



HARVARD MACY INSTITUTE
PROGRAMS FOR EDUCATORS & LEADERS
IN THE HEALTH PROFESSIONS

Twenty Years of Innovation

Committed to creating a global community of healthcare educators and leaders dedicated to transforming healthcare delivery and education.

Dedicated to the community of Harvard Macy Scholars and Faculty whose innovations in health care and education enhance the care of patients worldwide.

Educating to Innovate in Healthcare



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A Groundbreaking Program

The Harvard Macy Institute (HMI) was unique in the continuing professional development field when it was **created in 1994 as an inter-professional, international incubator for innovators in healthcare education**. In order to create a culture to facilitate change for educators in health care professions, HMI's foundational goals were to:

- Demonstrate respect for a wide diversity of opinions across all healthcare professions
- Create a community of scholars committed to advancing education as a means to improve healthcare delivery
- Build a growing cadre of leadership in healthcare innovation

The path toward success began with a **strong match between funder and HMI goals**. Two generous grants from the Josiah Macy Jr. Foundation (1994, 1996) gave the program planners the opportunity to re-imagine the extant model of continuing professional development for educators in health care professions. The founder of the Josiah Macy

Jr. Foundation chose to provide grants to programs “... *integrating functions in medical sciences and medical education for which there seems to be a particular need in our age of specialization and technological complexities*.” Although written in the 1930's, that statement by Kate Ladd (founder and daughter of Josiah Macy Jr. for whom the foundation is named) is amazingly prescient and relevant today.

HMI challenged the status quo with an innovative pedagogy, one that took educated risks, such as initiating and cementing collaborations with the Harvard University Graduate School of Education (HUGSE) and the Harvard Business School (HBS), an **unusual inter-professional collaboration from the outset**.

HMI sought to **build capacity to promote institution-specific and sustainable change** rather than offering a formulaic guide to educational innovation. To accomplish this in a continuing professional development program, HMI programs require and integrate **project-based experiential learning and action planning**.

- Scholars are challenged to **examine their own as well as institutional assumptions and behaviors that present barriers to change**, and to identify options that offer a fresh approach to their career and their capacity as a leader of educational and organizational change. HUGSE Professor Robert Kegan, in a 2014 interview, emphasized the opportunities HMI gives scholars for personal learning, for finding “...their own growing edge” within a “...trustworthy learning environment, to be vulnerable, and question their own assumptions. People are hungry for this kind of environment.” The core principles of *transformational learning* set forth by Kegan are often cited by scholars as an unexpectedly eye-opening and significant benefit of their HMI experience.
- HBS Professor Clayton Christensen said in a 2014 interview about HMI, “You have to come with a puzzle. If you don't have a question, you will never get an answer.” **Scholars must come to HMI with a personally meaningful project or challenge that is the centerpiece** for learning,

discussion, constructive critique, development of a solution, and ultimately a plan of action that serves as a learning contract with HMI. For most, this is a rare opportunity to focus completely on what it means to be an educational innovator and leader in the healthcare professions.

- Scholars become part of an inter-professional project team that collaborates on its members' institutional projects. The Institute is committed to the cross-fertilization of ideas among all faculty involved in health care education. Scholars frequently cite the importance of being introduced to the range of perspectives in health care, education, and institutions represented by the diverse backgrounds of fellow scholars. Continuing education programs should reflect the environments in which their participants live and work. Therefore the HMI *encourages inter-professional collaboration between physicians, nurses, and allied health professionals from across the country and worldwide.*



HMI Founder and Director, Dr. Elizabeth Armstrong, discusses creating and sustaining innovation in healthcare education.

Watch the video at www.harvardmacy.org/20th-Anniversary.aspx

HMI *faculty teach and model skills of educators and innovators* by inviting participants to observe and consider which of the teaching strategies in use may have potential benefits in their own setting. These include interactive exercises, case-based learning, reflective use of journals, discussion in large and small groups, expert panel discussions, step-back learning, use of simulations, and multiple small group activities.

In its planning to build a sustainable enterprise, HMI encourages attendees (called “scholars” at HMI) to return as educators (“faculty scholars”) in future

HMI courses to *build a continuous and expanding community of scholars.* Returning *faculty scholars* are drawn by the opportunity to: teach and learn from another cohort of scholars; help update course content or develop new courses or educational programs; and, nurture the ongoing community of scholars. Throughout each course and with subsequent networking and mentoring, HMI fosters a collegial atmosphere conducive to the exchange of ideas and the development of new knowledge.

HMI grew out of a recognition that leaders and innovators in health care

education benefit from intensive collaboration with like-minded individuals. HMI strives to foster a *collegial “think tank” atmosphere that provides scholars with not only an environment conducive to deeper thinking but diverse perspectives that open up unconsidered possibilities.* This attribute, more than any other, separates HMI programs from other continuing professional development offerings. HMI brings together health care professionals, educators, and leaders from across the globe to problem-solve together, develop ongoing learning communities, and spark unexpected collaborations.

