MITIGATING THE MATILDA EFFECT ON CHARLOTTE (LANI) NIRMALANI GUNAWARDENA: BRIDGING THE DISTANCE IN LEARNING ENVIRONMENTS

Carolyn ANDERSON
caanderson@tru.ca
Thompson Rivers University, Canada

ABSTRACT

The purpose of this paper is to bring voice to the work of Charlotte (Lani) Nirmalani Gunawardena, an underrepresented female trailblazer who has greatly contributed to the field of distance education (DE) and online distance learning (ODL) throughout her career. This paper explores her educational experiences, research interests–particularly in the areas of increased access to higher education, culture, social presence, and instructional design in connection to DE and ODL. It highlights her many contributions to this field and, this paper shares proud moments of her career to date–in her own words. This paper aims to pronounce Gunawardena's contributions by illuminating her dominant work in the sociocultural context of online learning, social presence theory, and culturally inclusive instructional design.

Keywords: Increased access, social presence, instructional design, sociocultural, online distance learning, Matilda effect, Charlotte Nirmalani Gunawardena

INTRODUCTION

In an interview on MOOCs organized by The Guardian Newspaper in the U. K., Extreme Learning Series (Gunawardena, 2014), Charlotte Nirmalani (known as "Lani") Gunawardena suggested that educators re-imagine education to focus in on how the digital learning environment can deliver learning in a different way. She said the future is about people collaborating with each other, such as we are seeing with social media, and that the collaborative nature of learning, the mentoring and support for students must be built into online learning through people and artificial intelligence (AI). Lani's ability to traverse the various landscapes and multiple layers of the digital learning environment, and connect them to student needs in contextual ways has been a successful, career-long endeavor. Her contributions to the field of distance education (DE) and open and distance learning (ODL) are vast, with more than 125 publications to her credit, plus interviews, conference proceedings, and much more.

Lani currently maintains the position of Distinguished Professor of Online Education and Instructional Technology in the Organization, Information, and Learning Sciences (OILS) program, College of University Libraries and Learning Sciences, at the University of New Mexico. She "founded and developed the graduate emphasis area in distance education in the OILS program and has thirty years' experience teaching about distance and online education" (University of New Mexico, n.d.). Lani is a female pioneer of distance education and online distance learning who has prominently advanced online learning. "She has extensively worked on culture and distance/online learning; social technologies, online learning, and socially mediated metacognition; social presence theory; social content of digital learning, and social construction of knowledge in online learning communities" (Bainbridge & Wark, 2023). Although much of her career has been spent in the United States, Lani's love of education and learning began in her birth country, Sri Lanka.

LANI'S EDUCATIONAL BACKGROUND

Born in the tropical island nation of Sri Lanka, Lani studied at Ladies' College, Colombo, and obtained her bachelor's degree in English (Honors) from the University of Sri Lanka. She taught English as a Second Language and elementary French at Museus College, Colombo, and worked as a Research Assistant in English for Specific Purposes at the Department of English, University of Colombo.

Lani completed a Master's degree in education with an emphasis on Teaching of English to Speakers of Other Languages (TESOL) at the University of Kansas in the United States. She completed her doctorate in Curriculum and Instruction, also at the University of Kansas (Gunawardena, n.d.).

After completing post-doctoral studies as a Kellogg Research Fellow at the University of Oklahoma, Lani joined the Training and Learning Technologies Department (later named the Organizational Learning and Instructional Technology program), in the College of Education at the University of New Mexico as an Assistant Professor of Distance Education and Instructional Technology in 1989. This was to develop the graduate emphasis in DE.

She now serves as a Regents' Professor in the Organization, Information, and Learning Sciences program in the College of University Libraries and Learning Sciences at the University of New Mexico. In her teaching and research activities, she continues to pursue her passion for online learning, blending it with her keen interest in intercultural communication (Gunawardena, n.d.).

LANI'S PASSION FOR DISTANCE AND ONLINE LEARNING

In her keynote address to Northern Kentucky Universities' Summer Online Faculty Institute, Lani relayed her passion for distance learning began after high school graduation when her friends did not make it into university. She stated country-sponsored universities in Sri Lanka only allowed entrance to 14 percent of applicants (Gunawardena, 2021). Lani was accepted and completed her undergraduate degree in English at the University of Sri Lanka in 1976, but it was the lack of educational opportunities for others that prompted her to continue her learning beyond her undergraduate degree.

