with the material, indicating that the cognitive scaffolding does support recursion, reflection, and knowledge building (Lax, et. al., 2009). Informal feedback from IMG learners is uniformly positive, and they recommend the site to their colleagues. Many have used it not only to increase their knowledge, but also to practice their language skills. It has also been recommended by tutors for those who have not done well in performance-based examinations, and for those in training programs who need remediation.

The Medical Literacy Course

During the first session of each iteration, an extensive assessment of participant language skills is undertaken. The reading and listening assessments from the CCC website are used for those language tasks. Writing is assessed by a standardized analysis of a written note following an observed conversation between doctor and patient. Speaking is assessed qualitatively in a structured small group discussion, and in two standardized, observed patient interviews. Three scales are completed by team members and other trained observers:

- a 16-item scale representing appropriate verbal and non-verbal behaviours (e.g. (introductions, gathering information, clarifying, body language)
- a seven item linguistic scale (e.g. fluency, pronunciation, vocabulary)
- an overall, four item linguistic/communication scale, ranging from “Language interferes with communication, to “Language does not interfere with communication.”

The pre-course patient simulations are set at a CLB level 6 (see Table 1).

Learners receive immediate feedback on all qualitative and quantitative assessments, enabling them to recognize their areas of strength and areas for improvement.

The same scales and patient simulations are used in the post-course speaking assessment, except that the CLB level of the patient portrayal is raised 1-2 levels by increasing affect and complexity of language.

Mean scores (%) of two standardized interviews (combined interview and linguistic scales)

Mean score pre-instruction	53.6%
Mean score post-instruction	65.7%
Paired t test	p= .01-.001 /cohort

Linguistic/communication results (scale 1-4)

Mean score pre-instruction	2.25
Mean score post-instruction	2.67
Paired t test	p>.001, all cohorts

The effect sizes of these data are large, and the results are both statistically and educationally significant. Almost all learners improve their speaking skills by at least one-two CLB levels. More important, they begin to understand the medical genre and develop skills to continue learning in the future (Russell, et. al, 2009).

Learner Comments about Speaking and Listening

- "I think I benefited the most from this part. The real interaction with SPs and the feedback from facilitators make me aware of my strong points and weak parts."
- "It put me face to face with my 'problem': to talk and listen."

Writing Results

The quantitative pre-course writing assessments are noted in the previous section. Subsequent assessment is qualitative. Learners have fewer opportunities to engage in written exercises than they would like, but model chart notes and written feedback give them a template for further practice.

Learner Comments on Writing Exercises

- "I've learned the expected format and contents of the patient chart, and how to organize it in a logic way. The summary writing is a good exercise as well."
- "I'll organize my information in writing with clinical reasoning."

Reading Results

The quantitative pre-course reading assessments indicated that many IMGs have difficulty with higher level abstract thinking (task two, below), and in understanding medical genres such as chart notes (task three). Results of the four reading tasks are as follows:

Mean scores % (MCQs) N= 85

1. Journal article 69%
2. Ethics Essay 51%
3. Chart note 61%
4. Manual 75%

Homework assignments focused on the reading of appropriate articles with written summary, and writing chart notes.

General Comments about the Medical Literacy Course

- "I improved the most in speaking and listening, because before I tried to have a checklist in mind, never went with patient cues."
- "They really changed my view and the way I practice. Before, I focused on medical stuff but I learned some other things that might even be more important than biomedical stuff."
- "The course has given me tools and ideas to self assess my skills according to the requirements of Canadian standards of practice."
- "I want to tell you that this is the most important thing that happened to me since I came here. You told me what was expected of me and made me confident that, with a bit of effort, I can reach to the expectations."
- "Thank you very much for you and your team for helping us move ahead confidently in our journey to Canadian Health Care System. I found the course very helpful and I would absolutely recommend your course to other IMGs. I have never found such wonderful teaching before. Now, I have a feeling I can do it. "

Other excerpts from Course Evaluations

What did you find difficult?