Current HMI Programs

The foundation for HMI began when two core programs were launched in 1994. Today, there are five courses that build on and integrate with each other as well as additional advanced educational offerings. Course directors and faculty have been committed to this program for 20 years, beginning with Elizabeth Armstrong, Robert Kegan, and Clayton Christensen.

HMI is a rarity, an initially funded program that *identified a way to become not only self-sustaining but also to grow and expand its impact.* The original two courses were updated each year, new courses were added, customized programs developed

internationally, and collaborations were nurtured with health care institutions worldwide. The timing and objectives for each course appear below along with representative quotes from scholars. Names of the course directors appear on the inside back cover.



PROGRAM FOR EDUCATORS IN THE HEALTH PROFESSIONS

First offered in 1995 | Held annually with Part 1 in January and Part 2 in May

The goal is to give participants the knowledge and skills to enhance their expertise in both conducting an educational project of their own design and taking a leadership role in the educational activities at their institutions. The course blends content on curriculum design, teaching and learning principles, assessment and evaluation strategies, with leadership skills and introductory material on the technology used to support learning. This program consists of two intensive sessions in residence at Harvard.

“The insights provided on Kolb’s Learning Theory were immediately applicable to a website we were developing ... which interactively teaches clinicians how to deliver results and understand the latest HIV test technology designed to identify HIV-infected patients in the earliest period of acute infection, to prevent ongoing HIV transmission at the highly infectious acute stage of disease.”

“I now know the language of education, where to look for information, papers I can refer to as resources. We come into medicine, learn the language of medicine and don’t learn anything about how to teach. That is what we learn here.”

LEADING INNOVATIONS IN HEALTH CARE AND EDUCATION

First offered in 1995 | Held annually in June

Progress in health care delivery is dependent on fundamental reform across the continuum of health care education, including undergraduate and postgraduate education and continuing professional development. Participants learn about disruptive innovations likely to impact health care delivery and the intertwined educational programs. This is achieved through a systems approach to major organizational change. HMI equips scholars with such tools as: negotiation and coalition building; management of conflict; overcoming resistance to change; and, obtaining and allocating resources.

“The most substantial impact for me was adding a business oriented perspective to my educationally oriented experience. This coupled with a new language related to innovation and change has been very effective in giving me ways to get my institution’s administration on board. I also have a broader understanding of ways in which the challenges I feel as a health professions educator mirror those faced by other professions, thus increasing my view of potential collaborations.”

A SYSTEMS APPROACH TO ASSESSMENT IN HEALTH PROFESSIONS EDUCATION

First offered in 2006 | Held annually in March

More and more, institutions are heeding the clarion call to become “data-driven.” In this program participants learn how to: (1) design assessment strategies that collect valuable student, faculty and course data; and, (2) insure that systems are in place to synthesize, interpret,



and direct data to appropriate stakeholders for decision making and process improvement. Course participants learn: rationales underlying best practices for program and institutional accreditation; benefits and shortcomings of various assessment approaches; and, translation of educational goals into meaningful, measurable outcomes.

[There were] "...lots of motivational aspects to this session, with one of the biggest for me being the concept of putting systems in place for good performance. This is in contrast to depending on individuals who are outstanding performers."

[I adopted] "... a programmatic systems approach to student assessment that is based on our institutional objectives and mission, using multiple modalities, multiple assessors, and multiple points of assessment for each domain."

BECOME A DIGITAL CITIZEN – TECHNOLOGY IN HEALTH CARE EDUCATION

First offered in 2013 | Held annually in October

This course provides health care educators with the skills needed to make use of current technology and social media tools to support teaching and learning networks. Scholars attending the course have direct experience in expanding their skills in four areas: asynchronous and online learning; classroom technology for interactive learning; managing information and combating information overload; and, social media and online communities of inquiry.

"I will use Twitter, encourage GooglePlus and create a resource library using Diigo and Zotera for our residents and faculty. I am looking forward to seeing if I can engage residents on a different level with some of the tools I have learned, e.g., Polleverywhere and Powtoon. I would also be very interested in developing a social media course for family physician educators."

PROGRAM FOR POST-GRADUATE TRAINEES: FUTURE ACADEMIC CLINICIAN EDUCATORS

First offered in 2013 | Held annually in December

This 3-day intensive program is focused on post-graduate trainees (residents and fellows) who seek to enhance their skills and scholarship as future academic clinician-educators. The course content is focused on two major themes: deepening skills in teaching and learning, and developing scholarship in medical education. Each scholar must have the explicit support of a faculty mentor who will assist and oversee the scholar's project development at the home institution. Faculty mentors are invited and strongly encouraged to attend the project reporting-out in person or online.

This new program is run in collaboration with HMI and three institutional partners: Partners HealthCare International (PHI); Boston Children's Hospital; and the Icahn School of Medicine at Mt. Sinai Hospital in New York. Susan Farrell, an HMI alumna and faculty and Assistant Professor of Medicine at HMS, initiated this program.

"This course was an amazing opportunity to learn about building a career in academic medical education as well as to refine a specific project in education. The course was ... packed with interactive sessions that afforded great opportunities to meet and learn from trainees and clinician-educators from all different institutions and fields. Applying for the course pushed me to work with my mentor to develop an idea I had already been hoping to do. Participating in the course was inspiring and really helped me refine my project, and, looking forward, I know I have a community of clinician-educators and colleagues I can look to for advice, support, and collaboration."