It was during the pursuit of her doctoral degree in Curriculum and Instruction at the University of Kansas that Lani began to consider how media could provide increased access to education (Bainbridge & Wark, 2023). Prompted by a suggestion from her father that she investigate how television could support the learning process, Lani began to consider how media influences learning. In an interview with Bainbridge and Wark (2023) for their book, *The Encyclopedia of Female Pioneers in Online Learning*, she shared a story of when she was an intern at the Division of Continuing Education at the University of Kansas and was provided the opportunity to evaluate a course for them that utilized a television component. The course was called "Brain, Mind, and Behaviour," and used the "PBS (Public Broadcasting Service) program as a video component to assist learning in the correspondence course" (Bainbridge & Wark, 2023, p. 141). Her work in this project acted as a catalyst for Lani to focus more in-depth on the intersection of media and distance education.

Lani's doctoral studies included a large emphasis on Instructional Technology and a minor emphasis on Instructional Television. She completed her doctorate with honours and, in 1988, won the National University Continuing Education Association's Charles A. Wedemeyer award for her dissertation, *New Communications Technologies and Distance Education: A Paradigm for the Integration of Video-based Instruction* (Gunawardena, n.d.).

In her career quest to find ways to create increased access to education, Lani strongly emphasizes that this is reliant upon the provision of access as a critical piece. She states, "How do you provide access to people who don't have access? I work with many Native American students who live in reservations here in New Mexico and they're extremely remote. Sometimes they don't really have good Wi-fi connections. In fact, one student told me, 'I have to really take my truck and go up the hill and join your Zoom meeting from there so I might lose my connection.'" (Gunwardena, 2021). One of the things we really must do is make accommodation for those who cannot access educational offerings (Gunawardena, 2021).

In *Addressing First-and Second-Order Barriers to Change: Strategies for Technology Integration*, Ertmer (1999) calls external factors, such as adequate access, time, training, and institutional support, as first-order barriers that are extrinsic to teachers. In similarity to Lani's story about Wi-Fi issues for Native American students in New Mexico, Indigenous communities in Canada are disproportionately affected by the lack of broadband Internet access. In a HillNote article for the Library of Parliament, Collier (2021) wrote about how the lack of broadband Internet access in Indigenous communities exacerbates long-standing inequities in areas such as health, employment, and education in Canada. He states that, even where broadband Internet is available, it still may be inaccessible to Indigenous People due to cost and/or lack of digital devices (paras. 5-6). In 2019, the Canadian "government released a strategy aiming for all Canadians to have access to 50/10 Mbps by 2030" (para. 9).

Second-order barriers, which are intrinsic to teachers, include their personal and fundamental beliefs, such as pedagogical and technological beliefs, as well as the willingness to change and best meet the needs of their learners (Tsai & Chai, 2012). Lani's interests in response to such barriers are the inclusion of culture and social presence to authentically, and meaningfully meet the needs of the learners in DE and ODL.

LANI'S INTEREST IN CULTURE AND HOW LEARNING HAPPENS IN NETWORKED ENVIRONMENTS

For learners to engage and remain in educational programs, it is essential they feel that they belong and are valued. If a program does not meet this need, it becomes a barrier to success for those students. Understanding this, Lani began to consider what it meant to have a culturally inclusive online learning community. After researching various definitions of culture and reviewing literature on existing frameworks for understanding culture, she considered what culture meant in an online environment; two themes emerged. The first was that cultures are complex. Examples of this, described in her 2021 keynote to faculty at Northern Kentucky Universities' Summer Online Faculty Institute, are how some cultures are less hierarchal, such as the United States, and others are more hierarchical, such as Mexico. Certain cultures, like the United States, value individualism, while others, like Japan, value collectivism. Lani discussed the concept of *uncertainty avoidance*, wherein certain cultures are very comfortable with a lot of ambiguity and certain cultures are not. She used the United States as an example of a culture that is very schedule-oriented, while Morocco, for example, is not. In connection to value systems, she stated that certain cultures are masculine, such as Mexico, while others are considered feminine, like Sweden. The second theme that is situated within the complexity of culture is the understanding that culture is multi-layered. Such multi-complexity is seen when considering how viewing a national culture is challenging, as it "doesn't really describe all the people in it" (Gunawardena, 2021). The individualism of the learner must also be attended to in order to deliver equitable education. Lani's example is the struggle of female students in male-dominated industries, such as engineering, where course design often suits many, but not all of its learners, such as women (Gunawardena, 2021).