- "To ask accurate questions in English"
- "I was afraid of my accent"
- "To translate academic words to regular words to make the interview easy for the patient."
- "Addressing the non-verbal cues"

What do you want to work on?

- "I learn I need to speak less and listen more"
- "To clarify anything I did not understand"
- "Greeting the patient…to get more confident"

In Cohort one, of those who applied to a residency program 50%were successful. Many of them had either been rejected previously, or had not even been granted an interview. They attribute their success in large measure to their increased skill Medical Literacy, and in their confidence and understanding of what is required. Subsequent cohorts are being tracked. To date, of the 73 IMGs in cohorts one-four, 23% have obtained a training position. Many in all cohorts have applied to the current match, which will occur in March, 2010.

Conclusions

- Significant improvement in contextual literacy levels can be achieved in a short time.

- The increased understanding of medical culture and the literacy skills acquired through this course may be of benefit to those applying for residency, and in subsequent practice.

The reasons for this may include:

- Learners are motivated, and have background knowledge and skills upon which they can build.

- Learner-centered pedagogical methods are rigorously applied in an individualized curriculum.

- Faculty address specific issues which are often the most difficult for IMGs to access, e. g.,the language and culture of medicine.

- The team approach to instruction which provides learners with multiple examples and types of feedback.

Future Developments

The CCC website now resides on the MCC server. It is linked to other sites (e.g. HealthForceOntario) visited by IMGs and others seeking information concerning practice in Canada. Word of mouth is also a major referral source. Maintenance and updates are coordinated with the MCC, and are minimal, as the content is not primarily biomedical information. The intent is for the website to continue be used by IMGs, but also to make it more known and available to Canadian educational programs. Modules such as that on Aboriginal Health and the Communication Skills tutorials are applicable in other health professional educational contexts.

The Medical Literacy course has a waiting list of over 200 applicants. Preferring not to charge fees, we have applied for additional funding to continue course iterations. We have also begun to adapt the course principles for use in other health care professions, and as a faculty/staff training program based on occupation-specific literacy.

Bibliography

There is a huge literature on the principles and practices of teaching communication. It is beyond the scope of this paper to quote it. We refer the reader to the following:

1. The bibliography in the CCC website module on Communication.

2. http://www.img-ccc/ca

3. Russell, M.L.(2006). Untangling the web of clinical skills assessment. In: *Faculty Development for the Teachers of Internationally Trained Medical Graduates*. http://www.afmc.ca/img

4. Stewart, M. editor. (2003). *The Patient-Centred Medicine: Transforming the Clinical Method.* Radcliffe Medical Press.

References

Boyd, M. & Schellenberg, G. (2007). Re-accreditation and occupations of immigrant doctors and engineers. Canadian Social Trends. Ottawa, Statistics Canada. http://www.statcan.ca/english/freepub/11-008-XIE/2007004/pdf/11-008-XIE200700410312.pdf. Accessed February, 2008.

Eva, K.W., Regehr, G. (2005). Self-assessment in the health professions: A reformulation and research agenda. *Acad. Med 80*: S46-S54.

Gudykunst, W.B. (2004). *Bridging Differences: Effective Intergroup Communication.* Sage Publications, London, p. 3.

Hall P, Keely E, Dojeiji S, Byszewski A, Marks M. (2006). Communication skills, cultural challenges and individual support: challenges of International Medical Graduates in a Canadian healthcare environment. *Med Teacher. 26(2):*120-125.

Hoekje, B.J. (2007). Medical Discourse and ESP courses for international medical graduates (IMGs). *English for Specific Purposes 26*: 327-343.

Lave J, & Wenger, E. *Situated learning: legitimate peripheral participation.* Cambridge, UK: Cambridge University;1991.

Lax, L.R., Russell, M.L., Nelles, L.J., Smith, C.M. (2009). Scaffolding knowledge building in a web-based communication and cultural competence program for International Medical Graduates. *Acad Med 84(10 Suppl):*S5-S8.

Nelles, L.J., Smith,C., Lax, L. Russell, M.L. (2009). The Translation of Face-to-Face to Video Simulation for Experiential Learning in a Web-based Communication & Cultural Competence Program for International Medical Graduates. Journal of Health Professions Education. In press.