MASTERS OF SCIENCE IN HEALTH PROFESSIONS EDUCATION

The graduate school founded by Massachusetts General Hospital, the Institute of Health Professions, announced in 2012 a new Master of Science in Health Professions Education degree program, in collaboration with the Harvard Macy Institute. Responding to the call for innovative educational reform and collaborative leadership in the health professions, this inter-professional program is designed for active clinician/educators who are seeking to further their expertise and careers by earning a master's degree. HMI courses can be used to earn credit toward this degree, and several HMI courses may be used as required courses in the Master's degree.

The year 2014 marks the launch of Harvard Medical School's new Master of Medical Sciences (MMSc) in Medical Education, a two-year program designed to provide rigorous research training in the field of medical education. The degree blends one year of formal



coursework, taught by faculty from Harvard Medical School, Harvard Graduate School of Education, and the Harvard Macy Institute, with an additional year of mentored research leading to a publishable master's thesis.

INTERNATIONAL PROGRAMS

HMI collaborates with alumni to develop customized programs for institutions around the world. These programs are designed to instruct faculty educators in the health profes-

sions in methods for translating their knowledge and capabilities into organization-wide improvements and innovations. Program offerings have been adapted for institutions in Singapore, Taiwan, Australia, Germany, Japan, Portugal, Canada, Sweden and the United Kingdom.



Launching Innovations

HMI sought to create a sustainable model of continuing professional education and to become an incubator for development of innovators and leaders in healthcare education.

In traditional pedagogy, there is a continuum of learning, from informative and passive to learning that is transformative and highly engaging. *HMI seeks to move people along the learning continuum, away from information delivery to personal change and institutional innovation.* Each of the five courses contributes to a greater understanding and capacity to make innovation happen. Educators are asked to think like leaders and vice versa and, together, to solve a common problem.

As reported in *The Idea Factory, Bell Labs and the Great Age of American Innovation* (2012), researchers found that innovation is much more likely to occur when individuals are introduced to wholly new perspectives and workplace experiences. This quote from the Bell Labs research could just as aptly describe the HMI philosophy.

“Most feats of sustained innovation cannot and do not occur in an iconic garage or the workshop of an ingenious inventor. They occur when people of diverse talents and mind-sets and expertise are brought together, preferably in close physical proximity where they can have frequent meetings and serendipitous encounters.”

HMI alumni scholars, through formal evaluations and informal correspondence, have reported direct connections between their HMI experience and their innovations in advancing education for health care professionals. *The kinds of innovations are classified into eight broad categories*, presented below, with examples. *The innovation categories should not be seen as representing an order of importance or as all-inclusive. Ultimately, it is each scholar’s “puzzle to be solved” and institutional characteristics that determine which kind of innovation evolves.*



Hear examples of HMI's impact from scholars and faculty.

Watch the video at www.harvardmacy.org/20th-Anniversary.aspx



1 Building Local Cadres of Change Agents

The development of institutional cadres of HMI alumni creates a powerful force for internal and external change.

To extend its reach beyond the individual scholars attending the courses held annually, HMI sought to develop local cadres of innovators at institutions nationwide and internationally. This was accomplished by giving priority to accepting individuals from institutions that sent scholars in previous years and whose leaders believe it is important to build a local group of change agents. To date, at least 155 institutions have sent five or more participants to HMI over the years: many of these have sent 20 or more. By developing a nucleus of faculty with a common understanding regarding health care education and innovation, there is a critical mass to challenge the status quo, champion significant change, and collectively create a long-lasting legacy.

- According to **Stephen R. Mitchell**, M.D., Dean for Medical Education, Georgetown University School of Medicine:

“As I look back at educational reform at Georgetown, it is with gratitude to the Harvard Macy Institute for assisting in more than a decade of sustained faculty development at our institution, for energizing and catalyzing change among key educators on the Georgetown faculty. Change has not only occurred because of the energy generated by nearly a dozen Harvard Macy alumni, it has been directed by those faculty members in collaboration with Harvard Macy alumni around the country and around the world.”

- In 2013, the American Medical Association (AMA) announced the names of eleven institutions awarded significant grants to promote innovation in medical education. Nine of the grantee institutions had built HMI innovation faculty cadres.

- At Loma Linda University Medical Center in California, 13 HMI alumni meet regularly at their local Harvard Macy Consortium to discuss common issues and diverse ideas. Faculty also sit in on each other’s classes to help improve teaching.
- According to **Alan Hull**, Associate Dean for Curricular Affairs at the Cleveland Clinic Lerner College of Medicine (CCLCM):

“The vision in 2002 for the CCLCM emerging track in the Case Western Reserve University School of Medicine was to develop a highly interactive, small, student-centered medical school curriculum and to prepare physician investigators using principle-based curriculum and assessment methods. Faculty determined that the new program would use problem-based learning (PBL) to implement a competency-based educational curriculum and assessment system. Cleveland Clinic faculty administrators worked with HMI’s Liz Armstrong and Tom Aretz on the initial design of the curriculum and assessment system, to introduce the CCLCM faculty to concepts of active small-group and PBL learning, and provide an on-going resource to develop CCLCM faculty leaders. In all, 25 Cleveland Clinic faculty participated in the HMI Program for Educators in the Health Professions, and have become leaders within the CCLCM. The projects that these faculty engaged in ranged from clinical education oversight and integration of clinical discipline rotations, research curriculum development, PBL facilitator training, student advising, competency-based assessment, basic science integration (e.g., neural and behavioral sciences), evidence-based medicine, faculty development and medical education technology. The Harvard Macy Program has left a legacy of medical education leaders committed to educational innovation and successful implementation of an evolving curriculum and assessment system.”

