THE 11TH ANNUAL
SOKA EDUCATION CONFERENCE

CREATING VALUE
THROUGH EDUCATION TOWARD THE FUTURE

SOKA UNIVERSITY OF AMERICA
ALISO VIEJO, CALIFORNIA
FEBRUARY 14-15, 2015

SOKA EDUCATION
STUDENT RESEARCH PROJECT
Disclaimer

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The Soka Education Student Research Project is an autonomous organization at Soka University of America, Aliso Viejo, California.

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Dear Reader,

We would like to extend a warm thank you for participating in the 11th Annual Soka Education Conference taking place on February 14-15, 2015. We have been working on realizing this conference for over a year now, so it is with great pleasure that we present these two busy days to you. This booklet that you are reading will serve as a document and reminder of our 2015 conference, a final compilation of everyone’s efforts as well as a point of departure for future inquiries into Soka Education.

As you know, this year marks the 11th Annual Soka Education Conference. Last year, the 10th Anniversary, marked the end of the first decade of the Soka Education Conference. With this year’s conference, we are excited to be opening a new decade of Soka Education research. This weekend is full to the brim with the thorough research of students, alumni, faculty, and professionals across a multitude of interest focuses. This year, presentations range from autistic care education, creative writing workshop pedagogy, medical school education, and after-school math programs. In addition to the academic brilliance of this conference, it is also a celebration of the progress Soka Education has made over the decades. With every conference, we become more and more curious as to how Soka Education or humanistic education in general is being implemented in communities around the world, in both traditional and non-traditional educational spheres. As this conference marks the 11th year of providing an academic venue for people to come together to discuss Soka Education and humanistic education at SUA, we hope that this discussion will increasingly incorporate experiences of the theoretical and tangible applications of humanistic education. We hope to partake in this historic conference with you and set the tone of humanistic education for upcoming decades.

This year’s keynote speaker is Dr. Rebecca Martusewicz, who is currently a professor in the Department of Teacher Education at Eastern Michigan University. As a leader in the field of EcoJustice Education, her scholarship focuses on exposing the deeply imbedded cultural assumptions leading to intersecting social and ecological problems. This field is especially interested in the ways schooling helps to maintain a fundamentally violent set of ideologies, structures, and institutions organizing the patterns of belief and behavior that shape our lives. Dr. Martusewicz is also the former editor in chief of The Journal of The American Educational Studies, which published a special issue on the educational work of Tsunesaburo Makiguchi titled “Tsunesaburo Makiguchi (1871-1944): Educational Philosophy in Context” in April 2009.

We were overjoyed by Dr. Martusewicz’ acceptance of our request to be this year’s keynote speaker. As one of Soka University of America’s principles is to foster leaders for the creative coexistence of nature and humanity, we believe her academic contributions to the field of education are in line with Soka Education Pedagogy and the values of SUA. Her speech will be beneficial for not only the discussion surrounding Soka Education but also for the dynamic development of education globally. We are very excited to have her present her speech titled “Toward Pedagogies of Responsibility: EcoJustice Education, Wendell Berry, and our Work for the ‘Great Economy’” which we hope will prove insightful for each audience member, undergraduate and graduate students, practioners, and professors alike.

From around the corner or across the world, thank you so much for coming to the 11th Annual Soka Education Conference. We sincerely appreciate the continued support of the students, faculty, alumni, family, and community members in understanding more deeply the significance of humanistic education in today’s world. Please enjoy this booklet and all its contents. We hope to see you next year!

Warmly,
Soka Education Student Research Project
What is Soka Education?

The starting point and essence of Soka education is the spirit to treasure each student individually so that they can become happy and enjoy a glorious future. Education does not exist for the sake of the nation, for business, or for religion. The aim of Soka education is the happiness of oneself and others, as well as society as a whole, and peace for all humanity. - Daisaku Ikeda, Founder of Soka University of America

Soka Education was founded by Tsunesaburo Makiguchi (1871-1944), a Japanese educator in the early 20th century. Emerging out of 40 years of classroom experience, Soka Education is one of the first full-fledged educational theories ever put forward by a Japanese elementary school principal.

Soka (創価) is derived from the Japanese characters "sozo" (creation) and "kachi" (value), and literally means value creation. Soka education seeks to empower students to perceive value in every aspect of life. A key element of Soka Education is the quality of the relationship between teacher and student. Rather than exercise authority over the students, teachers are expected to engage in the learning process and grow together with the students. Thus, Soka education is not a mere injection of knowledge, but a humanistic process that nurtures wisdom and enables the individual's potential to bloom to the fullest. The teacher's genuine care and concern for the student, and their efforts to nurture the unique character and potential of each learner, make up the heart of Soka education.

Makiguchi established this pedagogy based on his firm belief that the happiness of children should be the purpose of education. This was a radical idea in Japanese society, oppressed under fascist militarism before and during the war. Individuals were forced to place precedence upon national prestige rather than their own happiness, and children were taught at school to serve that purpose. It was against this backdrop that Makiguchi advocated that the happiness of children be the utmost priority of education.

Today Soka education is being practiced globally: in Japan the Soka education system encompasses kindergarten through university; in the United States, Soka University of America was founded in California; and there are Soka Kindergartens in Brazil, Hong Kong, Malaysia, Singapore and South Korea, as well as other parts of the world.

The Soka Education Student Research Project (SESRP) is a student-initiated and student-run project at Soka University of America. Project members engage in the study, research, and exhibition of Soka Education as a unique educational philosophy.

The purpose of SESRP is:

- To inspire individuals to embody and perpetuate the spirit of Soka Education
- To create a community united in protecting the values of Soka Education
- To encourage thorough and rigorous research into the meaning, possibilities, and development of Soka Education

The objectives of the SESRP are:

- To establish Soka Education as an acknowledged field of research
- To develop a centralized source and venue for information and discussion on Soka Education

To build and maintain relationships with other institutions to promote Soka Education
# Soka Education Conference 2015 Program

## Day 1: Saturday, February 14th, 2015

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Rebecca Martusewicz is a Professor in the Department of Teacher Education at Eastern Michigan University. She teaches courses on EcoJustice Education, a concentration in the Masters of Arts program in Social Foundations of Education. She also teaches and is Co-Coordinator of the Educational Studies PhD program at EMU. A leader in the field of EcoJustice Education, her scholarship focuses on exposing the deeply imbedded cultural assumptions leading to intersecting social and ecological problems. This field is especially interested in the ways schooling helps to maintain a fundamentally violent set of ideologies, structures, and institutions organizing the patterns of belief and behavior that shape our lives. And, we work with educators to identify their particular responsibilities in addressing and interrupting those processes with their students.

Rebecca is co-author of EcoJustice Education: Toward Diverse, Democratic and Sustainable Communities, with Jeff Edmundson and Johnny Lupinacci, now in its second edition (Routledge 2015), and many journal articles and book chapters focused on EcoJustice Education. She is also author of Seeking Passage: Post-Structuralism, Pedagogy, Ethics (Teachers College Press 2001), and is currently working on another book, Pedagogies of Responsibility: Lessons for EcoJustice Educators from Wendell Berry and Others. Her talk at this conference will focus on specific themes in Berry’s work that help us to understand the importance of what he calls “the Great Economy” of the living world for the development of pedagogies of responsibility.
## Speaker Biographies

**Ken Baxter** is a member of Soka University of America graduating class of 2008, concentrating in Humanities with a focus in philosophy. In 2012, he graduated with an Ed.M of Philosophy of Education from Teachers College, Columbia University. He currently resides in New Jersey, working at a standardized testing company as an assessment assistant. His long term goals in education is the implementation of Soka Education principles in the United States public school system. His hobbies include music, playing soccer, drinking coffee and is currently striving to strengthen a social movement in New Jersey that seeks to empower individuals' lives through teaching techniques of value-creation by the awareness of the inherent value in their own lives.

**Nandini Choudhury** graduated as a member of Soka University of America’s undergraduate class of 2012 with a concentration in Environmental Studies. She is currently a Master of Public Health candidate in Global Health at Boston University. Prior to pursuing graduate studies, she worked at a New Delhi-based non-profit organization working for vulnerable populations and gained research experience at the Public Health Foundation of India. Her current research interests include health inequities, vulnerable populations and the social determinants of health.

**Mitsuaki Hirai** is a Doctor of Public Health (DrPH) candidate in Global Health at the George Washington University Milken Institute School of Public Health. After graduating from Soka University of America in 2009, Hirai pursued a Master of Public Health (MPH) at UCLA School of Public Health and gained fieldwork experience in Uganda and Kenya. His academic and professional interests include water, sanitation, and hygiene (WASH), HIV/AIDS, and program evaluation.
**Kazumi Tsuchiya** is a current doctoral student in Health Behavior and Health Education (HBHE) at the University of Michigan School of Public Health (UM SPH). After completing her Bachelor of Arts from Soka University of America in 2009, she pursued a Master's of Public Health at UM SPH in HBHE. As a research specialist at the Center for Managing Chronic Disease (CMCD), she strengthened her experiences in research, mixed methods analysis, evaluation, project, and data management. Her research interests include food access with the intersection of the built environment, evaluation, social determinants, racial/ethnic health disparities, and working with vulnerable populations.

**Darin Ciccotelli** has recently published work in Colorado Review, Denver Quarterly, Fence, Hayden's Ferry Review, Subtropics, Third Coast and ZYZZYVA. Brenda Shaughnessy selected his poem “Superpower” for the Best New Poets 2013 anthology. His first poetry manuscript, “A Number of Dead Birds in Our Neighborhood, and for No Apparent Reason” was a finalist for the New Issues Prize in Poetry and the Four Way Books Intro Prize in Poetry. He received his MFA from the Michener Center for Writers at the University of Houston and his PhD from the University of Houston. He currently teaches at Soka University of America.

**Ryan Hayashi** is currently a high school mathematics teacher in Anthony, New Mexico. As a member of the Teach for America program, he teaches at an alternative school called Desert Pride Academy. The school serves students who have had various struggles in the traditional educational setting including low attendance, drugs, discipline, and teenage pregnancy. He is currently working to incorporate elements of Soka Education, critical thinking, and creativity into his Algebra I and Geometry classes. He graduated from Soka University of America in May 2012 as part of the 8th class. His research interests include Soka Education, humanistic education, culturally relevant pedagogy, social justice mathematics, and education for disadvantaged, minority populations.
**Henry Indangasi** is a professor of literature at the University of Nairobi. After graduating from the University of Nairobi with a B.A. (First Class) in literature in 1973, he was offered a scholarship by the University of California Education Abroad Program to pursue graduate studies at the University of California, Santa Cruz in 1974. In 1976, he was awarded an MA in literature, and 1980 he was awarded a PhD in literature by U. C. Santa Cruz, having written his doctoral dissertation on Joseph Conrad. Henry Indangasi has published many academic articles in Kenya and international journals. He co-authored a book called Dialogue on World Literature with Daisaku Ikeda, and edited with Masumi Odari Daisaku Ikeda and Africa and Daisaku Ikeda and Voices for Peace from Africa. He has co-authored several books in English for secondary schools and colleges in Kenya, the most notable being the series called Excelling in English, published by the Kenya Literature Bureau. His latest publication is an anthology of short stories called They Told My Sister and Other Stories.

**Masumi Hashimoto Odari** graduated with a BA in Letters from Soka University in 1986 and an MA in Literature from the University of Nairobi in 1989. She later pursued a law degree at the University of Nairobi and graduated with an LLB in 2001. After finishing Law School, she was admitted as an advocate of the High Court of Kenya in 2003. In 2010, she was awarded a PhD in literature by the University of Nairobi having written her doctoral dissertation on social injustices in Charles Dickens’ works. Masumi Odari has edited with Henry Indangasi Daisaku Ikeda and Africa and Daisaku Ikeda and Voices for Peace from Africa. She has also published a number of academic articles. Her interest is in children's literature, literature and peace, and literature and leadership. Masumi Hashimoto Odari is currently the Head of the Department of Literature at the University of Nairobi.
### Shivangi Khattar

Shivangi Khattar is currently a senior at Soka University of America and has been working closely with Soka Education Student Research Project as a coordinator. Her concentration is Social Behavioral Sciences and she aspires to go in for her Phd in Clinical Psychology in the States after graduating from a Bachelors in Liberal Arts at SUA. Her goal is to further the research for children with autism in India as well as to start an organization in India, in a hope to instill the ideals of Soka educational pedagogy in the best way possible. This desire grew during her time as a Soka student and her internship experiences with children in India, Ecuador and California. These diverse experiences helped her to understand the values and importance of Soka education as well as the need for understanding the importance of one-on-one care for children with special needs, especially autism spectrum disorder. This interest led her to use the example of the therapy center she worked with, in India, as a possible model for future centers for children with special needs based on certain ideals of Makiguchi's value-creating pedagogy. She aspires to further this research on autism, when she goes to attain her Phd in Clinical Psychology in the near future.

### Jacqueline M. Mills

Jacqueline M. Mills hails from Southern Illinois. She graduated from Soka University of America in 2008 and received her Masters of Public Policy, Certificate in Global Policy, and Certificate in International Development from Duke University in 2010. While interning in India during her Masters program, she decided to also pursue a career in medicine. She finished her post-baccalaureate pre-medical certificate at Tufts University in 2013. She has a variety of professional and academic research experiences, covering topics such as gender mainstreaming in water resource management, social reintegration of obstetric fistula patients in Tanzania, international typhoid vaccine policy, and the tracking of daptomycin-resistant enterococcal infections. She is currently a medical student at the Boston University School of Medicine and hopes to work in the intersection of international policy and clinical medicine in the future.
Michio Okamura has been a K-8 Japanese language educator in Chicago Public Schools for 11 years. He will soon complete his master’s degree in Bilingual and Bicultural Education from DePaul University and plans to continue his studies in the doctoral program in Curriculum Studies. Ever since he was introduced to Value-Creating Pedagogy in one of the master’s courses, he has been implementing the pedagogy through the framework of play and playfulness. He is convinced that play is a natural way for children to practice skills and knowledge that they need to survive and thrive in their local environment; children learn well when they are in a playful state of mind rather than being coerced; and language acquisition is the by-product of playful meaning making activities, in which children are intrinsically motivated to engage. He will continuously try to find joy in creating value through playful language learning activities with his students.

Hi! My name is Anri Tanabe. I graduated from SUA in 2011 and served as a US Peace Corps volunteer in Lesotho from 2012-2014. I never thought I would have the opportunity to live in a rural mountain village in southern Africa for 2 years, but now that I’m home, I can’t imagine who I would be today without having had that experience. I wanted to write for the Soka Education conference this year so that I could combine the two most influential aspects of my life thus far – my experience in Lesotho and my experience at SUA, and to share with you how they are related. I hope you will each gain something from it, in any size, shape, or form. Thank you for your time and interest!

Anna Varvak is an Associate Professor of Mathematics at Soka University of America, where she taught since 2004. She was born in Ukraine, emigrated at the age of 12, managed to not drop out of high-school more than once, received her B.S. from University of Massachusetts—Boston, and her M.A. and Ph.D. in Mathematics from Brandeis University. She is interested in incorporating student-centered pedagogy into math education. For the past two years, she has been leading a weekly Math Circle for a small group of middle-school children. She looks forward to introducing the SESRP community to the idea of Math Circles as a way of enriching children’s experience with mathematics.
Workshops

Workshop 1: Gender Neutral Language and Education
James Spady, Vuslat Demirkoparan, and Kristi Wilson
Professors at Soka University of America

Workshop Summary
This workshop will engage participants in a discussion of the history and uses of gender neutral language on college campuses, asking students to identify examples of sexist or gendered language from their experience at Soka and elsewhere. The purpose will be to attend to arguments for the significance of gender neutral language in education settings in general and at Soka University in particular.