To address the complexity of culture and the individualism of the learner in DE and ODL, Lani pivoted her focus to researching how to develop a conducive social environment for distance learning. In her interview with Bainbridge and Wark (2023), she discussed how education is a social process, yet sometimes we forget the social aspect of learning when we use technology. Questions also emerged on how culture influences the learning process, which led to her work on social presence that was influenced by the work of Fine (1979) who coined the term, idioculture. According to Fine, *idioculture* respecifies the content of culture by focusing on the level of small groups and the social interactions therein. It makes the culture concept useful by focusing on empirically observable group interactions as the locus of cultural creation (iresearchnet.com, n.d.). In response to discussion on the emerging topic of communication and instructional technology, Dikkers et. al use Gunawardena and Zittle's (1997) definition of *social presence* as "the degree to which a person is perceived as 'real' in computer-mediated communication (CMC)" (Dikkers et al., 2017, p. 11).

Lani understood the importance of emotion and connectedness for learners, not only for an enhanced online education experience, but also to address equity concerns and the marginalization of some learners. Her work in social presence led to the understanding that it is a strong predictor of student satisfaction in CMC, which fostered the development of frameworks to guide future research and provide context and structure. One of Lani's earlier frameworks was the Social Presence Indicators, a collection of 17 five-point semantic differential scales and the GlobalEd Questionnaire (Dikkers et. al., 2017, p. 17). Lani's research led to improved pedagogical techniques for teaching online and blended courses.

Lani was also interested in how learning happens in networked learning environments and how educators know that students learn from the interactions that they have with each other (Bainbridge & Wark, 2023). These interests led her to become involved in researching the social construction of knowledge and, with colleagues Lowe and Anderson, developed the interaction analysis model (IAM; Gunawardena et al., 1997). The IAM is still one of the most frequently used instruments in the study of knowledge construction. The extent of its use makes it one of the most coherent and empirically validated instruments in the research field (Lucas et al., 2013). In addition to her research on the social construction of knowledge, Lani has extensively researched the IAM; how to understand interactions online, as well as the combination of social learning analytics and social network analysis needed to do so (Bainbridge & Wark, 2023). Her keen interest in intercultural communication pushed her to co-author the 2018 book, *Culturally Inclusive Instructional Design: A Framework and Guide to Building Online Wisdom Communities*.

LANI AND CULTURALLY INCLUSIVE INSTRUCTIONAL DESIGN

The two greatest challenges facing us are clashes resulting from different cultural perspectives and the need to acquire wisdom to deal effectively with the environmental challenges created by 8 billion humans living together on this planet. This book speaks directly to both of these challenges (Anderson, 2018, as cited in Routledge.com Reviews).

In 2018, Lani and co-authors, Casey Frechette and Ludmila Layne, wrote the book *Culturally Inclusive Instructional Design: A Framework and Guide to Building Online Wisdom Communities*. It won the 2019 Outstanding Book Award from AECT's Division of Distance Education. As Lani's dream of increased access to education became a reality through her efforts—and the efforts of others—in DE and ODL, her attention turned towards the intersection of culture and instructional design. "Culturally inclusive instructional design provides a framework for thinking about culture in digital learning, offering insight into how to build inclusive online communities that encourage reflection and growth, regardless of content domain" (Routledge.com, 2019, para. 1). The "WisCom" framework

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looks at learners' collaboration in real-world problems. There are seven components to guide the design, delivery, and assessment of instruction with wisdom at the center and transformative learning at the end, achieved through the process of working together in collaboration with each other (Gunawardena, 2021). For Lani, the underlying premise of WisCom is that, if students from diverse backgrounds can feel connected, they can produce amazing learning experiences, which is often very difficult to do (Bainbridge & Wark, 2023).

ACCOLADES AND PROUD MOMENTS FOR LANI

Dr. Gunawardena's publication record in DE and ODL spans over 30 years, with over 125 publications to her credit, including two books, as well as book chapters, articles, forwards, and book reviews. In addition, she has been a participant in many interviews, conference proceedings, evaluation and technical reports, magazine articles, and as a keynote speaker (Gunawardena, n.d.; University of New Mexico, n.d.). For example, Lani has:

- **1988: Co-evaluated the State of Oklahoma' s interactive television-based distance education system**

- **2010: Appointed by the United States Secretary of Defense to serve on the Army Education Advisory Committee - Defense Language Institute Foreign Language Center Board of Visitors Subcommittee to evaluate the curriculum and the institution's support system for language learning**