2 Individual Transformation > Institutional Change

It is the rare continuing professional development program that successfully transforms participants' behaviors and has a lasting impact. **Robert Kegan**, co-director of the Educators course, described his research-based method to uncover and remove barriers to change.

“Our work pays very close—and very respectful—attention to all those behaviors people engage in that work against their change goals. Instead of regarding these behaviors as obstacles in need of elimination, we take them as unrecognized signals of other, usually unspoken, often unacknowledged, goals or motivations. The countervailing tension between these two sets of equally sincere motivations creates the ‘immune system,’ and sustains the status quo.”

By carefully peeling back the layers of behaviors that block openness to change, the HMI program raises awareness within individuals of the web of motivations that lead to resistance to change, and empowers scholars to engage in reflective, transformative thinking to address and move beyond those barriers.

Research provides evidence that HMI scholars find their understanding of educational principles combined with theories of personal and organizational change systems shapes practices in his/her institution.

- **J.P Orlando**, Associate Chief Academic Officer, St. Luke's University Health Network, is one of many who acknowledge the long-term effect of experiences at HMI.

“Looking back over the years, I realize that the Harvard Macy programs in 2006 and 2011 have influenced my thinking and abilities as a leader in healthcare education. Being selected for this position at St Lukes (Associate Chief Academic Officer/DIO at St Luke’s University Health Network /Temple School of Medicine Regional Medical Campus) is a reflection of that.”

- **Darshana Shah** is Associate Dean, Faculty Affairs & Professional Development and Professor of Pathology at Marshall University’s Joan C. Edwards School of Medicine. In 2004, she took the HMI Leaders course because she wanted to provide greater support for her fellow teachers even as she feared she was too low on the hierarchical ladder to make meaningful change.

“I wanted to create an Academy of Medical Educators at my school, but the goal seemed out of reach... The first valuable lesson I learned at the HMI is the biggest boundaries were ones I myself was drawing: empowerment comes from your ability to see beyond your position.”

Eight years later, her academy has 48 members and is “...a beacon that represents passionate teachers and promotes their growth.” Its scope has grown to incorporate faculty candidates from the university’s College of Health Professions, adding an important interdisciplinary dimension.



Colleagues and faculty problem-solve together and develop an ongoing support network, says Dr. Thomas Aretz, Associate Professor at Harvard Medical School and HMI Course Co-Director.

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3 Digital Learning: Demonstrating Outcomes and Scaling Up

Today's students are digital citizens, requiring health professions educators to expand learning environments. HMI scholars have leveraged Web 2.0 and social media tools to create and assess online professional learning opportunities.

- **James M. McGee**, Assistant Dean for Medical Education Technology at the University of Pittsburgh, attributes the genesis of his digital innovation to his training at HMI's Leading Innovations course. He created a **web-based virtual patient platform** at the University of Pittsburgh School of Medicine Laboratory for Educational Technology, a lab he established. The platform was commercialized into a product called vpSim™ and has now spread worldwide and become a profitable company, Decision Simulations LLC. His research focused on the effectiveness of technology-based education, including simulators, and online and multimedia programs. Dr. McGee is currently studying **performance improvement using online case-based learning and assessment, and the effect of interactivity and multimedia on these learning tools.**
- **Traci Wolbrink** is the Associate Program Director for OPENPediatrics, a downloadable learning application designed for physicians and nurses who care for critically ill children across the world. After attending the HMI Educators course as a scholar, she now teaches with HMI, bringing her skill set back to the learning community. Dr. Wolbrink brought to HMI a prototype of a ventilator simulation, for analyzing needs of children with severe respiratory problems to address a pressing need for advanced training of doctors to better save the lives of children with life-threatening illness. Through feedback from other professionals attending HMI as well as from course faculty, she learned how to take an online prototype to the next level, validated the simulation, and **demonstrated that users can move to significantly greater understanding through the time-compressed virtual experience of using a ventilator to save children's lives.**



4 Educating for Communication and Compassion

A topic addressed in media, within and beyond the healthcare professionals community, is the continuing need for clear and compassionate communication with patients. Here are two particularly effective strategies devised and tested by HMI scholars.