Facilitator Bios

James O’Neil Spady, Ph.D
Associate Professor of American History

Vuslat Demirkoparan, Ph.D
Visiting Assistant Professor of Rhetoric and Composition
Manager of the Writing Center

Kristi Wilson, Ph.D
Associate Professor of Rhetoric and Composition
Workshop 2: What would the ideal second/foreign language education be like in the light of Soka Education and Progressive Education? – Humanistic Approach

Hiroshi Matsumoto
Associate Professor of Japanese Language and Culture

Workshop Summary

This workshop intends to explore further what the ideal second/foreign language education would be like based on the philosophy of Soka Education and Progressive Education. This is an expanded version of my workshop given last year.

More specifically, we will focus on exploring some points about the purposes of second/foreign language education. In the light of Soka Education and Progressive Education, what should the most important purposes or goals of second/foreign language education be? Both Soka Education and Progressive Education emphasize that genuine education should aim to help fulfill each student’s needs (as one human being) and attain her/his highest level of potential and happiness. What does this kind of paramount focus of education really mean to today's second/foreign language education?

In order to deepen our discussion on this topic, this time, we will take a humanistic approach to second/foreign language education and examine the importance of (i) strengthening intercultural understanding, (ii) developing intrinsic motivation and attitudes, and (iii) acquiring more refined value systems and ways to take a look at ourselves. An ideal second/foreign language education should aim to help students not only enhance their language proficiency (and attain more instrumental outcomes, such as better job opportunities and income), but also broaden their perspectives about other cultures and values in the world (i.e., experience more integrative/intrinsic/humanistic outcomes). Such education should be able to help students eventually unlock their hidden potential, come to understand who they really are, and find their true identity.

This workshop will include small-group discussions and activities. Concrete examples from actual second/foreign language classes will be provided in order to facilitate the discussions.

Facilitator Bio

Professor Hiroshi Matsumoto teaches Japanese language and culture as well as second language acquisition and linguistics at SUA. He graduated from Kyoto University (undergraduate studies) and the University of Washington (M.Ed. in teaching English as a second language [TESL] and Ph.D. in second language acquisition [SLA] research). His research focuses on studying the process of Japanese (as a second) language acquisition among American university students, such as motivational factors, input and comprehension, intercultural understanding, and study abroad.
Workshop 3: Soka Education and Visual Media

Jennifer Hayashi  
SUA Class of 2014  
Tomas Crowder-Taraborrelli  
SUA Professor of Latin American Studies

Workshop Summary:
The purpose of this workshop is to understand and expand Soka Education in the field of video. Today we use video just as much if not more than we do written text, making it necessarily to expand Soka Education and consider its meaning in relation to video. This workshop aims to address how Makiguchi’s notion of value creation and community studies relates to video, specifically documentary film. In this workshop we will explore concepts and short video clips in order to better understand how we can understand Soka Education in this generation.

Facilitator Bios

Jennifer Hayashi graduated with SUA’s class of 2014 this past May. While studying at SUA she was a part of SESRP and served as a study leader her junior year. She studied abroad in Ecuador and focused her senior capstone on documentary film and hip-hop, as a means of value creation and community transformation. Immediately after graduating she returned to Ecuador to continue pursuing her path as an independent filmmaker. She recently successfully funded a Kickstarter project and is currently working on the documentary, The Roots Awaken. It is about a modern gathering of ancestral wisdom with leaders from Canada to Patagonia that took place in Ecuador. Her research interests include Soka education, humanistic education, community cinema, transformative arts, and modern indigenous cultures.

Tomas Crowder-Taraborrelli studied journalism and film at San Francisco State University, where he received his Bachelor of Arts degree. In 1994, he received a master’s degree in Comparative Literature from San Francisco State University. He then went into the Spanish and Portuguese doctoral program at the University of California, Irvine and received his Ph. D in 2001. He currently teaches Latin American Studies at SUA. He is also an associate producer of Community Cinema at Soka University, a documentary series produced by The Independent Television Services (ITVS).
Workshop 4: Soka Education in Action

Workshop Facilitators
Vicki Mokuria, Alankrita Chhikara, Jessica Bridges
Graduate Students of Soka University of America

Workshop Summary
This workshop is facilitated by three educators from diverse backgrounds. It will promote dialogue around what it means to be an educator implementing Soka philosophies in the classroom as well as examining the perspective of the philosophy of Soka in educational leadership. The three facilitators are current graduate students in Soka University of America's master's program in Educational Leadership and Societal Change.

Facilitator Bios

* Bios from left to right

**Vicki Mokuria** has had 30 years experience in education on all levels and is currently upgrading her education at SUA's graduate program.

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Measurement in Education: A Soka Education Perspective

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Abstract

Measuring growth in education is an essential aspect of a successful educational experience. However, the current conditions of measuring growth in education, most widely accomplished with standardized testing, has given rise to many criticisms against its intended educational value, claiming negative byproducts that reversely affect the education system. The essential need for measuring growth, and surveying the current conditions and criticisms, require a reassessment of what it means to measure, what are the standards of measurement, and what are the goals of measurement. Soka Education, with its fundamental goal as that of the learner’s ability to be happy, i.e. create value, may have valuable insight to help guide the process of measurement, and remind us about the ideals of education to which we can refresh our efforts to strive for.

One common criticism of current attempts to measure educational growth, or achievement through standardized testing, is its contribution to the ‘teaching to the test’ culture, where teachers are pressured to implement a curriculum strictly adherent to the requirements of test content. The culture has its root in what can be seen as politicization of education, namely the wide and deep political influence in the classroom, based on state, national and international political agendas.

While the autonomy of the classroom is essential, Tsunesaburo Makiguchi and Daisaku Ikeda remark that the educational experience must be guided and cannot end up as ‘directionless indulgence’. Ikeda writes about the purpose of education saying, “Makiguchi...asserted that it is the student’s realization of happiness.” Further, this ‘realization of happiness’ is to be achieved in the ability to create value. Thus, when considering that the original purpose of testing is measurement, testing within Soka Education would seem to be concerned with measuring the creation of value.

Value-creation is a significantly subjective experience, embodied in the relationship between the subject and object. However, using Heidegger’s anecdote of the cabinetmaker’s apprentice, we can begin to see the possibility of the subjective experience of creating value recognizable. In particular, Heidegger’s notion of ‘relatedness’ seems to resonate with how students are to learn how to create value. The visibility of this ‘relatedness’, i.e. the progress of the student, requires a viewpoint that is able to be ‘cognizant of value’, which must rest of the
teacher. Thus, the teacher, in a sense, becomes an important factor in the process of measurement in education.

Here, Iris Murdoch helps us further elaborate on the relationship between the teacher and student, exploring how the teacher’s ‘consciousness’ determines the outcome of possible choices available, i.e. for the students. In *The Sovereignty of Good* she remarks, “the Good [is] the source of light which reveals to us all things as they really are,” ultimately indicating that values to which the teacher sees determines the values to which the students work towards.

The viewpoint Soka Education presents in how to measure growth first concerns itself with where the growth is directed, namely the goal of education. This changes the essential task of ‘measuring’ growth, i.e. the students ability to create value. Even in identifying the teacher as an essential factor in this process of measurement, we cannot completely avoid the problem of the subjectivity in the process of creating value, that value is a determination each individual makes for themselves. However, if we can concentrate on the goal of human happiness, the shared value of all living beings, perhaps we may uncover an objectifiable standard of measurement to which the educational experience of the student can be guided along.
1. Introduction and macrocosmic viewpoint

The current educational climate significantly revolves around a felt need to verify and to direct the growth of those undergoing an institutionalized educational experience. Perhaps, today’s policy makers will resonate with Tunesaburo Makiguchi’s statement, “The revitalization of education proposes nothing less than to build the ideal society of tomorrow by planning the cultivation of human resources today.” (Creative Living 105) However, Makiguchi, and Daisaku Ikeda’s proposal on how to revitalize education constitutes a completely different view. In an educational environment where the stakes of testing are high, contributing to a ‘teach for the test’ culture, we are in need of a reformation of the notion of measuring in education itself. Using Martin Heidegger and Iris Murdoch, the follow research attempts to put Soka Education into dialogue about the nature of measurement in education, and attempt to extract a viewpoint on the role and value of measurement from the perspective of Makiguchi and Ikeda, as the establishers of Soka Education.

When we look at education from a global standpoint, we consider how fundamental goals and standards for education for all children are establish. The predominant forum for international, inter-cultural dialogue on these dialogues is the United Nations. Ikeda’s remarks on the value of the U.N., writing that, “[the U.N.] can serve as a center…for creating value through education of global citizens who can create a world of peace.” (Ikeda 119) We can certainly attest to the global competitive market, where the most destructive force can be seen as the nuclear weapons race primarily between the U.S. and the former Soviet Union. This globally competitive atmosphere can still be felt in various ways, such as Japan’s Prime Minister Abe’s recent proposal to reinstate a National military, America’s drone wars, and the ongoing war between Israelis and Palestinians. In such an environment, where the prevailing spirit of any given country is its own self-preservation and self-advancement, contributing to a further decay of intra-national trust, we can easily see the purpose and value of a forum such as the United Nations where an intra-national dialogue can occur, where dialogue itself is the path to peace.

Within the context of education specifically, another purpose of the United Nations can be identified. Ikeda states, “I have long believed that education must never be subservient to political interests…education should be accorded a status within public affairs equivalent even to that of the legislative, executive or judicial branches of government.” (Ikeda 120) While his comment specifies a proposal regarding a national government, we can highlight the underlining point that educational policy decisions need to be made free from their manipulation as a tool for other political agendas. To clarify, the educational context in which both Makiguchi and Toda grew up can serve as an example. Ikeda describes the situation as such:

During Makiguchi’s days as a young teacher, Japan began pursuing a national policy expressed by the slogan ‘national wealth and military strength’ – the path of imperial expansion. In the field of education, highest priority was likewise accorded to national aims, and all efforts were made to instill a blind, unquestioning patriotism. (Ikeda 124)
Similar examples, such as the Nazi propaganda machine, China’s Maoist educational curriculum, and even America’s educational origin as one where education was inherent to religious education, also present the extreme possibility of education being used as a means to achieve other goals, or what I would like to call being politicized.

The proposal of Makiguchi and Ikeda for the autonomy of education calls into question the ethicality of educational curricula derived from global-political affairs, such as the space race during the late 1960’s, which eventuated in the National Defense Education Act aimed at raising the scientific and mathematical literacy of American youth. Ikeda remarks, “The educational system has therefore been reduced to a mere mechanism that serves national objectives, be they political, military, economic or ideological…Treating education as a means rather than an end reinforces a utilitarian view of human life itself.” (Ikeda 84) In this sense, the United Nations must become a forum where this competition for desired educational results comes to a stop. We can see that the politicization of education is made more complex by its subservience to other fields, such as technology and economics. While the global arena demands for better technology and better finances, education is used to meet the agendas of other social endeavors. Education is no longer genuine, in the sense that it allows for the freedom of the learner to investigate their own connections. The competition between nations to be superior in various fields drives the educational agenda of each nation – we deem the freedom of genuine education to be too risky and uncontrollable in achieving certain social agendas.

We can see this competition and manipulation of education, perhaps even more clearly, within the United States. The inter-state demand for educational funding has driven the agenda of the classroom. In particular, programs like No Child Left Behind, and Race to the Top, all dependent on the results of standardized testing, exemplify a system in which the classroom agenda is controlled by a political agenda. These programs dictate how educational funding is spent – those schools that reach a certain standardized test score are granted additional tax-payer funding. For many schools, this funding is the only source of financial sustenance, and due to their already poor resources are not able to provide the educational support needed for students to succeed, especially in standardized testing. This politicized pressure on schools to ‘perform well’, i.e. have adequate and improving standardized test scores, further forces a reliance on the standardized testing and its preparation for schools to continue operating. As incentives or warnings are further emphasized, modus operandi of schools becomes the success of their students on standardized tests. This pressure penetrates into the classroom, influencing the curriculum and educational experience of the students. The students are now not going to school to learn, they are there to prepare for the test. To summarize, here are the steps of educational manipulation:

1. National political interests in having uniform levels of reading, math, science etc.
2. Requirement for schools to receive tax-payer funding
3. Pressure on teachers and classroom to drive the curriculum towards test prep
4. Freedom of learner to initiate a self-driven educational experience is corrupted
Regarding the last point, we may ask whether all learners are equal in their ability to drive their educational experience. While some may have an inherent spirit to learn, motivating their engagement with their experience, others may not be equipped with such a desire and may lack the inherent quality needed to engage experience in an educational manner. Ikeda states, “Makiguchi described the impact that the indiscriminate advocacy of ‘freedom’ can have on the educational process: ‘Mere liberation, unaccompanied by a creative, constructive element, falls into directionless indulgence…”’ (Ikeda 95) Ikeda further continues to explain that Makiguchi’s educational proposal called for more effort in preparation and consideration of goals rather than simply ‘letting go’ of any curriculum. Ikeda and Makiguchi are thus not proposing that Soka Education views genuine education as simply learning in the way or what the learner wants to learn, when they feel like it. To further explain Soka Education’s perspective on education, Ikeda remarks, referring to a Japanese Yukichi Fukuzawa, “[he] is not attacking learning, but only learning and knowledge for their own sakes.” (Ikeda 166)

In various peace proposals submitted to the U.N., Ikeda has included education towards human rights, environmental sustainability and peace. In some sense these may be considered political agendas, social objectives politicizing education as a means to achieve goals of human rights, environmental sustainability and world peace. Perhaps the following quotation from Ikeda, referring to Makiguchi, best describes the balance of these two intentions of Soka Education:

Mr. Makiguchi advocated helping children develop the ability to chart, and advance upon, their own chosen course, whether it be in a certain discipline or in life. He expressed a repugnance for cramming children’s heads with knowledge of little practical value…A knowledgeable or intellectual person is not necessarily a wise person. Knowledge, however abundant it may be, is wasted unless it is put to practical use. Indeed there are many people who, though possessing highly specialized knowledge, lack good common sense. Those who actively create the values of beauty, benefit and good wherever they are and in whatever circumstances they find themselves are people of wisdom. Polishing and acquiring this kind of wisdom is the meaning of value creation (soka). (Ikeda 214-215)

This then calls into question, how do we prepare? How do we set goals? How can we have confidence in the development of this kind of wisdom? How can we measure the realization of happiness? How can we be confident about the reality of progress in the learner’s ability to create value?

On the macrocosmic level, identifying the political forces that direct the classroom experience helps make visible how most classrooms, as currently not autonomous. Specifically in regards to standardized testing, it hints at least to some direct relationship between the culture of standardized testing and the motives on the global-political arena. While it may be premature to suggest that the inherent nature of standardized testing is political, we cannot ignore this quality of the current situation.
We have also identified that Soka Education, while proposing the autonomy of the educational process – freedom from politicization – is not advocating the complete ‘directionless indulgence’ of the learner completely unguided in their educational experience. We stand at a seemingly contradicting crossroads that Soka Education presents us – how do we allow for an educational experience free from politicization, yet ultimately guided to particular goals that Soka Education attempts to achieve?

2. Investigating value, and value-creation

In affirming the fundamental tenet of Soka Education, Ikeda states, “What is the fundamental purpose of education? Tsunesaburo Makiguchi, the father of Soka, or value-creating, education asserted that it is the student’s ‘realization of happiness’. (Ikeda xi) While it may be worthwhile at this point to investigate the notion of happiness, for the purposes of brevity and focus on Soka Education in particular, here we will make the next step to the definition as provided by Makiguchi. Ikeda clarifies that for Makiguchi, “…true happiness is to be found in a life of value creation…value creation is the capacity to find meaning, to enhance one’s own existence and contribute to the well-being of others, under any circumstance.” (112) Here, a survey investigation into the meaning of value-creation will help begin the process of uncovering Soka Education’s viewpoint on measurement.