- **2018: Led and completed the External Program Review effort and self-study report for the OILS program**

- **2019: Appointed as a World Bank consultant for the Ministry of Health in Sri Lanka to design, develop, and evaluate online professional development programs for primary care physicians**

- **Directed distance education evaluations for the United States Department of Education**

- **Directed distance education evaluations for the National Institutes of Health funded Native American Research Center for Health**

- **Consulted for the World Bank, the Asian Development Bank, U.S. corporations, and international higher education institutions in Brazil, Ghana, Mexico, Spain, Sri Lanka, and Turkey (University of New Mexico, n.d.)**

Dr. Gunawardena has won several awards in her career, including:

- **University of New Mexico's General Library Faculty Recognition Award for outstanding work as a College of Education faculty member.**

- **University of New Mexico Regents' Lecturership and Regents' Professorship.**

- **Charles A. Wedemeyer Award for Excellence in Book-length Manuscripts in the field of Distance Education.**

- **Fulbright Regional Research award to conduct research in Morocco and her native country Sri Lanka.**

- **2019: Outstanding Book Award from AECT's Division of Distance Education (University of New Mexico, n.d.)**

In her interview with Bainbridge and Wark (2023), Lani discussed proud moments of her career. She said,

> The first accomplishment is my contributions to research in the fields of distance and online learning. [This includes] some of my early work on the social construction of knowledge, and the development of [AIM].
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> …Another area of research where I have made a contribution is my studies on social presence…. The scale we developed in 1997 in the article I co-authored with Zittle to assess social presence through online surveys is still being used by researchers. I'm glad that my social presence research really did have an impact.
>
> …My research on how cultural factors influence communication and learning online is the third area where I have made an impact.
>
> …my design work…Our book, *Culturally-inclusive instructional design: A framework for building online WISDOM communities*, and the companion website www.colectivo.io, where we want to develop an international community of instructional designers, who share their designs that support cultural inclusivity.
>
> …international projects…My students and I developed a mobile and e-learning solution for training physician assistants in Ghana." [From this project] "I learned a lot about how to negotiate cultural spaces online and cultural spaces in international projects.
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> …I have worked in my country of birth, Sri Lanka, as a consultant for the Asian Development Bank funded project called the, 'National Online Distance Education System,' housed within the Ministry of Education, where they were actually going to implement a national distance education online system.
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> …Currently, I am working as a World Bank consultant to the Ministry of Health in Sri Lanka, helping them to design and assess online training courses for primary care physicians. (Bainbridge & Wark, 2023, pp. 145-146)

CONCLUDING THOUGHTS

Charlotte (Lani) Nirmalani Gunawardena's research offers a roadmap of the growth in DE and ODL. Beginning with wanting to help people have access to higher education, her interests and research brought her from television as a medium of educational delivery in the 1980s to creating frameworks for increased equity in distance and online learning in 2018 for all learners. Her impact has been vast for many students as her work has spanned the globe. She continues to lead students and governments alike through advisory roles in the drive for improved systems of access, and inter-cultural communication and learning. "The future is about people collaborating with each other" (Gunawardena, 2014). As a woman pioneer in DE and ODL, and as a Sri Lankan, Lani offers this field a feminine and person of colour perspective that has prominently advanced online learning. "The ever-evolving field of online learning continues to be informed by the seminal research and institutional leadership of women" (Bainbridge & Wark, as cited in Routledge.com, 2023). To this day, Lani continues her work in her role as a Regents' Professor in the Organization, Information, and Learning Sciences program in the College of University Libraries and Learning Sciences at the University of New Mexico alongside her other current contributions to DE and ODL.

REFERENCES

Bainbridge, S., & Wark, N. (2023). *The encyclopedia of female pioneers in online learning.* Routledge. https://www.routledge.com/The-Encyclopedia-of-Female-Pioneers-in-Online-Learning/Bainbridge-Wark/p/book/9781032230351

Collier, B. (2021, December 8). Broadband internet in indigenous communities. *HillNotes: Quick Reads on Canadian Topics*. https://hillnotes.ca/2021/12/08/broadband-internet-in-indigenous-communities/

Dikkers, A.G., Whiteside, A.L., & Tap, B. (2017). Social presence: Understanding connections among definitions, theory, measurements, and practice. In A.L. Whiteside, A.G. Dikkers, & K. Swan (Eds.), *Social presence in online learning: Multiple perspectives on practice and research*, (p. 11). Stylus Publishing, LLC. https://styluspub.presswarehouse.com/browse/book/9781620365090/Social-Presence-in-Online-Learning

Ertmer, P. A. (1999). Addressing first-and second-order barriers to change: strategies for technology integration. *Educational Technology Research Development, 47*, 47–61. https://doi.org/10.1007/BF02299597

Fine, G. A. (1979). Small groups and culture creation: The idioculture of little league baseball teams. *American Sociological Review* 44 (5): 733-45.