- **Yumi Shitama Jarris**, from Medstar Georgetown University Hospital, received an award from Kevin Eva in Edinburgh at the Association for the Study of Medical Education (ASME) meeting for her HMI project done as a result of the Educators program. She was lead author for the most frequently downloaded article from the refereed journal, *Medical Education's* prestigious "Really Good Stuff" column in 2012. The oft-used paper describes: "**Critical reflection: lessons learned from a communication skills assessment.**"

- In 2008, **Helen Riess**, HMS Associate Professor, identified an unmet need for empathy education and attended HMI in the hopes she could address this serious problem that negatively impacted patients' relationships with health care professionals. The project Dr. Riess brought to her first HMI course was the development and testing of an in-person training program with a randomized controlled trial at HMS. She was excited to find that patients rated doctors who participated in her training higher in measures of empathy than those who did not. Her research generated significant media attention and she began to see her work as a potential disruptive innovation. She took a second HMI course, *Leading Innovations*, and realized she had to scale her project and develop strategic partners to maximize its impact. To fast forward, **the empathy training she developed is now available worldwide in a rigorously tested digital version, through a company called Empathetics, and is being used in at least six countries with thousands of physicians.**





5 Interdisciplinary and Interprofessional

Scholars in HMI courses are encouraged to leave their typical workplace personas behind, and to actively evaluate their own or institutional concerns from perspectives of scholars from a wide range of disciplines, professions and institutions.

- **Nelda Godfrey**, Associate Dean for Undergraduate Programs and Clinical Associate Professor at the University of Kansas School of Nursing, discovered new bodies of scholarly research in education and business as well as unexpected interdisciplinary possibilities at HMI. She brought her insights back to her home institution and was able to revitalize faculty beyond the “provincialism of our own discipline.” What resulted was a professionalism initiative at the School of Nursing, including academic societies for undergraduates and a rite of passage ceremony. Furthermore, the significant **collaboration she initiated between the School of Nursing and the School of Medicine** was something she had never imagined as a possibility until her HMI experience.
- In 2005, five faculty from the University of California-San Francisco (UCSF) attended the Program for Educators in the Health Professions with the goal of designing interdisciplinary modules emphasizing the importance and efficacy of

inter-professional collaboration in delivering high-quality patient care. **Preetha Basaviah, Carrie Chen, and Shieva Khayam-Bashi** represented the UCSF School of Medicine. They were joined by **Rosemary Plank**, from the School of Nursing, and **Sharon Youmans**, from the School of Pharmacy. Together these five educators sought to create an inter-professional curriculum, which would bring together students from the Schools of Medicine, Nursing, and Pharmacy for training in collaborative patient care. They hypothesized that collaborative learning in the classroom and clinical settings would facilitate inter-professional teamwork, resulting in improved patient safety and outcomes. Rosemary Plank’s comments reveal their goal was met.

“Attending the Harvard Macy Institute as part of a team that included three physicians, a pharmacist, and a nurse opened a journey into understanding health care education from multiple perspectives... Viewing teaching and learning from the perspective of the multiple rather than the single profession opened a door to reviewing new ways of teaching and collaboration. Most enlightening was the effect that inter-professional communication has on professional competence and patient outcomes.”

6 International Impact

The HMI program attracts scholars from across the world, and has long sought to broaden perspectives of all scholars and foster an international community of educators in health care professions. Some scholars begin new collaborations through HMI that have a major impact on continuing professional development in their own countries.

- **Steve Field**, from the United Kingdom (UK), took a residential course for post-graduate medical deans and other medical educators held by the UK Association for Medical Education in conjunction with HMI. This experience inspired him to sign up for the June Leading Innovations course in the United States many years ago. Here, he was introduced to the work of Clayton Christensen and the case study method, and to new theories of dealing with organizational change. He began networking with fellow educators and clinical leaders from across the world. Since then, Field returns to HMI each June as a faculty scholar teaching in the Leaders course. He has become an important contributor in examining *future directions for the National Health Service (NHS) as Chair, NHS Future Forum and of the National Health Inclusion Board in the UK*. He also has used “disruptive innovation” theory to promote multiple cost-saving suggestions within the NHS.
- **Tham Kum Ying**, MBBS (Singapore), FRCSE, MSc and Assistant Chairman Medical Board (Education) reports on the momentous impact of Singapore’s collaboration with HMI. In 2009, the Ministry of Health announced that Singapore would change to a US-style residency system for their graduate medical education (GME). The National Healthcare Group* (NHG) was one of three Sponsoring Institutions endorsed by the Ministry to provide GME. Over a period of 12 months, a new framework, new policies, new funding mechanisms, new ways of teaching, learning and assessing would replace what had evolved over the prior 50 years. While apprehension was inevitable, NHG also felt that this was an opportunity of a lifetime to transform GME.



To develop a group of leaders and educators to *lead* this transformation was the most urgent first step. NHG approached HMI to customize a faculty development program and a critical collaboration was formed. As of 2014, the new program in Singapore graduated about 80 education leaders and educators, with another 80 progressing steadily in the 4-module program. Each of these leaders and educators has *changed the teaching and learning experience for the residents and clinical teachers in the wards, departments, residency programs, in NHG and the Ministry of Health*. Today, NHG is the sponsoring institution in Singapore that has the largest number of residency programs given a four-year review cycle by ACGME-International – a testimony to how program directors and educators have transformed GME.