Pawlinkowska-Smith, G. (2000). Centre for Canadian Language Benchmarks [homepage on the Internet]. Ottawa: The Centre; (updated 2009). Available from: http://www.language.

Russell, M.L. & McIlroy, J. (2002). Assessment of Complex Written Communication Skills in International Medical Graduates. Proceedings of American Association of Medical Colleges, Research in Medical Education.

Russell, M.L., Lax, L.R., Elgie, S. (2008). Validation of a language assessment tool for IMGs. Proceedings *: Annual Meeting of the Canadian Association of Medical Education,* Montreal, Canada.

Russell, M.L., Dobbie, L.T., Hobbs, K.D., Jacobs, J.A., Rogal, S.W., Smith, C.M. (2009). Improving Medical Literacy: Results of Intensive, Short Course Occupation-Specific Language Training. Proceedings*: Research in Medical Education,* American Association of Medical Colleges Meeting.

Scardamalia, M. & Bereiter, C. (2003). Knowledge building. In: *Encyclopedia of Education, 2nd ed*., Macmillan, New York, NY,

Scardamalia, M, & Bereiter, C. (2006). Knowledge building: theory, pedagogy, and technology. In: Sawyer K, editor*. Cambridge handbook of the learning sciences*. Cambridge, MA: Harvard University Press;. p. 97-119.

Schön, D.A.(1987*). Educating the reflective practitioner: toward a new design for teaching and learning in the professions*. San Francisco, CA: Jossey-Bass.

Stewart, M. editor. (2003). *The Patient-Centred Medicine: Transforming the Clinical Method.* Radcliffe Medical Press.

Wong, A. & Lohfeld, L.(2008). Recertifying as a doctor in Canada: international medical graduates and the journey from entry to adaptation. *Medical Education 42*: 53-60.

Zulla, R., Baerlocher, M.,O., Verma, S. (2008). International medical graduates (IMGs) needs assessment study: comparison between current IMG trainees and program directors. *BMC Medical Education* http://www.bio,edcentral.com/1472-6920-8-42

Figure 1—Communication & Cultural Competence Website Home page

CLB Level	Clinical Task	Medical Context
SIMPLE CLINICAL TASK	**SIMPLE CLINICAL TASK**	**SIMPLE CLINCAL TASK**
Level 6: one:one Ask for and provide information in an interview related to daily activities.	Presentation of abdominal pain. Affect related to pain only.	Data collection short, with clear symptomatology. IMG must access mainly biomedical knowledge.
INTERMEDIATE TASK	**INTERMEDIATE TASK**	**INTERMEDIATE TASK**
Level 8 one:one Asks for and/or provides detailed information, related to personal needs, varied activities. Initiates questions to gather, analyze information needed for decision.	Taking a history of knee complaint. Functional impact, minimal affect.	Sufficient data collection. Sufficient data integration (e.g. biomedical with psychosocial impact).
Level 8 one:one Responds to questions with required information. Explains, summarizes.	Performs examination. Closure of interview.	Responds to patient cues. Adequate control, organization. Sufficient control of expression.
COMPLEX CLINICAL TASK	**COMPLEX CLINICAL TASK**	**COMPLEX CLINICAL TASK**
Level 11 one:one: Inquires about implications and consequences.	Determine readiness and counsel (e.g. d/c smoking)	Skillful collection of: All relevant biomedical data. All relevant psychosocial data. Integration of both contexts is accurate and perceptive.
Level 11 one:one Agrees/disagrees with a stand, idea, point of view. Uses verbal and no-verbal behaviour appropriate for professional argument.	Discuss ethical issue with patient or colleagues (e.g euthanasia).	Consistent, perceptive response to feelings, needs and values of the other. Ability to express abstract ideas clearly and non-judgmentally.
Level 11 one:one Aware of differences in cross-cultural perceptions about question asking.	Inter-professional conflict resolution.	Adequate flexibility, consistent control. Command of all features of expression.