Gunawardena, C. N. (n.d.). *Dr. Charlotte Nirmalani "Lani" Gunawardena – Distinguished Professor.* https://cgunawardena.wordpress.com/

Gunawardena, C. N. (2014, March). *A free education online: Too good to be true? A video debate* [Video]. The Guardian: Extreme Learning Series, United Kingdom. http://www.theguardian.com/education/video/2014/mar/06/free-education-online-video-debate

Gunawardena, C. N. (2021, June 22). *Keynote – Dr. Charlotte Gunawardena* [Keynote address]. Northern Kentucky Universities' Summer Online Faculty Institute. Highland Heights, Kentucky, U.S.A. Video@NKU. https://video.nku.edu/media/Keynote+-+Dr.++Charlotte+Gunawardena/1_gf0q0gmq

Gunawardena, C. N., Frechette, C., & Layne, L. (2018). *Culturally inclusive instructional design: A framework and guide to building online wisdom communities* Routledge. https://www.routledge.com/Culturally-Inclusive-Instructional-Design-A-Framework-and-Guide-to-Building/Gunawardena-Frechette-Layne/p/book/9781138217867#

Gunawardena, C. N., Lowe, C. A., & Anderson, T. (1997). Analysis of a global online debate and the development of an interaction analysis model for examining social construction of knowledge in computer conferencing. *Journal of Educational Computing Research, 17*(4), 397-431. https://doi.org/10.2190/7MQV-X9UJ-C7Q3-NRAG

Gunawardena, C. N., & Zittle, F.J. (1997). Social presence as a predictor of satisfaction within a computer-mediated conferencing environment. *American Journal of Distance Education*, 11(3), 8-26. https://doi.org/10.1080/08923649709526970

Iresearchnet.com. (n.d). Idioculture. *Sociology: Sociology of culture.* https://sociology.iresearchnet.com/sociology-of-culture/idioculture/#google_vignette

Lucas, M., Gunawardena, C. & Moreira, A. (2013). Assessing social construction of knowledge online: A critique of the interaction analysis model. *Computers in Human Behavior, 30*(January 2014), 574-582. https://doi.org/10.1016/j.chb.2013.07.050

Routledge. (2019). *Culturally inclusive instructional design: A framework and guide to building online wisdom communities* [Book overview and reviews]. Routledge.com. https://www.routledge.com/Culturally-Inclusive-Instructional-Design-A-Framework-and-Guide-to-Building/Gunawardena-Frechette-Layne/p/book/9781138217867#

Routledge. (2023). *The encyclopedia of female pioneers in online learning* [Book overview]*.* Routledge.com. https://www.routledge.com/The-Encyclopedia-of-Female-Pioneers-in-Online-Learning/Bainbridge-Wark/p/book/9781032230351

Tsai, C. C., and Chai, C. S. (2012). The "third"-order barrier for technology-integration instruction: implications for teacher education. *Australas. J. Educ. Technol.* 28, 1057–1060. doi: 10.14742/ajet.810

University of New Mexico. (n.d.). *Charlotte "Lani" Gunawardena - Distinguished Professor Organization, Information and Learning Sciences.* College of University Libraries & Learning Sciences: People. https://ulls.unm.edu/people/directory/g/gunawardena-charlotte-lani.php

BIODATA and CONTACT ADDRESS of the AUTHOR

Carolyn ANDERSON is an Assistant Teaching Professor in the School of Education at Thompson Rivers University. She is Nuxalk, a Sixties Scoop survivor, wife, mother and teaching professional. She holds a Master of Education in Open, Digital, and Distance Education through Athabasca University, a Diploma in Home Economics from the University of British Columbia, and a Bachelor of General Studies (First Nations and History) from Simon Fraser University. Her interest lies in the existing inequities in education for Indigenous learners which is apparent in the gap in graduation rates between Aboriginal and non-Aboriginal students in Canada.

Anderson, Carolyn
Thompson Rivers University
Address: 805 Tru Way, Kamloops, BC V2C 0C8
Email: caanderson@tru.ca