An essential explanation of value-creation is presented through Makiguchi’s explanation of the relationship between persons and the world. Referring to this relationship as the subject-object relationship, he explores the different, but often mistaken, modes of relationship that exists. He begins with the differentiation between the concept of value and truth: “Totally unlike truth, which identifies an object in its essential qualities, value emerges as the measure of the appropriateness of the object for the evaluator.” (Creative Living 60) The basic point is that truth exists separate from the observer, though the observer may be the first to uncover a truth. Makiguchi also refers to the differences of truth and value, with the differences between cognition and evaluation:

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While truth and value are completely different in its conceptual essence, cognition and evaluation are different as mental processes. Makiguchi defines the difference in these two mental processes saying, “The mental operation by which we know things intellectually is termed cognition. Evaluation involves placing a value upon things, or judging…cognition, the perception of the thing among things, is objective, and evaluation, the perception of the thing in relation to the self, is subjective.” (71) While Makiguchi goes on to describe in greater detail differing processes involved in ‘cognition’, this main difference between cognition and evaluation already suggests where a significant part of value-creation education lies, and therefore an initial suggestion to where measurement for Soka Education should take place.
Cognition, the mental process of knowing, and making analyses in comparison to other objects, refers to a non-subjective understanding of the object. Makiguchi also clarifies the difference between the reality of an object and its name, saying, “the reality of the waterfall goes unchanged regardless of what we call it.” (64) In the classroom, cognition refers to the objective understanding of a subject, regardless of the learner’s personal relationship to that object. The process of cognition is not a given; it is a developed skill. Learning how to identify something is an essential skill for functioning in the world – it may be argued that cognition is how an individual can exist in society, and those who are unable, are shut out from the shared conceptual world, from communication which relies on language built on shared cognition, and more importantly, from their own ability to live.

The relationship between humans, in particular, and the world does not stop at cognition. We do not live in the world unbiased, and our individuality is expressed in our differences in preference and sentimentality the world provides us. Here, I’m using ‘sentimentality’ as a commonly used expression noting to the idea of value –objects that we identify as sentimental refer to the value we place on these objects. While this is not the only kind of value, my attempt is to help make the notion ‘value’ more relatable to the audience.

Makiguchi identifies evaluation as the process of creating value saying, “The value is not inherent in the subject (person) nor in the object but is manifest in the attracting or repelling force between them.” (Creative Living 82) Values do not exist pre-formulated in people. Further, they are created whether or not we are able to consciously direct our value-creating processes. Makiguchi states, “Education is a science dedicated to eliciting personal values in teachers, who will in turn guide their students to value creation.” (103) In this sense, value-creation is a process that education needs to be purposed in guiding.

In regards to measuring the development of these two mental processes, it is easy to see how it will occur for cognition. Indeed, perhaps we can argue that the current state of education is primarily concerned with the measurement of the development of cognition in children. When we think about evaluation, however, a measurement in the development of the evaluation process is not intuitive. Even ‘development’ becomes an obscure notion in regards to value-creation, perhaps because it is associated as a subjective process.

To further explore this realm of ‘value-creating’, there are few important points made by Makiguchi that will provide a very initial light in the direction of how measuring a seemingly pure-subjective process is possible. First, Makiguchi points that ‘value’ is attributed to an object on two dimensions. In speaking of the relationship between ‘utility’, or usefulness, and value, Makiguchi states, “utility value means each individual’s subjective profit, while exchange value stands for the utility value which is approved by society at large.” (Philosophy 102) The general point is that there are two meanings to value: an individual (i.e. subjective profit), and a social (i.e. exchange value).

This notion of a social, or exchange, value hints to the possibility of an objective standard of measurement since this value requires a shared agreement on the value of an object by more than one person. It is important to note that this usage of the term ‘value’, in terms of utility, is
an economic notion; ‘value’, used here, does not recognize its essential feature, as something which adds or detracts from the human condition. However, the quality of a value being social, as something recognized by more than one person, may allow us to consider that even a subjective process of creating value can potentially be subjected to an objective standard. In the case of objects, this is not difficult to imagine – any new objective discovered or created is compared with currently existing objects and measured by its rarity/abundance, its analysis as an objective that fills a need, etc. In terms of measuring the ability to ‘create’ the value of this object, we consider how well someone may understand the economic conditions of the market the object would most likely be a part of, and for an object already with exchange value, allow the student to determine what the value might be if the object were new, or in economic conditions with different factors (i.e. more/less of the object).

Makiguchi also speaks of ‘exchange’ value aside from its economic notion when he says, “When subjective and personal gain is objectively acknowledged by the general public, we call it ‘exchange value’.” (102) Based on the economic notion, this would refer to the general value an object has for an individual, shared by many individuals (i.e. value of rice, or food in general). Yet, it would seem that Makiguchi would allow for a broader interpretation, that ‘personal gain’ refers to any notion of value and for any kind of object or action.

3. The cabinetmaker’s apprentice and value-creation

Here, I’d like to propose using an anecdote by Martin Heidegger, an early-mid 20th Century German philosopher, to present a possible example of Soka Education and thereby allow for an analysis on the possibility of measurement.

A cabinetmaker's apprentice, someone who is learning to build cabinets and the like, will serve as an example. His learning is not mere practice, to gain facility in the use of tools. Nor does he merely gather knowledge about the customary forms of the things he is to build. If he is to become a true cabinetmaker, he makes himself answer and respond above all to the different kinds of wood as it enters into man’s dwelling with all the hidden riches of its nature. In fact, this relatedness to wood is what maintains the whole craft. Without that relatedness, the craft will never be anything but empty busywork, any occupation with it will be determined exclusively by business concerns. Every handicraft, all human dealings are constantly in that danger. (Heidegger 14-15)

In Heidegger’s example of a cabinetmaker’s apprentice, the notion of ‘relatedness’ to the wood is significant as the identifier of highlighting why ‘facility in the use of tools’ and knowledge of ‘customary forms’ is not enough. While our current conditions of over-manufactured line of wood products, the dramatic decrease in this kind of occupation and therefore and a dramatic increase in the value of such produced products, makes this kind of example an idealistic one, it may still serve as an example for our purposes.
As Heidegger argues, this ‘relatedness’ to the wood is what ‘maintains the whole craft’, and is ultimately what distinguishes the craftwork from mere manufactured craftwork – if we consider that current mass factory production of woodcraft products is the long-term result of condensing knowledge, making processes efficient, to more importantly fulfill a humanity-wide shared value of wood products, it would seem that factory production is the pinnacle of efficiency in the ‘facility of the use of tools’, and the greatest simplification of ‘knowledge of customary forms’. Without this ‘relatedness’, this nostalgic notion of a cabinetmaker is simply the origins of the factory production phenomenon of woodwork.

In the anecdote, the cabinetmaker’s apprentice is learning how to ‘answer and respond’ to the various kinds of wood, forming a relation, and here, I would like to argue that the apprentice is actually establishing and ‘responding’ to the value of the wood. The inherent qualities of the wood is what distinguishes itself from other kinds of woods, or even other resources in general. The apprentice’s ability to recognize the unique quality, but further, to respond to it by using it in a way that recognizing the unique quality of the wood (i.e. cedar vs. bamboo) embodies the process of creating value. Using the two notions of value, individual and social, we can say that the cabinetmaker’s ability to craft the wood according to its unique quality, making this quality public, and its social recognition or acceptance of the unique quality of the wood, it the process of establishing social value. The individual value here may range from the apprentice developing a certain taste for the kinds of woods he prefers, and an appreciation for all kinds of woods and their unique qualities – indeed, here the social and individual value are intertwined.

What can this anecdote offer in understanding how to measure the creation of value? In a general sense, as measurers, we would look towards how much the apprentice is able to recognize and utilize the unique qualities of the wood, resulting in creative ways of maximizing the woods’ strengths, or even creatively using its weakness in determining the woods use-value. In the apprentice’s investigation of the wood, or development of their relatedness to it, they become cognizant of the values the wood has, as is previously recognized and utilized publicly. We can argue that even if the apprentice’s investigation of the wood, at least initially, only results in the recognition of the qualities of the wood already recognized and applied publicly, the apprentice’s relationship and realization – genuine, and subjectively discovered – can be recognized as value-‘creation’. It may not be ‘creation’, in the sense that it is new to the history of humanity, but it is creation in that the awareness of the wood emerges from a purely subjective relationship with the wood (i.e. not pre-established by conceptual knowledge provided by the teacher). In other words, for the apprentice, it is creation of value; he has discovered the value the wood has on his own.

We can also argue that the discovery of already-known values can be claimed as value-creation by what Makiguchi identifies as ‘cognition of value’. He says, “when we have recognized by retrospection the degree of the mutual influence or relative force between object and subject, we term it the cognition of value.” (Philosophy 79) While remembering that even social values are designated by the relationship between subject and object, the cognition of value can occur whether the value discovered is the first or nth time for the object; in other
words, for the apprentice, the cognition of the value – even if it is already publicly shared – only
refers to the general relationship between the subject and object. When the apprentice arrives at
this relationship on their own, the value is discovered, or ‘created’, subjectively, regardless if
millions of others share that same relationship of seeing the object with value.

To further clarify the relationship between creating value and existing values, we turn to
Makiguchi again for another definition: “[Value] can be divided into the evaluating subject, the
object to be evaluated and the relationship between the two, which is the content of value. That is
to say, we can see that there are two relationships; one to be recognized and one to be evaluated
by the subject.” (Philosophy 79) He states that the ‘content’ of value lies in the relationship
between the subject and object, evaluator and the evaluated. We must be diligent to constantly
keep in mind this definition of value. In terms of measuring the creation of value, it is the
measurement of the relationship between subject and object.

As Makiguchi points out in the ‘cognition of value’, it is through retrospection that we
are able to identify value. Yet, how are we able to retrospect on a relationship that is subjective?
The anecdote of the apprentice tells us that a certain relatedness is needed for a self-discovery of
the unique, or valuable, properties of the wood. One could imagine that a master cabinetmaker
would be able to identify the growth of the apprentice, by the apprentice’s ability to recognize
unique qualities of the wood that is only visible through a close relatedness with the wood.
Further, the master cabinetmaker would look to see, in one sense, how much the apprentice’s
recognition of those values have fully matured. The master sees how creative the apprentice
becomes with the wood, having identified those unique properties, and uncovers unique ways of
using those properties – the master also comes to learn of different ways, albeit very subtle and
simple, the wood’s properties can be expressed.

We see in the anecdote that a ‘cognition of value’ can only occur after much experience
and understanding with the various qualities of wood and the various uses employed in society.
Especially in the trying to identify the ‘relatedness’ level of the apprentice to the wood, the
apprentice themselves would not know how far along they are in understanding the properties of
the wood; to the extent that the apprentice’s understanding of the wood is still novice, in
comparison to level’s of understanding already achieved, a master is needed to help identify
where the apprentice’s relatedness is to the wood, in comparison to what is possible. The master
would thus find creative ways of stimulating the apprentice, leading them to think in different
ways or expose different techniques to enable them to develop their relatedness. In this sense, the
master is the true guide of the apprentice’s journey in creating value.

From the anecdote, we gain some insight on how measurement of the creation of value
may be possible. We also see how the teacher is vital in process of measuring the value-creation
process. The teacher, based on their mastered ‘relatedness’ to the object, can help identify where
the student’s relatedness to that object lies. As quoted earlier, Makiguchi identified teachers as
the ones who will “guide their students to value creation”. Ikeda illustrates the value of the
teacher saying, “We learn from people and it is for this reason that the humanity of the teacher
represents the core of the educational experience.” (Ikeda 117) While Ikeda uses the term
‘humanity’, which we have not specifically investigated, we can still derive the sense that Ikeda is referring to the quality of the teacher as a guide. Perhaps it is not unreasonable to say that humanity includes the realm of value-creation in the educational experience, the realm that exists in evaluation and beyond cognitive process of identifying and conceptually understanding.

4. Murdoch and the student-teacher relationship

An approach to further explore this response to measuring value-creation is in regards to the aforementioned balance between politicized learning and learning as directionless indulgence. Ikeda explains, “Knowledge itself is a neutral tool that can be used for good or evil…Wisdom, in contrast, always directs us toward happiness. The task of education must be to stimulate and unleash the wisdom that lies dormant.” (Ikeda 151) It is important to remember, here, that one expression of Soka Education’s goal is ‘character formation’, “the teaching [of] young people how to live in society and encouraging them to think independently.” (150). The descriptive difference between ‘helping students gain understanding’ and fostering them, helps further present the notion that the teacher measures based on their humanity, or human being-ness. It is who the teacher is that dictates the growth of the learner.

Here, I’d like to introduce Iris Murdoch to explore further how the teacher affects the classroom. In her book *The Sovereignty of Good*, she states:

I can only choose within the world I can see, in the moral sense of ‘see’ which implies that clear vision is a result of moral imagination and moral effort. There is also of course ‘distorted vision’…If we consider what the work of attention is like, how continuously it goes on, and how imperceptibly it builds up structures of value round about us, we shall not be surprised that at crucial moments of choice most of the business of choosing is already over. (Murdoch 36)

The point made here does not support determinism, but argues that our choices, deeply intertwined with how we see the world, are made in realm of possibility based on how we see the world. While a choice we make may have consequences beyond our understanding, our understanding of the consequences of choices available, or viewable to us, is what frames the choices we perceive to have. In this sense, she is talking about the relationship between how one sees the world and how one interacts; they are mutually inclusive.

Murdoch also states that, “Our states of consciousness differ…and they are profoundly connected with our energies and our ability to choose and act.” (82) She argues that the way we view the world, our state of consciousness, and I’d like to argue – our character – is what determines how we engage the world. In this sense, her point resonates with Ikeda and Makiguchi’s, identifying the constructor of the educational experience, namely the teacher, as the vital ‘element’ in the determination of how and what the learner will learn.

In speaking against the politicization of education, Ikeda writes, “Learning is the very purpose of human life…” (Ikeda pg.84) Under that declaration, we also state Makiguchi’s direction that “the most urgent order of business is thus for teachers...to come to a realization of
themselves as learners and of their relationship to others over and above this as that of a guiding aide.” (Creative Living 197) Thus, in reference to Murdoch’s points, the fundamental point to argue here is that the teacher becomes the rule of measure for the student’s growth. To the extent that the teacher has grown in their humanity or state of consciousness, the growth of their students will be determined. Further, to the extent the teacher can grow as a learner, will dictate how much the students are able to grow as learners.

5. Conclusion

To conclude, the present research attempted to unveil some of the underlying principles in the philosophy of Soka that sheds light on how to measure the growth of students’ ability to create value. The dominantly politicized nature of education, and role of measurement has in the politicization, prevents education from fulfilling its potential as a means to help students learn how to live in that way that contributes to life. The notion of ‘relatedness’ in Heidegger’s anecdote of the apprentice gives us a way of seeing how the creation of value is measurable, namely in light of the mastery of the teacher. Murdoch helps us elucidate the quality of the relationship between teacher and student, where the consciousness of the teacher is a significant determining factor in the developing the consciousness of the student, i.e. creativity, the desire to learn etc.