Even more heartening was the introduction of an inter-professional element in their program two years ago. In 2014, the program will undergo a formal curricular review with the goal that teachers and educators will prepare young professionals to be able to work more collaboratively and respond constructively to the rapidly evolving healthcare needs of Singapore.

* National Healthcare Group (NHG) is one of 6 healthcare clusters in Singapore with Tan Tock Seng Hospital as the flagship acute care hospital in NHG.

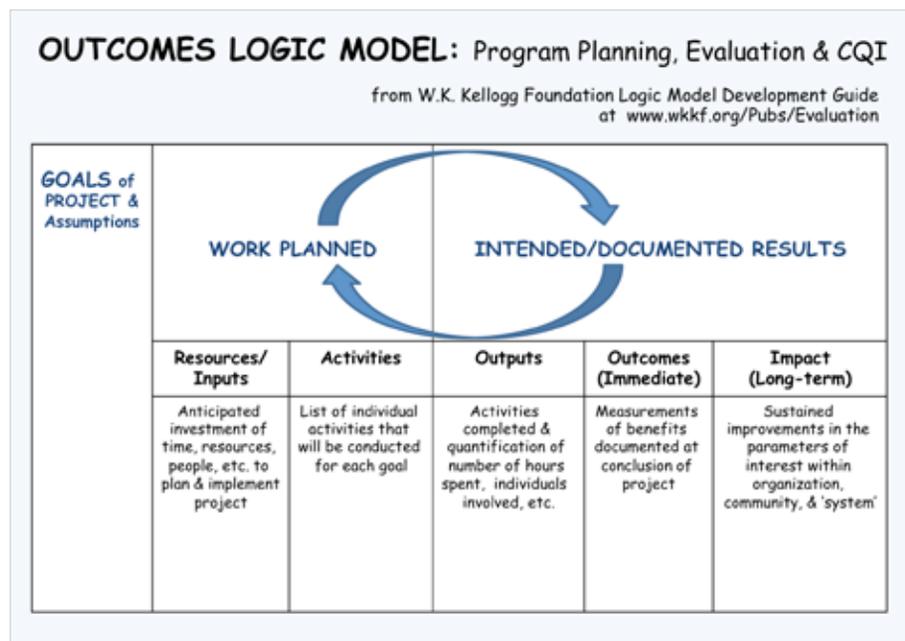
7 Building Scholarship

HMI immerses participants in scholarship that is often new to them such as, theories of learning, educational assessment, organizational development, and theories supporting systems change and innovation. The result has been growth in scholarly studies by healthcare educators, and very importantly, increasing credibility of research in healthcare education as a path toward tenured professorship or other academic positions.

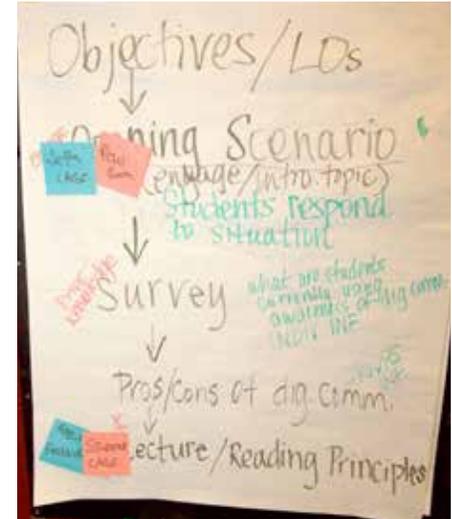
- **Nagaswami Vasan** of the New Jersey Medical School (NJMS) was promoted to Full Professor in July 2008, *the first time that a member of the school's faculty received promotion based on educational scholarship*. Dr. Vasan attended the Program for Educators in 2006, and has since returned as a faculty scholar. His participation in HMI was recognized by the NJMS Promotion and Tenure Committee and highlighted in letters from faculty supporting his promotion.

As one letter writer put it, “*Dr. Vasan’s selection and continued participation in the Harvard Macy program recognizes his ability to collaborate and mentor faculty in their educational scholarship.*” And Dr. Vasan agrees, “*I developed better skills at evaluating curriculum and programs, negotiating with colleagues and administrators, giving feedback, and recognizing the big assumption that worked against me. The Harvard Macy programs have enabled me to expand my scholarly thinking and endeavors.*” His success and expanded scholarship have also increased expectations of Dr. Vasan. At NJMS he is now involved in faculty development, serves on the Academic Policies and Program Committee, and was recently appointed Chair of the Preclerkship Committee.

- **Margaret Hay**, Associate Professor and Academic Director, Student Admissions, in the Faculty of Medicine, Nursing & Health Sciences at Monash University, Australia, attended the Educators Course in 2010. She completed a six-month sabbatical at the HMI in 2011, has returned annually as a faculty scholar for the Systems Approach to Assessment course and helped launch the Digital Citizen course. She is collaborating on a multi-institutional and international research project with two long-time HMI faculty from the United States, has collected data for four years, and will soon be writing and submitting papers to publish the findings. The papers will describe the Objective Structured Clinical Examination (OSCE) model she developed during the Educators course and uses the Outcomes Logic Model taught at HMI. Since her involvement with HMI, she has also *obtained over \$400,000 in funding for educational research projects*, particularly related to student selection, and is currently supervising three Ph.D. projects in health professions education. Dr. Hay also now teaches with other HMI faculty in Singapore.