We are far from determining a universal system of measuring the creation of value in education. The present research identifies the teacher as an essential determining factor in the possibility of having an objective standard of measurement. We have yet to consider the point that teachers themselves are not free from the subjectivity of their understanding of their craft. Yet, it seems that the goal of Soka Education, uncompromising in the foundational value that all living beings are precious, and that the purpose of education should serve to help people learn how to become happy, strives to help students arrive at this foundational value through their subjective, value-creating process. In this sense, our search for a standard of ‘measurement’, as we strive to grasp our own subjective journey to becoming successful in living creatively, would force our gaze to the great individuals, to even great literature, to great examples in history that have demonstrated significant accomplishments in the establishment of life-affirming, creations of value.
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Soka Education and Public Health:
Towards a Value-Creating Future

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Abstract
Soka education and public health share the common goal of promoting the well-being of people and society at large. However, there is little to no known literature that studies the two fields in conjunction. Thus, this paper explores some of the parallels between the field of public health and the ethos of Soka education. In particular, we focus on five elements of Soka education drawn from the ideas of Tsunesaburo Makiguchi and Daisaku Ikeda, and corresponding applications in public health practice and training. Based on our inquiry, we suggest that Soka education and public health offer opportunities for synergy, and offer insights into how Soka education can be integrated into the field of public health for the well-being of our society.
Introduction

“Today societies are seriously preoccupied with health. This may be partly because peace is becoming a reality for more and more people. On the other hand, increasing levels of stress may contribute to a real rise in personal anxiety about health. In such an atmosphere, health has become a prime topic of debate and discussion” (Ikeda and Simard XIX).

Health and education are two fundamental pillars of our society that have a direct bearing on our future and are inextricably linked to one another as conditions for the well-being of society. While education is considered a key social determinant of health (Solar and Irwin 31), evidence suggests that good health is essential for optimal learning (Glewwe and Miguel 3562; Jukes S193). Over the past five years, some alumni of Soka University of America (SUA) have pursued graduate training and careers in public health, which is an interdisciplinary field with the mission of “fulfilling society’s interest in assuring conditions in which people can be healthy” (Institute of Medicine 7). Our experiential knowledge suggests that public health and Soka education share similar features such as the common goal of improving the well-being of people and society at large. However, to the best of our knowledge, the two fields have not been studied in conjunction thus far. In particular, the potential applications of Soka education to public health remain unaddressed. In this paper, we introduce the field of public health and explore the ethos of Soka education in five key areas, drawing from Tsunesaburo Makiguchi and Daisaku Ikeda’s ideas and from its application at Soka University of America. We further explore how these aspects of Soka education resonate with elements of public health practice and training, and how Soka education can be integrated into the field of public health for the well-being of our society.

Introduction to Public Health

Public health is traditionally concerned about people’s health status at the population level with an emphasis on disease prevention while clinical medicine focuses on providing treatment to individuals (Merson, Black, and Mills xviii; Novick and Morrow 2). These two fields complement each other to address individual health and population health as a continuum (Novick and Morrow 2–4). A well-accepted definition of public health was developed in 1920 by an American bacteriologist, Charles-Edward Amory Winslow. Winslow defined public health as:

“the science and art of preventing disease, prolonging life and promoting physical health and efficacy through organized community efforts for the sanitation of the environment, the control of communicable infections, the education of the individual in personal hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of social machinery which will ensure every individual in the community a standard of living adequate for the maintenance of health” (30).
In accordance with this definition, public health interventions have been implemented worldwide to prevent the occurrence of diseases, achieve early detection and treatment of diseases, and manage chronic health conditions as three levels of disease prevention. In practice, the scope of public health encompasses a plethora of issues ranging from the prevention of teen violence to controlling disease outbreaks such as Ebola Virus Disease and HIV AIDS.

*Disease* and *health* are key concepts that provide insights into the role and goal of public health. Campbell, Scadding, and Roberts defined disease as:

“the sum of the abnormal phenomena displayed by a group of living organisms in association with a specified common characteristic or set of characteristics by which they differ from the norm for their species in such a way as to place them at a biological disadvantage” (757). This definition is based on the germ theory, which suggests that etiologic agents or micro-organisms such as bacteria and viruses cause disease (Novick and Morrow 11). While evil spirits and filth were once regarded as the cause of disease (Cohen 156; Novick and Morrow 9), public health primarily focuses on the biomedical framework of disease as the basis for disease prevention activities (Institute of Medicine 126).

The World Health Organization (WHO) defines health as “a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity” (1). Although this definition of health has been critiqued for its questionable feasibility and relevance to contemporary society (Huber et al. 1), it has been used as the standard in public health for many years. The primary goal of public health is, therefore, to ensure the well-being of populations through disease prevention, disease control and health promotion. The WHO definition of health suggests that the scope of public health transcends the traditional disease prevention focus to actively promote well-being among people. This notion of *health promotion*—“the process of enabling people to increase control over, and improve, their health” (WHO 1) — suggests the importance of developing people’s autonomy over their lives. Accordingly, the field of public health has begun to recognize the importance of empowering people to be autonomous agents who can actively live a life with a sense of purpose in life for their overall well-being.

In more recent years, the WHO Commission on the Social Determinants of Health has promoted the concept of health as “a social phenomenon”, thereby emphasizing health equity, inter-sectoral action and social justice (Solar and Irwin 10). The commission defines the *social determinants of health* as: “the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness” (WHO, “Key Concepts”). This definition recognizes the influence of larger economic, political and social forces that shape the circumstances of an individual or community’s health status and provides insights into how factors such as education, income, employment status and the built environment contribute to health outcomes (WHO, “Key Concepts”).
Major Milestones in Public Health

Based on scientific advancement, disease prevention efforts made substantial progress in population health in the 20th century. The Centers for Disease Control and Prevention (CDC) noted 10 major public health accomplishments in the United States during the 20th century: 1) vaccine administration; 2) motor-vehicle safety; 3) occupational health at workplaces; 4) infectious disease control; 5) mortality reduction from cardiovascular disease; 6) safer and healthier nutrition; 7) healthier maternal and child health; 8) reproductive health; 9) fluoridation of water for drinking; and 10) recognition of health risks associated with tobacco (“Ten Great Public” 241). More specifically, the scope of vaccine administration significantly expanded from five diseases in 1900 to 26 diseases in 1999; smallpox, polio, measles, and 18 other infectious diseases became newly vaccine-preventable during this period, and a global vaccination campaign led to the eradication of smallpox in 1979 (CDC, “Impact of Vaccines” 244). The United States also experienced a sharp decline in infant mortality rates from approximately 100 infant deaths per 1,000 live births in 1915 to 7.2 per 1,000 live births in 1997 (CDC “Healthier Mothers” 849). These accomplishments illustrate the significance of public health in preventing health issues and promoting healthier lives.

Public Health Training in the United States

In order to foster the next generation of public health professionals and researchers, 52 accredited universities in the United States are currently offering graduate programs for a Master of Public Health (MPH) degree (Association of Schools & Programs of Public Health [ASPPH]). These schools follow a competency-based education model that focuses on the development of knowledge, skills and attitudes (ASPPH, “Educate”). MPH courses place emphasis on interdisciplinary approaches to examine health outcomes and skills acquisition, which includes program planning, evaluation, and budgeting so that students can apply them in real life settings after completing their degree. While each program provides public health training to students with unique strengths and characteristics, some of the common areas of study include biostatistics, epidemiology, community health, health education and promotion, health policy, environmental health, and global health. These sub-fields of public health collectively contribute to analyzing and addressing health problems at the communal, national, and global levels.

Soka Education and Value-Creation Pedagogy

Soka education, which translates to “value-creating education,” originates from Tsunesaburo Makiguchi’s value-creating pedagogy which aims to foster students’ wisdom to create meaningful value in any circumstance. Makiguchi published his educational theory in The System of Value-Creating Pedagogy and entrusted his dream of establishing Soka schools to his disciple, Josei Toda. Makiguchi’s dream was brought to fruition by Toda’s successor, Daisaku Ikeda, who has founded the Soka school system, which includes kindergartens, elementary schools, high schools, and universities across 7 countries (Goulah and Ito 60).
At its core, Soka education is “people-centered” and is based on a philosophy of respect towards the unlimited potential in all persons (Heffron 143). Although educational pedagogy is undoubtedly central to Soka education, we would like to emphasize that Soka education is more than an educational pedagogy. Instead of being a defined methodology, Makiguchi’s value-creating pedagogy has evolved into an ethos of education that has inherited his ideals of education (Goulah and Ito 60). In other words: “Soka education is not a philosophy of education; it is a philosophy of life, one in which the creation of value (Soka) in any and all circumstances forms the central premise (Heffron 144).”

In order to contextualize our exploration of Soka education and public health in this paper, we focus on the following core inter-related aspects of Soka education drawn from Makiguchi’s pedagogy and Ikeda’s works: 1) Value-creation and the happiness of the learner/individual; 2) Global citizenship; 3) Interconnectedness; 4) Experiential learning; and 5) Humanitarian competition.

Value creation and the happiness of the learner/individual

Makiguchi stated that the purpose of education was the happiness of the learner (Ikeda, “Soka Education” xi) and to develop a sense of purpose in life (Ikeda, “On Being Human” 218). He asserted that a happy life can be created through the cognition of truth and creation of value (Goulah and Ito 59). Goulah and Ito describe the cognition of truth as “the accurate cognition of the realities of existence, meaning, and value through direct observation, understanding, and evaluation” (59) while the creation of value can take place in the forms of economic gains, moral good, and sensory beauty through subjective interactions with realities.

In more simple terms, Ikeda has described value creation as “the capacity to find meaning, to enhance one’s own existence and contribute to the well-being of others, under any circumstance” (“Thoughts on Education” 54). Thus, the value-creating pedagogy aims to foster students’ capacity in cognition of truth and value creation for their happiness. However, the creation of value takes precedence over the cognition of truth in Makiguchi’s theory. That is, producing value from any truth is an act of creation more important than discovering the truth (Heffron 145).

Global citizenship

According to Makiguchi, the welfare of the world and the individual’s well-being are inseparable (Ikeda, “Soka Education” 5). Based on this belief, global citizenship is a core feature of Soka education that can be traced to Makiguchi and Toda’s ideals (Goulah and Ito 57). Drawing from Makiguchi’s ideology, Ikeda has described the key components of global citizenship as follows:

“i) The wisdom to perceive the interconnectedness of all life and living;
ii) The courage not to fear or deny difference; but to respect and strive to understand people of different cultures, and to grow from encounters with them;

iii) The compassion to maintain an imaginative empathy that reaches beyond one’s immediate surroundings and extends to those suffering in distant places” (“Thoughts on education” 55).

The importance of global citizenship in Soka education is evident in the mission of Soka University of America (SUA) which endeavors to foster students to be global citizens who live contributive lives in society. SUA’s unique educational curriculum helps students perceive a sense of purpose in life and develop the characteristics of global citizens. For instance, living on a diverse campus, studying a foreign language and experiencing a semester-long study abroad enables students to experience new cultures and learn how to foster mutual understanding with people of different cultural backgrounds. Anecdotal evidence suggests that the study abroad experience can be a turning point for SUA students in developing cross-cultural understanding and respect.

Interconnectedness

The emphasis placed on interconnectedness in Ikeda’s description of global citizenship draws from the Buddhist belief in the interdependence of all life (Ikeda, “Soka Education” 45). This understanding of interconnectivity forms the foundation that enables people to live contributive lives. Based on this belief, Makiguchi endorsed neither a passive, dependent mode of living, nor an independent life in which one is isolated from others. Rather, he advocated a “consciously interactive, interdependent mode of existence, a life of committed contribution” (Ikeda, “Soka Education” 46). In The Geography of Human Life, Makiguchi also emphasizes the importance of finding commonality between human life and natural environment (Heffron 146), which is echoed in one of SUA’s founding principles: “Foster leaders for the creative coexistence of nature and humanity” (Ikeda, “For the Leaders” 15). Based on these ideals, the Soka school system emphasizes a liberal arts approach to foster students’ understanding of the interconnectedness between human beings, their environment and society (Soka University Mission Statement).

Experiential learning

Learning through gaining hands-on experience is a critical element of Soka education, as it connects classroom learning with societal realities, thereby contributing to the individual’s holistic development. In addition to academic learning, Makiguchi’s pedagogy incorporated strategies and opportunities for students to develop themselves through societal interactions and extracurricular activities “in real-life settings” (Ikeda, “Soka Education”17-19). In contrast to his Japanese educational contemporaries who favored conceptual theories, Makiguchi also emphasized experience for teachers and encouraged them to evaluate their daily teaching experiences for successes and failures (Ikeda, “Soka Education” 10). The concept of experiential
learning in Soka education can be illustrated through the unique Learning Cluster program at SUA. Learning Clusters are 3.5 week-long research seminars that examine specific topics in-depth and frequently incorporate a significant field/practical component. This active experience of engaging with local, regional or global issues helps foster a sense of global citizenship among students (Soka University of America).

Humanitarian competition

In his book, *The Geography of Human Life*, Makiguchi shares his observations on the direction that human civilization has taken. Through his comprehension of Darwin’s theory of evolution, he recognized that competition can function as a driving force in human development and history (Ikeda, “Soka Education” 6). While the nature of competition has historically been economic, political and/or military, Makiguchi proposed the concept of “humanitarian competition” for the future direction of humanity (Ikeda, “Humanitarian Competition” 5-6). Humanitarian competition refers to a competition between people and nations based on interrelatedness and cooperation to “make the greatest contribution to human happiness and well-being” (Ikeda, “Soka Education” 7). This would also entail that nations would need to work towards proposing solutions that will not only benefit themselves but others as well (Ikeda, “Soka Education” 7). Through this concept of humanitarian competition, Makiguchi proposed a synergy between the humanistic qualities of individuals and societies, and the reality of competitive tendencies (Ikeda, “Humanitarian competition” 6). Thus, Makiguchi envisioned an age in which humanitarian competition would be a stronger force than economic, political or military power (Ikeda, “Soka Education” 6-7)

Public Health and the Ethos of Soka Education

In studying the ethos of Soka education and public health in conjunction, this section focuses on the aforementioned aspects of Makiguchi’s theory and Soka education and explores some of the existing parallels in public health.

Public Health, Value Creation and Happiness

Ikeda describes Makiguchi’s essential criterion for value as “…whether something adds to or detracts from, advances or hinders, the human condition” (“Soka Education” 16). Using this criterion to evaluate the fundamental purpose of public health, we suggest that public health inherently seeks to “create value” by alleviating ill-health and human suffering. Makiguchi keenly observed the connection between health and happiness, and stated that, “Health is the physiological foundation of happiness” (Makiguchi and Birnbaum 27). Therefore, public health helps establish one of the fundamental conditions for developing a happy, value-creative life through its efforts to secure healthier lives for people. As an applied field, public health is not limited to discovering “truths” but focuses on harnessing such information to improve the human condition.
Soka education’s goal of helping people cultivate a sense of purpose in life (Ikeda, “On Being Human” 218) also resonates with the goals of health promotion. Empirical evidence suggests that having a purpose in life is positively associated with desirable health outcomes. More specifically, having a purpose in life has been linked with greater life satisfaction, living longer, being more proactive about one’s health, using more preventive health services and spending fewer nights in the hospital (Bronk et al. 500; Hill et al. 1485; Kim et al. 16331). Thus, value-creation and good health seem to be closely connected in numerous ways.

Public health and global citizenship

In light of the increasing interdependence of people and nations through globalization, there have been efforts to foster future public health professionals as engaged global citizens. Empirical evidence comes from the University of Saskatchewan in Canada where a sequence of two global health courses have been offered for this purpose since the late 1990s (Hanson 71). The first course provides students with volunteer opportunities at local community-based organizations and encourages them to reflect on the meaning of their experiences in class. In the second course, students spend six weeks in Nicaragua for a field study while continuing the reflection of their experience through discussions. As such, the courses have constantly promoted a cycle of reflective discussions and social action. According to Hanson, this educational approach contributes to developing students’ inward and outward dimensions as global citizens, characterized by internal awareness about interdependence of global communities and subsequent contributive actions in society (76-77). Education for global citizenship in public health, therefore, can be further developed by placing emphasis on actions based on the foundational characteristics described by Ikeda.

Public health and inter-connectivity

The concept of inter-connectivity espoused by Soka education is fundamental to public health. The idea of disease transmission, for instance, essentially relies on this concept of interdependence among people, and between people and their environments. Public health is also an inherently inter-disciplinary field, which draws from a variety of subjects including biology, social and behavioral sciences, environmental studies, statistics, law and economics. The “social determinants of health” approach to public health further transcends the predominantly biomedical approach to health and describes a broader spectrum of inter-connectivity through its inclusion of non-health sectors and factors (Solar and Irwin 10).

Despite the need to address multiple levels of health determinants, public health professionals often approach public health problems with behavioral interventions implemented at the individual level that do not consider the social determinants of health (Wallack and Lawrence 567). Wallack and Lawrence attribute this to a disconnect between the “language of public health” which emphasizes interconnectivity, and the primary language of the United States, which emphasizes individualism. Thus, they place emphasis on the need to consider
larger conditions and “collective choices” in addition to personal responsibility in health outcomes. To illustrate, they cite the successful instance of addressing gun violence in California by using “the language of community” to reframe violence as a public health issue instead of a criminal justice issue (569-570).

Further, the role of interconnectivity in global health is becoming more apparent because of factors such as globalization and epidemics. However, Wallack and Lawrence observe that “recognizing the pragmatic reality of interconnection does not necessarily lead to accepting the normative value of interconnection…” (569). Thus, they caution that a greater awareness of interconnectivity in global health must be promoted without bolstering xenophobic fears and panic that often surround disease epidemics (569).

Public health and experiential learning

As a practice-oriented field, public health has recognized the importance of incorporating experiential learning as part of graduate training. In order to ensure that public health students gain adequate knowledge and skills in research and/or program management, MPH programs in the United States often require students to have a practicum or internship experience. This form of “applied learning” enables students to polish practical skills in their chosen specialties (e.g., biostatistics, program evaluation, policy advocacy) and be prepared to work as effective public health professionals (ASPPH, “Framing the Future” 4).

Public health and humanitarian competition

Humanitarian competitions in public health can be understood as competitions for improving public health based on innovative ideas and effective program implementation. The Bill & Melinda Gates Foundation, for instance, has called for innovative ideas to solve major global health challenges (e.g., vaccine development, infectious disease control, sanitation) and has provided funding for research and programs worldwide since 2003 (Varmus et al. 399). In addition to the Gates Foundation, a number of national and international organizations around offer funding for public health research on a competitive basis. Competing for these funding opportunities with the humanitarian goal of improving public health could be a catalyst for public health professionals to develop creative and effective approaches to global health problems. This resonates with Ikeda’s call for humanitarian competition in developing innovative financing mechanisms to address ill-health, sanitation and poverty (Ikeda, “Humanitarian Competition” 12).

Soka Education and Public Health: Opportunities for Synergy

We have seen that certain aspects of public health application and training resonate with the core values and approaches of Soka education. With this in mind, we believe that there are opportunities for synergistic interactions between the two fields towards their mutual goal of
human well-being and social good. In particular, we suggest that Soka education can supplement public health in the following ways.

**Soka education to foster public health professionals**

Drager and Beaglehole have identified a need for “a new kind of public health workforce” which is capable of minimizing the adverse effects of globalization on public health, while maximizing the advantageous ones. According to them, public health personnel must possess the skills and knowledge necessary for inter-sectoral and cross-border engagements for health and social goals (803). Hanson further observes that the current global health education tends to remain bio-medically-focused and neglects the sociocultural understanding of health issues. Without adequate attention to critical social science perspectives, global health ethics and the internalization of learning, the international practicum model in public health programs can inadvertently reinforce attitudes of cultural or professional superiority (74). Thus, there is “…a need for improved pedagogies and alternative curricula to encourage not only culturally sensitive professional or clinical practice, but also personal transformation and extended understanding of and commitments to social change (Hanson 75). We believe that Soka education’s intrinsic focus on global citizenship, the learner’s personal growth, and the liberal arts, position it to complement public health education in fostering a culturally sensitive public health workforce.

Further, Soka education could play a key role in bridging the gap in promoting the “language of interconnectivity” in public health, highlighted by Wallack and Lawrence (567). As discussed earlier, Soka education enables learners to perceive interconnection and interdependence, ranging from inter-personal to environmental connections through an interdisciplinary, liberal arts approach. Soka education’s focus on global citizenship can also counter the challenge of xenophobic fears articulated by Wallack and Lawrence (569).

In a sense, public health can be considered as a practical field for applying Soka education to create value in society. At present, neither of the Soka universities offers a public health program although Soka University of Japan offers a nursing program. Therefore, we advocate the expansion of Soka curricula in these institutions to include courses and opportunities for public health training. For instance, SUA students could design Learning Clusters around public health-related topics and contribute to improving the health status of communities while gaining essential knowledge and skills in this field. Additional interdisciplinary courses related to health can also prepare current Soka students for further training in public health.

Since Soka education is not limited to the Soka schools, the ethos of Soka education could be further incorporated into and articulated by training programs for public health. The curriculum policy for Soka University’s nursing program enumerates the following principles, which can serve as a model for incorporating the principles of Soka education into training programs for health professionals:

1. Delve into the principle of life’s inherent sanctity and develop a robust understanding of life and death.
2. Acquire a comprehensive understanding of human beings as well as the expertise and skills to practice nursing based on scientific evidence.

3. Acquire the basic ability to establish cooperative synergy among the fields of nursing, health, medical services and social welfare.

4. Acquire the ability to sustain a lifelong commitment to self-improvement and learning in order to adapt to an increasingly complex environment.

5. Acquire the ability to understand general health issues from a global perspective and to cooperate with the others in the international community” (Soka University Faculty of Nursing).

Conclusion

Soka education is based on respect towards the lives of all human beings, and its people-centered focus has been the basis for training students as contributive global citizens. Public health, which focuses on the health and well-being of our communities and society, is an expansive and dynamic field with multiple concurrent discourses. Therefore, we cannot claim to provide a comprehensive characterization and comparison of its ethos with Soka education. Areas for further studies in this context could include inquiries into the application of value creation pedagogy in cultivating a sense of purpose to improve health outcomes. Further, Soka education’s model of participatory learning and the use of participatory research methods in public health could also be compared.

In our paper, we have drawn parallels between certain aspects of public health and five characteristics of Soka education, i.e. value-creation, interconnectivity, global citizenship, experiential learning and global citizenship. In doing so, we perceive a great potential for synergistic efforts between both fields and hope that this paper offers a starting point for the further discussion and application of Soka education in public health. In particular, we propose the future development of public health programs at the Soka universities. Finally, we look forward to further research and collaborative action between the fields of Soka education and public health, as we continue to reflect on the applications of Soka education in our individual public health careers.
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Radical Student-Centeredness in the Creative Writing Workshop

Darin Ciccotelli

Abstract

This essay argues for radicalized student-centeredness in the creative writing workshop, focusing on how a wholly interpretive space can better facilitate the processes and action/reflection cycles within experiential learning. In reviewing recent creative writing scholarship by Hunley, Donnelly, Leahy and Vanderslice, justifications for the discipline have lead to an overemphasis on craft knowledge and prescription, practices that have already diminished student-centeredness in the field. The goal of this essay is to demonstrate how an emphasis on interrogation, particularly as it relates to deconstruction, feminist theory, identity and accountability, can accentuate the values already inherent to workshop practices.
In “It Doesn’t Work for Me: A Critique of the Workshop Approach to Teaching Poetry Writing and a Suggestion for Revision,” Tom C. Hunley denounces the widespread use of workshops in creative writing pedagogy. In doing so, he gives us the most pointed example of what has become a theme in recent scholarship, questioning the privileged position of workshops in the field. Initially, Hunley offers two hypothetical scenarios as his way of demonstrating the problems of today’s workshop practices. In his imagined classrooms, teachers give brief, lazy interpretations (“It’s a bit sentimental, isn’t it class?”) while students bloviate (“The religious imagery is too Miltonic”) or make baseless comments (“The long lines are a risk, but you get away with it”) (1). He portrays students as unschooled when it comes to craft knowledge:

She is also concerned because she vaguely knows of forms such as the villanelle and the ghazal, but she isn’t confident about her ability to identify and define them, much less write them. As an unconscious means of hiding these insecurities and protecting her status as class star, she finds herself using terms such as ‘enjambment,’ ‘pentameter,’ and ‘metonymy’ without quite knowing what they mean. (2)

For Hunley, the workshop exists as an empty collaboration—a simulacrum. Both faculty and students take up prescribed roles as opposed to transacting real knowledge.

Hunley argues that “[t]he traditional workshop model of teaching undergraduate poetry writing has gone virtually questioned for the past seventy years and has been ratified by hundreds of universities, treated as the way to teach creative writing, despite a paucity of studies or empirical evidence or proof” (2). His is a useful cautionary. Workshops have overwhelmed creative writing for the better part of five decades, due mostly to those young faculty members who recapitulate what they were taught as well as those MFA programs which forgo teacher training and pedagogical theory (5). But there is also a question of proportion. Questioning the wholesale incorporation of workshops does not prohibit their occasional use. If anything, Hunley speaks less to theory than implementation here. After all, he criticizes today’s faculty for being lazy: “[t]he pedagogical methodology most commonly used in American colleges functions more as a convenience for the instructors than as a vehicle for meeting the needs of students” (2).

When they aren’t lazy—or maybe because of it—Hunley’s workshop leaders dominate their respective classes: “While the traditional workshop model ostensibly promotes student-centered classrooms, with students interacting in a circle rather than passively listening to lectures while sitting in rows, in practice it is more often teacher-centered, catering to the professor’s need to perform professorial duties in as expedient a manner as possible before returning to his/her own writing” (6). Are these traits truly inherent to workshop theory? Aren’t they the more likely result of a half-century of unchecked practices?

Hunley’s not alone in this questioning, particularly when it comes to more teacher-centered workshops. Wendy Bishop and Patrick Bizzaro also portray workshop facilitators as an obstacle to the student-centeredness of the course. In Released Into Language: Options for Teaching Creative Writing, Wendy Bishop calls contemporary workshops “unimodal,” characterizing them as a place wherein “students are encouraged to rely too heavily on the mediation of the teacher” (142). Patrick Bizzaro investigates the phenomenon further;
Responding to Student Poems: Applications of Critical Theory refers to such instructors as “exemplar readers,” and they are the disseminators of ingrained New Critical practices, identifying “norms” and standards in student texts. By participating in such, they unravel the student-centeredness of the course: “[u]sing New Critical values in evaluating student writing thus requires students to believe that the teacher’s reading of the text, as the meaning rendered by an exemplary reader, is the text as it really exists” (41). Of course, Bishop and Bizzaro identify these shortcomings so as to reinvigorate workshops, not replace them. As Dianne Donnelly writes in Does the Writing Workshop Still Work?, most theorists seek a greater understanding of workshops, “not a dismantling of the workshop model or even a simple re-tooling . . . but rather a more enlightened view of the model as an intelligent and robust pedagogy” (7).

Before we minimize what has been, according to Anna Leahy, the “signature pedagogy” in creative writing since its inception, we should ask how a move away from workshops would affect student-centeredness in our classes (65). Hunley, for one, rarely speaks in constructivist terms. He, instead, focuses on students’ deficits. In revisiting the history of workshop model, he presents the Breadloaf Writers’ Conference, whose faculty included Robert Frost, Louis Untermeyer and other luminaries, as proof that “[t]he workshop model was not designed with undergraduates or the ruck of graduate students in mind. It was designed for gifted, elite writers who needed very little instruction, though they may have benefited from criticism on their manuscripts” (3). Later, citing both Wallace Stegner and Bruce Bawer, Hunley identifies the need for “rigor,” “discipline” and “craft” in traditional workshops (8). He invalidates process-based and expressionist pedagogies, saying that “[w]orkshops that do not emphasize technique risk encouraging students to pass off chopped prose diary entries as poetry” (8). Also, according to him, “students often lack the terminology needed to intelligently critique each others’ writing, even after participating in several different workshops” (9).

Even in a generous reading, these arguments come close to elitism. Moreover, they preoccupy themselves with both craft knowledge and acculturation at the expense of student-centeredness. Is there any reason to think that Hunley’s pedagogy from Teaching Poetry Writing: A Five-Canon Approach, a pedagogy based on classical rhetorical theory, will be less “unimodal” than the earlier hypothetical workshops? He tells us that “[a]mong the primary benefits of using the five canons of rhetoric in poetry writing classrooms is the fact that this method can make instruction more systematic, less haphazard” (29). One of its ancillary benefits is how “it provides student poets with a greater arsenal of figures and tropes” (29). This theory isn’t inherently “unimodal,” yet it may be implemented to be so. [compare with Hunley’s hypothetical, switching out literary terms for rhetorical ones]

If we follow Hunley’s recommendations to their logical conclusion, we will concede our most active site for learning in the creative writing classroom. Consequently, while it is worthwhile to challenge the omnipresence of workshops, we should also remember their inherent strengths. In fact, disciplines across the university aspire to the student-centeredness that exists in the today’s creative writing workshops. If anything, perhaps what has soured workshops is neither the lack of craft knowledge nor prescription but the over-emphasis on both. What if we
facilitate creative writing workshops to be less “systematic” in their dissemination of craft knowledge and more radical in their use of a wholly interrogative space? This essay will argue for such radicalized student-centeredness in the creative writing workshop, focusing on how the interpretive activities of a workshop can and should mean more than any prescription for a text. Craft knowledge may be assimilated in such classes, but it should not be the primary purpose of workshops to disperse such knowledge. Moreover, radicalized student-centeredness should emphasize both writers and readers, exploring how the latter is changed in terms of identity and accountability. In doing so, it will allow students to investigate, solve problems, assume responsibility and engage in critical reflection—the key benefits of a student-centered classroom.

Before delving into this radicalized view of student-centeredness, we must first establish a context for why and how student-centeredness, particularly in the form of workshops, benefits students in the university. Recently, theorists and pedagogists in creative writing have focused less on foregrounding such constructivist values when they argue for the worth of the discipline. In “Teaching as a Creative Act: Why the Writing Workshop Works in Creative Writing,” for example, Anna Leahy validates workshops for three reasons: creativity, community and the self. She argues for workshops because they complicate notions of creativity, showing students “how to be curious as writers and how diligence and effort—practice, bum in the seat, revision—matter more than talent” (67). She reinforces the need for community, telling us that “while the act of writing requires isolation and individual effort, community is often especially important for creative production” (67). Finally, Leahy encourages workshops to push against the so-called self, prioritizing the task of writing over self-esteem (69). Yet she never spells out the benefits of experiential or learner-centered education as part of her argument. Leahy clearly understands such benefits. She simply de-emphasizes such justifications in favor of more teacher-centered language. For example, when she argues for the workshop as a site of collaborative learning, she talks about it in terms of labor practices and skill-building, a more commodified language than one might expect in defense of collaboration (68). From there, she continually inserts teachers into that collaborative process as part of her justification; examples include “the workshop with an informed, engaged teacher orchestrates . . . social interaction among individuals with varying expertise working toward cohesive goals” and “it’s crucial for the creative writing teacher to set guidelines” (68). This particular version of collaborative learning—a traditionally student-centered approach that allows for problem solving, interpretation and the assumption of responsibility—sounds highly structured and mediated.