Many papers have been published over the years that grew out of HMI projects and related scholarship. It is not only the scholars that have shared their findings but also the course co-directors and faculty scholars. As the references in the back of the report show, Liz Armstrong has authored a number of studies to extend learning that began at HMI.



8 Systems Approach to Assessment

Participants learn that an effective solution to a perceived problem comes only after a thorough analysis of the interrelated components within an educational system.

- **Aimee Strang**, Assistant Dean at Albany College of Pharmacy, found it very useful to **use systems thinking when contemplating the relationship between their curriculum and the student's licensing exam scores**. The typical response to a lower than desired cohort score had been a flurry of efforts to make changes in the curricular content.

"When I considered that the curriculum and education process is composed of independent agents (faculty, students and administration) who have conflicting goals (promotion and tenure, getting good grades, meeting accreditation requirements) and have learned how to "succeed" in obtaining their goals, I am reminded of all the other variables that we need to consider before we leap to make the easy, linear change."

Many scholars found themselves viewing assessment in a new way after they experienced a Systems Approach to Assessment. Comments from participants completing the 2013 course reveal movement from assessment as largely an individually-focused activity to a much more encompassing systems approach.

"I will advocate for more assessment for learning and less emphasis on assessment of learning." (emphasis added)

"More focus on hubs and networks; improved integration of assessment and closing the loop between assessments and the information they offer regarding curriculum and learner progress at different stages of the learner continuum."

While this broadened systems approach to assessment is more challenging, it succeeds in – as one scholar said – “organizing the complexity” where assessment is both a research and learning tool for the organization and individuals.

"Evaluation should result in feedback. Systems-based thinking can result in improved processes and outcomes."

Looking Toward the Next 20 Years

RETAIN HMI'S QUALITY AND CULTURE THAT HAS INSPIRED INNOVATION.

In thinking about the future, HMI founder, Elizabeth Armstrong, along with two course co-directors, Robert Kegan and Clayton Christensen (shown on following page), emphasized that first and foremost is to *continue doing what has worked well for the first 20 years*:

- *Create a community of educators that endures.* A central mission for HMI was to nurture and build an ongoing community of educators with lasting bonds and opportunities for advice and collaboration. As Robert Kegan observed, the bond created among HMI alumni is “instantly renewable, like running into an old friend” an achievement he sees as “very special and rare.” Evaluation data supports the significant value of being part of the HMI community.
- *Openness to change, experimentation, and risk-taking.* Just as faculty at HMI model a wide range of teaching strategies, HMI itself demonstrates how to become a “learning organization” that is both sustainable and adaptive.

- *Collaboration among different professional schools* at Harvard helped raise the profile and prestige of continuing professional education for educators in health professions. HMI now collaborates with faculty from institutions across the world bringing ever-widening expertise and fresh perspectives.
- *Promote personal and organizational transformation.* HMI sees personal growth as vital, i.e. the scholar is not treated only as an agent of the organization. Theories of “transformational learning” are applied in courses to help scholars question their assumptions, identify perceived barriers to change, and transform the way they think about making significant change. Case study learning about “disruptive innovation” and experiences fostering “innovator’s DNA” give scholars tools that support meaningful organizational change.
- *Increasingly inter-professional.* Teaching across professions is a longstanding goal of HMI, one that was unique when HMI began 20 years ago. Assuming health care is increasingly going to be delivered

in teams, scholars need to *learn* in inter-professional teams.

- *Build the next generation of HMI faculty, leaders and innovators.* Each HMI course and graduate degree collaboration includes faculty scholars, former HMI participants who return as faculty and often do so multiple times. They provide advice on how to update course content, and collaborate on projects with other HMI scholars or faculty. Over time, this deepens faculty scholars’ commitment to the HMI culture of innovation and prepares them to become the next generation of HMI leadership.

PROACTIVELY ADAPT TO EACH GENERATIONAL SHIFT IN MODES OF LEARNING.

Rapidly evolving technology affects each level of health care education systems, from continuing professional development to education of future health professionals to patient education. The 2013 addition of the Digital Citizen course reflects this change. It is even possible that future HMI courses may have an online delivery component.



BUILD NEW INNOVATION-INSPIRING COMMUNITIES.

Over the years, HMI has created communities including over 3,500 scholars within 799 different institutions. Once there is a critical mass of scholars at home institutions, the institutional community becomes a tremendous leverager of the power of the program. In addition to encouraging more scholars to attend in interprofessional teams to increase the transfer of learning from the individuals to the home institution, HMI hopes to promote more *regional* and more *international* communities of learning.