To be clear, this is not a criticism of Leahy’s text. Instead, we should simply understand it as evidence of how recent theorists have framed experiential and student-centered activities in creative writing. Interestingly, Leahy cites a number of cognitive scientists and neurologists in her arguments. She gathers evidence from Alice Flaherty, Nancy Andreasen, and several articles from the journal Scientific American Mind. In doing so, she speaks to the reliability and verifiability of such arguments. Creative writing pedagogy has fixated on such reliability in recent years, as it continually answers (or is forced to answer) the question “Can creative writing be taught?” Leahy herself attempts to move past the issue: “While the question ‘can creative
writing be taught?’ still lingers, the field has largely learned in an environment that values creativity, establishes a community, and respects the individual” (67). Yet in justifying the field, has something else been lost? In searching for this patina of verifiability, have we over-emphasized the content knowledge within creative writing workshops? Have we focused on reproducibility instead of student-centeredness? Moreover, have we done so at a time when post-process theories of composition now undermine knowability and reproducibility?

In “Promoting student-centered forms of learning across an entire university,” David Kember reminds us that, “[f]or those charged with improving the quality of teaching and learning in universities, an abiding concern has been trying to persuade academics to shift from teacher-centred forms of teaching towards more student-centred approaches” (1). Overemphasizing the content knowledge and verifiability of our discipline might eventually lead to a shift in the wrong direction. For this reason, creative writing must emphasize the values inherent to its student-centered approach.

Cheryl Estes clarifies these values in “Promoting Student-Centered Learning in Experiential Education.” First, Estes defines student-centeredness when she writes, “for education to be at its best, the learner must be the one who processes the information from educational experiences. Student reflection on experience is deeply embedded within experiential education paradigms” (142). In quoting the Association of Experiential Education’s definition, she names the specific ways in which learners process information: “posing questions, investigating, experimenting, being curious, solving problems, assuming responsibility, being creative, and constructing meaning” (142). For Estes, such processes engage in what Laura Joplin calls the “action-reflection” cycle, a dynamic circumstance in which learners respond to their own situational feedback. Finally, Estes reminds us of a central tenet of student-centered and experiential learning: “the learner’s experience is the valid basis for knowledge” (142).

Perhaps no other university pedagogy engages as many student-centered processes as the writing workshop. Moreover, it facilitates these processes when students take up either author or reader roles. As authors, students must pose questions to themselves as they consider readers’ interpretations of their work, asking how much or how little of readers’ feedback to incorporate into their vision of a text. Authors often pose literal questions to the workshop after they’ve heard such feedback, participating in the application of new knowledge. More importantly, even in introductory workshops, authors pose questions to themselves and investigate as they manufacture personas or points-of-view. They engage the constructedness of identity here, and it is this voice-construction that remains the primary industry in most workshops. In The Program Era: Postwar Fiction and the Rise of Creative Writing, McGurl writes extensively about how voice creation (or self-creation), typified by the “find your voice” maxim, continues to be the primary enterprise of creative writing:

Foremost among the original entities created by creative writing, it was assumed, would be the personality of the student herself, who in a circular process of literary-existential autopoiesis would find and fashion a self—call it a realist fiction of self—in the very act of creative self-expression. While this imaginative writing practice was understood to be
Based on personal experience, it might be more accurate to say that it completed the process of “experience” as theorized by John Dewey, for whom “mere activity” in the world does not count as authentic experience until it is “connected with the return wave of consequences” that load “mere flux . . . with significance.” Intensifying the feedback loop that transforms actions into meaningful experiences, creative writing contributes to the “continuous formation” of the individual who is the sum of these experiences (86).

With these poems, essays or stories, students certainly experiment with a whole constellation of rhetorical and literary ideas. Moreover, in-class writing assignments complicate such experiments, introducing new ways of thinking about invention. (In my own classes, students play with language- and subject-based prompts, juxtapositions, surrealist techniques, forms and syntactical imitations so as to widen their exposure to possible approaches.) Those workshops that require revision also facilitate problem solving in the most concrete way, asking students to trouble-shoot on a smaller level while re-imagining the text on a larger level. Even within the workshop itself, however, as peers interpret a text, students solve problems when they reconcile their own original vision of a creative work with divergent and often irreconcilable readings of it. In doing so, authors assume responsibility for both texts and their identity, no matter how constructed the latter may be. The authors’ attempts to “be creative” and “construct meaning” are obvious here.

Yet for all of the experiential and student-centered benefits the workshop offers to writers, it might be more impactful to readers. For years, many of us have heard this workshop truism in some form: “The day you’re workshopped is the day you learn the least.” In evaluating student-centered processes for readers, we understand why this is the case. Students must pose interpretive questions, investigate, be curious, solve interpretive problems, assume responsibility for their readings and construct meaning in every workshop class. Moreover, such interpretations take place in a public community and deeply affect both the author and their class’s perception of that reader. Therefore, the stakes in such educational practices are far higher if compared with a discussion of some long-dead literary figure. In more than a decade of teaching writing workshops, I’ve seen how keenly students attend to the intellectual and ethical ramifications of reading. They attach themselves to various aesthetics, subjects or schools, often at the expense of others. Moreover, they build alliances with each other, learning how to protect workshopped texts while also deconstructing them in some way. Our attachment to author and reader identities within the workshop facilitates our experiential education.

Moreover, this experiential education takes place because most of these processes—posing questions, investigating, experimenting, being curious, solving problems, being creative, and constructing meaning certainly apply here—engage what Joplin calls an “action/reflection” cycle. In each of these processes, students evaluate the social and collaborated interpretations of a text alongside individual interpretations, which accelerates the transaction of real and experiential knowledge. When defenders of institutionalized creative writing programs—often, they are defenders who take up the explicit cause of MFA programs, for those detractors who repeatedly ask the “Can it be taught?” question do so in opposition to such graduate programs—
cite community and financial support as their justifications, they forget how this “action/reflection” cycle advances a writer’s education. Defenders must remember these pedagogical benefits or else they will be doomed to answering the “Can it be taught?” question ad infinitum. (For an example of this type of non-pedagogical defense, one might read George Saunders’ “A Mini-Manifesto” from the MFA vs NYC: The Two Cultures of American Fiction anthology.) Creative writing students participate in far more decisions and take far more intellectual actions than they would in isolation. When writing facilitators say that “the workshop is smarter than any one person”—again, a popular truism—they simply mean that a workshop offers a varied sample of readings and interpretations, which means that more interpretive possibilities will be explored. These interpretations lead to more actions and reflections.

(Note: some detractors say that this accelerated interpretive space leads to homogeneity, as students will inevitably coalesce into one type of writing or what Donald Hall pejoratively refers to as the “McPoem” (para. 29). If anything, I’ve found the opposite to be true. By exhausting the set of possible interpretations, students work harder to construct more original aesthetics, leading to a greater heterogeneity of texts. To my mind, the past two decades of contemporary American poetry—a poetry largely written by MFA and PhD graduates—proves this point.)

Finally, because students have a more focused attention on either their own or their peers’ work than they might a traditional literary text, the workshop can exist as a site for acquiring craft knowledge. In this way, it can satisfy theorists like Stephanie Vanderslice, who writes, “the workshop must be refocused to include content that enhances skill building and craft” (33). It can satisfy Anna Leahy, who develops a common craft knowledge and vocabulary at the outset of her workshops (72). If anything, this craft knowledge drives the Piagetian notions of assimilation and accommodation, for it specifies and gives words to all the new information students take in from the outside world as well as how they might reconfigure their interpretive processes in response to that information. While I similarly construct a craft vocabulary in my own workshops, such a vocabulary remains a means for deepening our interrogations of the text. We must not overemphasize said vocabulary to the point of obstructing those processes and action/reflection cycles that exist in the student-centered workshop.

With these notions of student centeredness in mind, we begin to see why workshops should be preserved and how more radical approaches to workshopping can further emphasize these processes and action/reflection cycles inherent to the student-centeredness pedagogy. I believe that the workshop should exist as a wholly interrogative space, one that eschews prescription and holds as many simultaneous interpretations and contingencies as possible. To call this a radical student-centeredness does not mean it is necessarily political. I use the term radical to suggest just how far workshop facilitators can and should go in their questioning of the text. If we can manage it, we will facilitate greater questioning, investigating, experimenting, problem-solving and meaning-construction in our students. Moreover, we will allow them to
assume a greater responsibility in terms of their own respective texts, minimize the teacher-centeredness of New Critical approaches.

My workshops often begin with a blanket interpretive question: “What is this poem about?” (From this point, my examples will be poetry-specific. While poetry lends itself best to this interrogative approach, as it is more likely to make use of ambiguity and juxtaposition, this workshop model can serve all creative genres.) This question allows students to make cursory interpretations of the text. By interrogating what the poem’s “about,” of course, we invite students to concentrate on thematic content at first, so they often give several possible interpretations. Early in the semester, some students might offer revision suggestions or prescriptions at that time. But I explicitly hold them off, usually telling them that “I want to wait on any revision suggestions until we know what the poem actually says.” The workshop then performs as a New Critical space, engaging in a close reading of the text. Here I ask, “What does the poem actually say?” or “What is the narrative or occasion within the poem?” Now, in this second phase of the workshop, we consider the text chronologically or structurally. If anything seems radical to students here, it is the microscopic attention we turn toward the text, interpreting the poem in terms of its narrative, image, lineation and syntax. In many workshops, this second phase acts as fodder for a later prescriptive phase, wherein peers offer revision suggestions to the readers. But I refuse the later tendency. Instead, I build multiple interpretations of the text and then ask more questions that are contingent upon the interpretations. In doing so, I elongate the interpretive activity of the workshop to (and sometimes past) its logical consequence.

For example, imagine a poetic lament from some unidentified “I” persona to an equally unidentified “you” persona. In Dickinsonian fashion, the “I”/”you” binary could represent a lover to her beloved, a poet to her reader or a believer to her god. In this circumstance, instead of preferring one interpretation to the others, my facilitation of the workshop would always be contingent on the three readings. So I might ask, “How do the shorter lines and abrupt enjambments of the poem speak to this interpretation of the poem as between lover and beloved?” After sufficient feedback, I would ask, “How do they speak to the poet/reader interpretation?” and so forth. Once the workshop exhausts these questions—and it will surprise you how long such questioning can take place with real and positive results—students crave some prescriptive or revision-based comment from me and the other workshop participants. While I don’t refuse them commentary, what I offer is a highly contingent set of questions that they might continue asking as they revise the poem—a set of questions that may or may not lead to a new set of craft considerations. Instead of telling a hypothetical student to cut a particular stanza, my approach would sound more like this: “if you want to privilege the lover/beloved readings of your poem, and if you want those readings to produce an ambiguity in terms of the final conclusion, you might ask how removing or reordering the stanzas would produce such ambiguity.”

To my mind, the closest theoretical precedent for this type of workshop can be found in Mary Ann Cain’s “‘A Space of Radical Openness’: Re-Visioning the Creative Writing
Workshop.” Cain responds to student work by way of three separate strategies: observation, interpretation and evaluation. In observing, she and her students simply introduce what they notice in a text, identifying details and patterns. In interpreting, they anticipate what those details and patterns might mean. But instead of evaluating some objective worth of the text, she and her students evaluate how they, as readers, value what they have observed and interpreted (229). They do so without any claim to authority, and they refuse prescriptions. Moreover, Cain identifies such practices as “radical,” for she sees creative writing as sharing “in this ‘radical’ moment where the usual oppositions between academic knowledge and practical knowledge – the knowing ‘that’ versus the knowing ‘how’ – [are] disrupted” (221). That said, Cain contextualizes such activities by asking of the text the question “Does it work?” Furthermore, her work, to use Edward Soja’s terminology, “[‘spacializes’] that question so that our understanding of how [the text] works within specific social, textual, and material spaces is engaged” (218). Such rhetorical contextualizations make all the sense in the world, but in my workshops practice, I keep them at bay in these first two stages of the process, as I do not want them to prejudice student-centered processes. At the moment that such questions become generative more than obstructive, however, I think they serve the interrogative space well.

It should be noted that my interrogative workshops also take cues from Patrick Bizzaro’s Responding to Student Poems: Applications of Critical Theory in an attempt to complicate the types of questions and interpretations being formed in the workshop. In his study, Bizzaro applies various theoretical frameworks to the writing workshop and in doing so discovers worthwhile ways of changing said workshops. Since my own interrogations in that second phase have a New Critical underpinning to them, I find Bizzaro’s applications of deconstructionist and feminist theory useful and necessary as a counterbalance to the close reading in the workshop. First, when applying deconstruction to the workshop, Bizzaro writes that “a deconstructive pedagogy—if such an approach to teaching, writing, and evaluating writing is possible at all—will be founded chiefly on the issue of difference, on analyzing the incongruities in a text, on applying pressure to a poem’s seems and thereby uncovering what has been intentionally or unintentionally excluded” (95). Bizzaro builds his pedagogy out of these potential exclusions, asking what the text opposes, what it privileges and what it makes dominant. From there, after isolating the hierarchies in the text, he reverses them. And he eventually holds up dominant readings and their reverses so as to interrogate them both (99). Furthermore, in applying feminist theory to his workshops, Bizzaro goes on to ask who or what is silenced in the text: “I believe that in using deconstruction, a reader determines what has been consciously or unconsciously excluded from the text; in using feminist criticism, the reader searches for what has been silenced” (146).

Once the workshop applies these theories to its radical interrogation of the text, it necessarily arrives at a third phase of the work: questions of identity. After discussing how texts might exclude or silence, it seems logical to ask how the text engenders an identity or authorial persona. Obviously, the workshop makes no claims to the authenticity or factual existence of this persona; workshops often foreground the constructedness of such personas and stress that
they exist as rhetorical concepts separate from the author herself. But such interrogations seem
necessary, particularly in light of how New Critical approaches avoid such questions. In reading
Junot Diaz’s “MFA vs POC,” for example, one understands the problem with such exclusions.
Diaz explains how his “workshop reproduced exactly the dominant culture’s blind spots and
assumptions around race and racism (and sexism and heteronormativity, etc)” (para. 11). Some
instructors might attest to the value of these New Critical silences, as they are supposed to
privilege craft analysis over intentionality, yet Diaz maintains, “I was a person of color in a
workshop whose theory of reality did not include my most fundamental experiences as a person
of color—that did not in other words include me” (para. 15). Such injurious practices impede
upon the student-centeredness of the course, as they traumatize participants in the workshop to
the point that they disrupt the action/reflection cycles as they relate to writing. Instead of
interpreting, investigating, solving problems in regard to and assuming responsibility for both
text and interpretations of text, students apply these processes to the culture of the course.

Finally, in addition to questioning identity as it is suggested by the text, facilitators
should hold texts accountable the world. To do this, readers must interrogate how texts change
them—how texts reaffirm or complicate their respective worldviews. This sounds like a lofty
question, but since it positively influences both authors and readers, students adapt quickly to its
claims. First, by ending with questions of accountability, we take student authors seriously. We
identify them as impactful and consequential. While prescriptive workshops inevitably focus on
the negatives of a text, participating in a fix-it enterprise that undermines students’ confidence in
their work, questions of accountability emphasize how writing influences us—a more positive
conception. More importantly, as Barbara Couture tells us in “Writing and Accountability,” such
social knowledge in turn affects an author’s own conceptions of being and writing: “To be
accountable as a writer, we must acknowledge our engagement with others as a precondition for
formulating our own ideas” (35).

Yet accountability deeply impacts the reader as well. Questioning how the text affects
them lets readers take ownership of the text. As a result, they engage in a second set of student-
centered processes, investigating and constructing meaning in relation to their lives. Not only do
they interpret the text as an artifact of authorial importance, but they interpolate the text as a
thing that will change them. Couture implores us to “evaluate how individuals are affected in
their concrete interactions with the physical work as a result of their writing and reading” (38).