Perhaps it is the creation of these learning communities that will have the greatest sustained impact. In analyzing experiences of educational innovators in *Educators’ Stories of Creating Enduring Change* (2013), **commonalities across successful innovations** were found:

- “stay true to your *values*
- commit to a *vision* that closes the gap between what is and what should be
- *take risks* with the help of partners
- nurture those partnerships through effective *teamwork*

- pay attention to the *context and culture* of the environment
- be *open-minded and curious* learners in a way that improves our work over time
- take advantage of opportunities to *translate and spread* your work to other venues
- invest in partnerships and build communities that can lead to a *legacy* of enduring change.”

The Founder and Director of HMI, Elizabeth Armstrong, captured her vision of the future when she observed:

“The Harvard Macy Institute was itself an innovation when it started. It will continue to lead the way as an engine of change in education for institutions globally through its dedicated worldwide community of talented and passionate individuals committed to all of the above values. This Institute was built on respect and collaboration, and those qualities will sustain it: they are part of our DNA.”

REFERENCES

- Armstrong EG, Doyle J, Bennett NL. *Transformative professional development of physicians as educators: assessment of a model*. Acad Med. 2003 Jul; 78(7):702-8.
- Armstrong EG, Mackey M, Spear SJ. *Medical education as a process management problem*. Acad Med. 2004 Aug; 79(8):721-8.
- Armstrong EG, Barsion SJ. *Using an outcomes-logic-model approach to evaluate a faculty development program for medical educators*. Acad Med. 2006 May; 81(5):483-8.
- Armstrong EG, Barsion SJ. *Creating "Innovator's DNA" in health care education*. Acad Med. 2013 Mar; 88(3):343-8.
- Armstrong, EG with Barsion SJ. *From Freedom to Learn to Freedom to Innovate: The Harvard Macy Institute Study*. In "Educators' Stories of Creating Enduring Change: Enhancing the Professional Culture of Academic Health Science Centers" Ed: Headrick LA, and Litzelman DK. Radcliffe Publishing, (2013) pp.23-42.
- Bowe CM, Lahey L, Kegan R, Armstrong EG. *Questioning the "big assumptions". Part II: recognizing organizational contradictions that impede institutional change*. Med Educ. 2003 Aug; 37(8):723-33.
- Christensen CM, Grossman JH, Hwang J. 2008. *The Innovator's Prescription: A Disruptive Solution for Health Care*. McGraw Hill.
- Dyer, J, Gregersen, H, Christensen, CM 2011. *The Innovator's DNA: Mastering the Five Skills of Disruptive Innovators*. Boston, MA: Harvard Business Review Press.
- Friedlander MJ, Andrews L, Armstrong EG, Aschenbrenner C, Kass JS, Ogden P, Schwartzstein R, Viggiano TR. *What can medical education learn from the neurobiology of learning?* Acad Med. 2011 Apr; 86(4):415-20.
- Gertner, J. 2013. *The Idea Factory: Bell Labs and the Great Age of American Innovation*. Penguin Books.
- Headrick LA, Litzelman DK (Ed.) 2013. *Educators' Stories of Creating Enduring Change: Enhancing the Professional Culture of Academic Health Science Centers*. London & New York: Radcliffe Publishing.
- Kegan, R, Lahey, L. 2001. *How the Way We Talk Can Change the Way We Work: Seven Languages for Transformation*. Jossey-Bass/Wiley.
- Kerfoot BP, Shaffer K, McMahon GT, Baker H, Kirdar J, Kanter S, Corbett EC, Berkow R, Krupat E, Armstrong EG. *Online "spaced education progress-testing" of students to confront two upcoming challenges to medical schools*. Acad Med. 2011 Mar; 86(3): 300-6.
- Wagner, T 2012. *Creating Innovators: The Making of Young People Who Will Change the World*. Scribner.
- Weber RA, Armstrong EG. *Teaching plastic surgeons how to be better teachers*. Plast Reconstr Surg. 2012 May; 129(5):1191-7.

Harvard Macy Institute: Annual Course Offerings

Program for Educators in the Health Professions

(January for 10 days, May for 5 days)

Co-Directors: **Elizabeth Armstrong, Ph.D.; Robert Kegan, Ph.D.**

A Systems Approach to Assessment in Health Professions Education

(March for 6 days)

Co-Directors: **H. Thomas Aretz, M.D.; Elizabeth Armstrong, Ph.D.;**

Connie Bowe, M.D.; Louis Pangaro, M.D.

Leading Innovations in Health Care & Education

(June for 6 days)

Co-Directors: **Elizabeth Armstrong, Ph.D.; Clayton Christensen, D. B.A.**

Become a Digital Citizen — Technology in Health Care Education

(October for 6 days)

Co-Directors: **H. Thomas Aretz, M.D.; Elizabeth Armstrong, Ph.D.;**

Neil Mehta, M.D.; Roy Phitayakorn, M.D.; Curtis Whitehair, M.D.

Program for Post-Graduate Trainees: Future Academic Clinician-Educators

(December for 3 days)*

Co-Directors: **Elizabeth Armstrong, Ph.D.; Susan Farrell, M.D.;**

Reena Karani, M.D.; Alan Leichtner, M.D.

*This course is done in collaboration with Partners HealthCare International, Boston Children's Hospital, and Icahn School of Medicine at Mt. Sinai.

For applications and more information about any of these courses, please go to www.harvardmacy.org

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