In conclusion, such radical student-centeredness amplifies what workshops already do
well, empowering students within the processes and action/reflection cycles of experiential
education. The radical student-centeredness of the creative writing workshop uses a wholly
interrogative space, favoring contingent readings over prescriptions as well as discussing the
exclusions and silences inherent to the text. Moreover, radical student-centeredness addresses
both identity and accountability as they are suggested or created by the text. To minimize these
activities would be to lose the signature pedagogy in creative writing, preferring the dispersal of
craft knowledge and prescription as well as building justifications for possible teacher-
centeredness in the future. While we must continue to argue for creative writing as an academic
enterprises, we cannot allow such arguments to distort our own view of the inherent value of that
signature pedagogy.
Works Cited


From the Concrete to the Abstract: Soka Education Geometry

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SUA Class of 2012

Abstract

In order to implement the Soka vision of education at the preschool and elementary levels, curricula, materials and pedagogical methods were identified, developed, and implemented in the classrooms that were assessed as being in alignment with this vision. The design decisions and initial results of five months of implementation are presented here. We delineate our understanding of Soka education, present two pedagogical approaches that were selected, (Montessori and Doman), report on our experience of establishing and operating the school focused on Soka education ideals and utilizing these methods, and finally assess effectiveness, based on our experience, in achieving the key elements and characteristics of Soka education.
I am a third year math teacher living in Anthony, New Mexico. I teach Algebra I and Geometry at an alternative high school called Desert Pride Academy. Anthony is a small rural town with a majority Hispanic population. It is located in Southern New Mexico and borders El Paso, Texas and Juarez, Mexico. The “borderlands” is an area rich in diverse culture and history. At the same time, it is a region that confronts serious social issues such as poverty, militarism, drugs, and immigration.

All of these issues pose obstacles to the educational achievement of children in New Mexico. This year, the annual “Quality Counts Report” from the Education Research Center ranked New Mexico dead last – 50th out of 50 – in terms of educational performance. My school, Desert Pride Academy (DPA) is an alternative high school located in Southern New Mexico. It serves students who have experienced issues of attendance, discipline, or pregnancy. As a first year teacher, I struggled to teach mathematics in this context.

During my first year, I remember being struck by the realization that I disliked my classes even more than my students. I had been teaching mathematics much as it had been taught to me - as formulas to followed, a series of operations to be executed. What was the meaning of all of this? For students struggling with various hardships in life – violence, hunger, homelessness - what was the purpose of calculating the measure of the unknown angle of a quadrilateral?

**Traditional Geometry Education**

The inability of my students to find meaning in mathematics is in no way a fault of the subject itself. Rather, it is a result of a schooling system that presents math – like other subjects – as an activity involving the memorization of de-contextualized concepts. This approach fails to teach the relationships between math concepts and other concepts, students’ direct experience, or the problem-context from which the idea originally arose. In short, high school mathematics fails to teach relationships or connections. The result is that students are not able to integrate new learning into any sort of conceptual framework. Scattered, meaningless, disconnected facts go in one ear and out the other.

In both *Community Studies as the Integrating Focus of Instruction* and *Geography of Human Life*, Makiguchi argues that the role of instruction is to help students develop a solid conceptual network. Throughout his work, Makiguchi’s various proposals and ideas are all based on what I find to be the central theme of Soka Education - teaching relationships and connections. In *A Geography of Human Life*, Makiguchi lamented that the Japanese school system failed in this regard, teaching geography much in the same way that American schools now teach geometry:

No other subject is taught in as pitiful and ridiculous a way in Japanese schools as geography. Not only in elementary schools but in junior high schools as well, students are made to memorize the names of mountains, rivers, lakes, and cities, and population figures without any theoretical framework or relationships whatever. It is impossible for students to retain this factual mish mash for long, so all they have left after examinations are fragmented bits of useless knowledge.
It is no wonder that students generally think of geography as the least interesting and the most disliked of all their subjects. This certainly is not true geography. (Makiguchi, x)

Without any theory or framework to ground learned facts, students simply memorize and forget, memorize and forget.

In *A Mathematician’s Lament: How School Cheats Us Out of Our Most Fascinating and Imaginative Art Form*, math educator Paul Lockhardt presents a powerful critique of traditional math education. His critique echoes that which Makiguchi made many decades earlier:

The main problem with school mathematics is that there are no problems. Oh, I know what passes for problems in math classes, these insipid “exercises.” “Here is a type of problem. Here is how to solve it. Yes it will be on the test. Do exercises 1-35 odd for homework.” What a sad way to learn mathematics: to be a trained chimpanzee. (9)

Memorization and procedural execution take precedence over reasoning and problem-solving. In *Education for Creative Living*, Makiguchi expressed the same sentiment when he wrote that education “does not consist in pilfering the intellectual property amassed by others through no additional effort of one’s own; it would rather place people on their own path of discovery and invention” (168). He believed that students must make their own discoveries; they shouldn’t merely be taught to memorize the discoveries of others.

There can be no development of creativity or reasoning skills unless one engages in active problem-solving oneself. As Lockhardt explains, “Mental acuity of any kind comes from solving problems yourself, not from being told how to solve them” (14). The decision to teach procedural execution over problem-solving is a political act made by a system that uses education for economic ends. Its aim is creating well-trained workers, incredibly proficient in following directions. The hope of fostering value creators – the ultimate aim of Soka Education – becomes impossible when schooling kills students’ creative capacities and stunts their ability to think for themselves.

Later in the essay, Lockhardt goes on to critique the subject of High School Geometry, which he sarcastically titles “the instrument of the devil:”

And never was a wolf in sheep’s clothing as insidious, nor a false friend as treacherous, as High School Geometry. It is precisely because it is school’s attempt to introduce students to the art of argument that makes it so very dangerous. Posing as the arena in which students will finally get to engage in true mathematical reasoning, this virus attacks mathematics at its heart, destroying the very essence of creative rational argument, poisoning the students’ enjoyment of this fascinating and beautiful subject, and permanently disabling them from thinking about math in a natural and intuitive way. The mechanism behind this is subtle and devious. The student-victim is first stunned and paralyzed by an onslaught of pointless definitions, propositions, and notations, and is then slowly
and painstakingly weaned away from any natural curiosity or intuition about shapes and their patterns by a systematic indoctrination into the stilted language and artificial format of so-called "formal geometric proof. (18)

Lockhardt’s critique of high school geometry is rooted in a frustration that it claims to “introduce students to the art of argument” and “mathematical reasoning.” In reality, however, the teacher places rigid restrictions on the method of argument and notation. This acts to undermine student creativity and restricts their intuitive reasoning skills. Again, the result is that students are taught to follow instructions rather than think for themselves.

All of these critiques of traditional schooling put words to the frustrations I had been experiencing as a first year teacher. As a result of these reflections, I started seeking a more meaningful mathematics curriculum. I found direction in the field of Social Justice Mathematics (SJM), which aims to apply Paulo Freire’s work to math education. A social justice approach teaches students to use numbers as a tool to understand and address relevant social issues. At the 2014 Soka Education Conference, I presented a paper entitled “Putting Theory into Practice: Reflections on the Implementation of Soka Mathematics Education” on this topic.

I found social justice mathematics to be a powerful approach in subjects such as algebra and statistics. The reason is that the concepts in these subjects lend themselves well to social analysis. However, I struggled to effectively implement a social justice approach in my geometry class. I did find some examples of such work. However, it seemed to me that the subject of geometry focused more on natural phenomena than on social phenomena. I also began considering what a Soka Education approach to the subject would look like in practice. How would Makiguchi or Toda teach a geometry class?

**Josei Toda**

Josei Toda was an educator and mathematician who worked tirelessly to advance the educational theories of his teacher, Tsunesaburo Makiguchi. In 1923, Toda established a tutorial school called the Jishu Gakkan in Tokyo to implement the principles of value-creating education. He also devoted himself to compiling and financing the publication of *Soka Kyoikugaku Taikei*, The System of Value-Creating Pedagogy, on November 18th, 1930. In the book, Makiguchi outlined his educational principles, proposals, and practices. In June of the same year, Toda also published a compilation of his own teaching materials as a mathematics guidebook called “Suirishiki shido sanjutsu” - *A Deductive Guide to Arithmetic.*

Josei Toda’s teaching style was unique and effective. He used concrete examples and direct experiences to help students grasp abstract principles. In one famous episode, Toda asked his students if they wanted a dog. The children all replied that they did want a dog. Toda then wrote the Japanese character for dog 犬 on the board:

Toda pointed at the character on the blackboard and said, "It's a dog, isn't it? Go ahead, you may have him."It was definitely a dog, but not one the children could take home. They were bewildered, unable to find the flaw in their reasoning. Toda explained that it was an abstract symbol for "dog." By repeating interesting examples of this kind, he
implanted in their young minds the concept that mathematics is a study based upon symbols, and soon they began actively applying their new-found knowledge for themselves. (Ikeda 13).

In this example, Toda creates a concrete experience in which students can develop understanding of an abstract concept. He teaches young students the basics of abstract thinking. In another passage, Daisaku Ikeda further elaborates on Toda’s method of moving from the concrete to the abstract:

He appealed to the insatiable curiosity of the young and taught them to recognize mathematical concepts by means of concrete examples. Through repeated exercises of their reasoning power, he was, without their knowledge, instilling in them an understanding of highly complex and difficult principles. His methods were not only interesting but completely logical and gave the children a chance to delight in their studies. (14)

Makiguchi also emphasized the importance of using students’ direct experience in the local community as the starting point for illustrating abstract concepts. The idea was to start with examples and situations with which students were familiar. From there, the teacher would help students see the connections with distant phenomena and principles that exist more universally. His goal was building connections from the familiar to the unfamiliar.

Eventually, Toda compiled his lessons and teaching materials into a guidebook, called “Suirishiki shido sanjutsu” - A Deductive Guide to Arithmetic. In an essay discussing Toda’s life and achievements, Soka Education researcher Masayuki Shiohara explains that the purpose of the guidebook was to help students teach themselves through the process of reasoning. In A Deductive Guide to Arithmetic, Toda writes:

In teaching children how to solve applied problems, the main focus should be on fostering the student’s reasoning ability. It is not a learning in which we teach the way to solve a question or in which a student simply commits an answer to memory. Rather, it is a learning to enable the student to think how to solve a question. There is value in thinking, and the effect of learning this field comes from acquiring the habit to think. (Shiohara 2008, 155)

Here, Toda identifies reasoning with active problem-solving skills and in opposition to rote memorization and procedural learning. As mentioned earlier, procedural learning means simply teaching students a procedure - “the way to solve a question” rather than letting students grapple with problems and make their own creative discoveries. In Toda’s model, students must think for themselves and create their own problem-solving strategies.

As the title would suggest, the Deductive Guide to Arithmetic taught students based on deductive reasoning. Deductive reasoning is the ability to use logic and known facts to arrive at valid conclusions. Logical deduction is the foundation of mathematics in general and geometry.
in particular. For example, in the *Elements*, Euclid starts with a set of axioms and deduces many other theorems of plane geometry. Again, the emphasis is on helping students build connections between their existing conceptual framework and new leanings. They can use what they know to discover what they do not, moving from the familiar to the unfamiliar.

To summarize, I will present Toda’s teaching in three concise points.

- Using concrete examples and experiences to illustrate abstract, universal principles.
- Developing students reasoning skills through active problem-solving.
- Using a deductive approach in which students use prior knowledge to build new knowledge.

**Plato**

I will now introduce the perspective of the Greek mathematician Plato. I have included Plato because of the incredible influence of his work on the history of mathematics. Furthermore, his understanding of mathematics in particular and education in general shares much in common with the views of Makiguchi and Toda. Unfortunately, the mathematics performed in many of America’s schools is of an entirely different kind than that done by mathematicians, like Plato, who built the foundations of the subject in the first place.

In Plato’s *Republic*, his teacher Socrates speaks about the benefits of studying mathematics: “Arithmetic has a very great and elevating effect, compelling the soul to reason about abstract number, and rebelling against the introduction of visible or tangible objects into the argument” (238). Socrates goes on to express a similar point about the subject of geometry when he explains that, “the knowledge at which geometry aims is knowledge of the eternal, and not of aught perishing and transient . . . geometry will draw the soul towards truth, and create the spirit of philosophy, and raise up that which is now unhappily allowed to fall down” (239). In both passages, the point is that the primary focus of mathematics is not the fleeting, transient, real world in which we live. Rather, it explores mathematical reality. In Plato’s view, mathematics is a study of abstractions - the transcendent forms, patterns, principles, numbers, and shapes that exist in what he conceptualized as the world of Forms.

The benefit of exploring mathematical reality is that it refines one’s ability to reason. Here, reason is the practice of studying transcendent principles. It is an act of perceiving unity amidst diversity, the abstract amidst the concrete. Exercising this capacity of reason produces an “elevating effect” that acts to “draw the soul towards truth.” The ability to reason is a learned skill. Thus, the role of the educator becomes that of facilitating a process in which students develop the ability to reason about abstract concepts and perceive universal principles.

**Tsunesaburo Makiguchi**

Like Plato and Socrates, Tsunesaburo Makiguchi held the view that an important aim of education is that of helping students perceive relationships and principles. This goal is rooted in Makiguchi’s understanding of the phenomena of the natural world as fundamentally
interconnected. He designed the community studies program and his geography curriculum with the goal of helping students perceive the myriad of relationships and universal principles at work in nature. In *The Geography of Human Life*, Makiguchi writes:

> If we think seriously about it, we can see that every aspect of this universe can be observed in this small area of our homeland. And because our homeland is the place where we live, where we walk, where we see and hear and gain impressions, it is possible for us to observe all these things directly. Thus, it is possible for us to explain the general nature of complex phenomena anywhere in the world through the use of examples which we can find in abundance even in the most remote village or hamlet. (xvi)

Thus, Makiguchi’s educational approach is that of starting with the direct observation of the local community. With the familiar as the foundation, the teacher can then help the student build connections with phenomena more distant. He further explains this approach by listing ten principles for teachers to keep in mind when designing lessons:

- From nearby to far away
- From singular to plural
- From known to unknown
- From whole to part
- From general to specific
- From cause to effect
- From visible to invisible
- From the individual to the whole
- From simple to complex
- From concrete to abstract

He concludes chapter three of *The Geography of Human Life* by stating, “with these guidelines to help us, and beginning in our own homelands, let us set out on our quest for understanding of the world around us” (33).

Here, we find the origins of Toda’s method of using concrete examples to illustrate difficult mathematical concepts. These ideas also share much in common with Plato’s ultimate goal of helping students develop the skill to reason towards truth. In Makiguchi’s words, the truth which educational pursues is “abstract,” “invisible,” “unknown,” and related to the “whole.” The role of the educator is to guide students from familiar phenomena in the local community toward these invisible principles.

Makiguchi’s concept of the “geography of human life” is unique because it focuses not on the Earth, but on the relations between human beings and the Earth. Furthermore, he believed that investigating these relationships would help students experience a feeling of great wonder. He describes his own experience of this feeling as follows:
“... being aware of the rich variety of phenomena that influence my life, I cannot help thinking of the way the whole earth operates. I look around and, although my eyes can reach only a few kilometers in any direction, my heart and mind are filled with excitement and wonder and curiosity about the earth and about the relationship between the earth and our lives on the earth.” (Geography, xv)

Furthermore, Makgichi argued that by studying natural relationships, students would develop a “growing awareness of our indebtedness to our society” and “feelings of appreciation and a sense of social responsibility within us” (xv). Thus, an educational approach that focuses on conceptual relationships helps students develop the spirit of social contribution necessary for value creation.

I have introduced the work of Makiguchi, Toda, and Plato in order to provide some guiding principles for a vision of a geometry class based on Soka Education. The approaches of all three teachers share many following points in common. I will now add a few points to our list of principles to keep in mind:

- Using concrete examples and experiences to illustrate abstract, universal principles.
- Developing students reasoning skills through active problem-solving.
- Using a deductive approach in which students use prior knowledge to build new knowledge.
- Starting with direct observation of the familiar, then building connections o the unfamiliar.
- Always focusing on helping students develop conceptual relationships.

**Soka Education Geometry in Practice: Sacred Geometry**

I will now introduce a field of study called Sacred Geometry. It is an approach to the subject that is much more aligned with the principles outlined above than traditional high school geometry. In *A Beginner’s Guide to Constructing the Universe*, Michael Schneider defines three types of mathematics: secular, symbolic, and sacred. The aim of secular mathematics, that which is taught in school, is to teach students how to perform calculations that will be useful in daily life and the workforce, Adding prices, calculating change, telling time, designing a building, calculating interest – these are all examples of secular mathematics. Our society’s over-emphasis on secular mathematics is a symptom of the fact that – as Makiguchi lamented in pre-WWII Japan – education is made to serve the economy.

Symbolic mathematics is the study of the numeric and spatial principles at work in natural phenomena throughout the universe. As Schneider explains, the subject of symbolic mathematics is the patterns of number and shape in nature:

According to ancient mathematical philosophers, the simple counting numbers from one to ten and the shapes that represent them such as circle line, triangle, and square, express a consistent, comprehensible language. The ten numbers are
a complete archetypal sourcebook. They are the original ten patents for designs found all through the universe. These ideal patterns are the ones that were skewed and veiled in school and that nature approximates in all transitory forms, from the smallest subatomic particles to largest galactic clusters, crystals, plants, fruits, and vegetables, weather patterns, and animal and human bodies. Anything anyone can point to in nature is composed of small patterns and is part of larger ones. (xx)

This is the way that Plato, Socrates, Pythagoras, and other ancient mathematical philosophers studied mathematics. Schneider goes on to explain that, compared to symbolic mathematics, sacred mathematics goes a step further to apply these patterns and principles of the universe to one’s growth as a human being.

Sacred geometry is an approach that fulfills the educational goals and methods of Makiguchi, Toda, and Plato. The point is that by observing everyday objects and phenomena, one can perceive numeric and spatial patterns that occur throughout nature. For example, the number 6, represented by the hexagon, is found in a beehive, a snowflake, and a crystal. Why is this? What is the connection? Questions such as these pursue Makgichi’s goal of helping students perceive universal principle in the phenomena of everyday life. It teaches geometry by investigating connections and relations – relationships found with regards to shape, number, plants, animals, architecture, art, and many other things.

Sacred Geometry Lesson

I will now include an example of a sacred geometry lesson I designed and taught. The topic is the golden ratio and the Fibonacci sequence (see Appendix I). The lesson begins with the famous Fibonacci sequence. Students are asked to find the pattern and use it to predict the numbers that will follow. They discover that each term is simply the sum of the two preceding terms. This creates the sequence 1, 1, 2, 3, 5, 8, 13 etc. Next, I ask the students to calculate the ratio by which the numbers are growing. The interesting thing is that as the sequence progresses, the ratio between each term and the next approaches a special number. This number is Φ (phi) which is an irrational number with an approximate value of 1.61. The ratio of each two terms approaches, but never reaches, this special number.
After this introduction, I present a video that shows how this ratio shows up throughout nature in diverse phenomena such as shells, the human body, galaxies, pine cones, sunflowers, Greek architecture, Renaissance painting, etc. After the video, the students use the numbers of the Fibonacci sequence to construct a golden spiral:

![Golden Spiral Diagram](image)

The smallest box has dimensions of 1x1, then 1x1, then 2x2, then 3x3, and so forth following the numbers of the sequence. Eventually, this construction creates the outline for a “golden spiral,” a structure found in phenomena as diverse as a shell and a galaxy.

On day two, students are asked a riddle about rabbits that also demonstrates the Fibonacci sequence. Afterwards, they are given a drawing of a large, regular pentagon. They connect the vertexes to create a star – a pentagram – and continue the process repeatedly.

![Pentagram Diagram](image)

The worksheet then guides the student through a process of comparing the side lengths of this construction. The students find that each line segment is in a phi ratio with the next smallest segment. In other words, each segment is approximately 1.61 times smaller than the previous segment. The lesson then concludes with a discussion of the way pentagons, the number 5, and phi all represent the principle of self-regeneration (as in the self-replicating numbers of the Fibonacci sequence) that is characteristic of all life.
Although the lesson is in no way unique or ground-breaking, I do believe that it represents an approach to geometry that fulfills the principles discussed in the work of Makiguchi, Toda, and Plato. It shows students how a single principle, a single number, is at work in diverse everyday phenomena. Some students were surprised to learn that even our own body is based on the phi ratio. A single number ties together a math riddle, a pentagon, a sunflower, the human hand, and the Mona Lisa. Thus, the lesson fulfills the goal of using concrete examples and experiences to help students perceive abstract, universal principles. This lesson was also successful in creating a sense of wonder – much more successful than having students calculate the area of a pentagon with a given formula repeatedly, for example.

Conclusion

I have provided the Sacred Geometry lesson on the golden ratio as an example of a Soka approach to geometry in practice. At the same time, I believe that Sacred Geometry is not the only way to teach the subject in a manner in agreement with the vision of Makiguchi, Toda, and Plato. There is a great deal of work that has been done to approach the subject from a problem-solving perspective. For example, the book *Measurement* by Paul Lockhard takes the reader through plane and solid geometry with a series of thought-provoking questions. It represents a deductive approach in which one must use previous learnings to write creative proofs to a variety of questions.

Another example of effective work is that of the math teacher Dan Myers. Myers has developed the concept of the “three act” lesson plan. Each lesson begins by presenting students with a video that illustrates a problem. This is the first act. During the second act, students are given necessary information and asked to come up with their own solution. Different ideas are presented, critiqued, and re-worked. Finally, during the third act, the answer is presented. The initial video presents the problem in terms of a concrete visual experience that everyone can understand. Students are then asked to problem-solve and think for themselves. This fulfills Makiguchi’s aim of moving from a concrete problem to an abstract idea that addresses it. It also places students on “their own path of discovery and invention” (Education, 168).

My own efforts represent an initial groping toward a vision of mathematics that is more meaningful, effective, and enjoyable for my students. What is needed now is for many Soka Educators to challenge the difficult task of putting the ideals of Soka Educators into concrete practice in the classroom. Ultimately, this work is the same as that pursued by both Makiguchi and Toda throughout their careers as educators.

Initially, Makiguchi hoped for *The System of Value-Creating Pedagogy* to encompass a total of twelve volumes. The first four were intended to provide a general overview of his philosophy of education while the following eight would explore the practical methods of implementation. However, in the end he was only able to publish the first four volumes (Shiohara, 174). For this reason, it is up to the successors of Makiguchi’s vision to work to put the principles of Soka Education into practice. As Makiguchi himself adamantly argued, this is
not the work of armchair scholars or educational policy-makers. It is the work of teachers who, planning late into the night, fight to design lessons that will help open the eyes and minds of their beloved students. It is my hope that, as one small addition to this effort, this essay can contribute to the effort to put the vision of Makiguchi, Toda, and Ikeda into practice.

**Appendix One**

Name______________________

Golden Ratio Lesson Day One

In the pattern below, which numbers come next?

```
1  1  2  3  5  8  
```

1. What is the pattern?

2. Next, divide each number by the number before it. As you go along, your answers should get closer and closer. What number do your answers approach?

   The Fibonacci sequence can be viewed as a spiral by drawing successive Fibonacci-sized squares. Start with a 1 x 1 square in the center of your paper. Beside that square place another 1 x 1 square. Since 1 + 1 = 2, the next square will be a 2 x 2. 1 + 2 is 3. So, the next square is 3 x 3, and so on. Each succeeding square is placed in a counter-clockwise position to the last square as they rotate around the initial 1x1 square. Show students that rectangles are formed when you combine a new square with all of the previous squares.

```
1  1  2  3  5  8  
```

3. Once you construction your golden rectangle, answer the following about the largest golden triangle that you have.
Length ___________________  Width __________________________

Divide the length by the width. What number do you get?
Golden Ratio Lesson Day 2

1. On January first, a pair of baby rabbits - one male and one female - take one month to grow old. After, one month, they give birth to another pair of baby rabbits. This pair takes one month to grow old. Then, both pairs give birth to another set of babies. Fill out the chart to figure out how many pairs there will be after one year.

<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
</table>

2. Connect each vertex of the pentagon to make a star. Inside the star is another pentagon. Connect the vertexes of the little pentagon to make a little star. Repeat this pattern as many times as you can.

3. A. How many times bigger is the diagonal of the big pentagon than its side? Use a ruler.

Diagonal

b. The side of the pentagon forms the base of an isosceles triangle. How much bigger is this base than the legs of the isosceles triangle?

c. Find the rest of the ratios.

4. What does the answer of this infinite calculation come out to?

$$\varphi = \sqrt{1 + \sqrt{1 + \sqrt{1 + \sqrt{1 + \cdots}}}$$
5. Phi is an irrational number.

Irrational number ___________________________________________________________

6. What does the picture of the flowers have to do with phi?
Works Cited


Value Creating Education in Kenya

Henry Indangasi
Masumi Hashimoto Odari

Abstract

In his dialogue with Vincent Harding titled *America Will Be! Conversations on Hope, Freedom and Democracy*, Daisaku Ikeda says the following about Soka University of America:

At Soka University of America, our hope is to nurture global citizens who will spread their wings and fly. We want them to become leaders who have a sincere commitment to serving the people, who courageously act for the cause of peace and justice, and who wisely honor and protect the global environment and the biological and social diversity on Earth. (226)

His interlocutor agrees and adds that students at this institution are “challenged to discover themselves as world citizens and as leaders whose ultimate purpose is to recreate their societies and their world” (227).

The University of Nairobi signed an exchange agreement with Soka University, Japan over two decades ago. This agreement involved the exchange of staff and students. Resulting from this link, a number of Kenyan students have been trained at Soka University and a number of Japanese students have taken classes at the University of Nairobi. The program has also benefitted lecturers from both countries. It is in this light that we examine the effect and result of this exchange program and discuss the importance of introducing value creating education in our education system.

In this paper, we examine the challenges and possibilities of creating value in a developing multi-ethnics, multi-cultural society such as ours. Our traditional communities, with their ancient folk values, are evolving into a modern economic and political entity called Kenya. The values if these traditional societies are reflected in their oral literature: their own narratives, their proverbs, their oral poetry, and their songs. Our challenge as Kenyan educators is how to tap into this rich resource of folk wisdom for values that would hold our people together.

The English syllabus in our schools recommends the teaching of what are called emerging issues: good governance, integrity and accountability, democracy, gender sensitivity, national cohesion ethnic balance, and environmental conservation. English course books contain passages on these emerging issues which are then used to teach topics such as comprehension
and summary. The challenge for us is to teach the values associated with these emerging issues against the backdrop of a corrupt political class.

Our paper also examines the challenges and prospects of teaching and examining life skills: self-management skills on the one hand and people skills on the other. In our view, teachers can be trained to teach and examine these skills. Our argument is that education without values and life skills is not only inadequate; it is potentially harmful to ourselves and to society.

In conclusion, we suggest borrowing from the Soka education philosophy into the education system in Kenya which will go a long way in fostering our students to become capable people who can create value not only in their lives but to the society as a whole.
Exactly fifty years ago, Daisaku Ikeda declared that the twenty-first century will be “the Century of Africa.” And in 2013, he dedicated a poem to Africa entitled “Ode to Africa.” In the poem, he writes:

Africa, my treasured friend,
I respect you from my heart,
Africa, motherland of all humanity!
The twenty-first century will be a century of Africa.
Those who suffer most earn the right to the greatest happiness.
Africa, you are the light that shines with a great mission to change the history of humankind.

Yet, Africa faces many problems; conflicts due to tribalism, religious differences, lack of natural resources, corruption, terrorism, famine to mention a few. We are presented with many challenges that if Africa is to fulfill its mission in changing the history of humankind and to make it a continent of peace, we must do something. We must do something different from how we have been doing in the past. We, as educators, believe that one of the first actions we must take is to reform our education system. The purpose of this paper is to discuss how the soka education can act as a model to foster capable people who will be the change to promote peace and justice in Kenya.

In 1991, the University of Nairobi signed a MoU for an exchange programme with Soka University, and in the following year, the Founder of Soka University, Daisaku Ikeda was awarded an honorary doctorate from our university. The Exchange Programme was the beginning of very fruitful interactions between the two institutions. We have witnessed an exchange of staff and students; and those of us who have participated in these exchanges have benefitted greatly. We have, for instance, learnt about Soka’s humanistic education, and the university’s efforts to nurture global citizens. We have also learnt about the importance of having a mentor in one’s life, and of course the positive effect Daisaku Ikeda has had on Soka University students as their mentor. And finally, living in a country that is bedeviled by ethnic and tribal tensions, we have appreciated the significance of Ikeda’s pacifism, something the Japanese thinker has institutionalized in the university he founded.

Although it has made tentative steps to introduce peace and conflict resolution courses, the University of Nairobi remains a typical educational establishment emphasizing what is glibly called academic excellence, with little or no regard for moral values. What complicates matters further is that, like many of their counterparts in the developing world, most Kenyan academics see things like peace and conflict resolution as an absence of war and conflict. In other words, they do not see peace, for example, as a moral construct, or as a world view. Moreover, and we want to stress this point, the official historical narrative in Kenya is that we shed blood to gain our independence, and therefore there is merit in violence. This narrative is promoted by our political class; but the narrative conveniently ignores the fact that the so-called Mau Mau Uprising was militarily defeated in 1956, and that the independence we obtained in 1963 was a negotiated settlement between the British colonial government and the Kenyan political
Indangasi and Hashimoto Odari

leadership. This official narrative makes it hard to argue for pacifism as a political and moral ideal.

Let us dispose of the question of value creation. Where, in our Kenyan context, do values come from and how are they created? To a large extent, our Kenyan communities are still traditional, and our values are embedded in our folklore, our oral narratives, our proverbs, and our songs. Our oral narratives, normally told to children by their grandmothers, invariably contain moral lessons concerning how we relate with members of our family, our relatives, our neighbors, our friends, and the larger society. Our oral narratives stress the values of communalism, of peace and good neighborliness. Proverbs encapsulate the collective wisdom and world view of the traditional society. The proverb: “You reap what you sow,” this warns you about the consequences of your actions. “If you see spear grass dancing, don’t imitate it” – this warns you against peer pressure. “A person who doesn’t know how to dance keeps saying they want to rearrange their dress” – this is about creating lame excuses for not doing what you are supposed to do. Lastly, we have our traditional songs which are sung during ceremonies such as weddings and funerals. Some Luhya wedding songs, for instance, poke fun at the bride and the groom; but their essential message is that marriage is an enjoyable and amusing affair. But there are those that will tell the newly-married couple that marriage is not a bed of roses, that there will be pain and tears. Luhya dirges will tell you about the permanence and inevitability of death.

So, the traditional society is a tested medium for the growth and preservation of values. The question we have had to confront in Kenya is how to transfer these values to our schools and colleges. In the 1970s and early 1980s, our high school students used to be asked to go back to their homes and collect oral literature materials. Their teachers would assess them and then send the grades to the Kenya National Examinations Council. The idea behind this was to get these students to learn the values contained in these oral literature forms. Unfortunately, this programme was discontinued after it was discovered that some teachers cheated on the grades they awarded in order to raise the academic profile of their schools.

In 1986, Kenyan teachers of literature formed the Kenya Oral Literature Association. The objectives were: 1. to promote the teaching of oral literature in schools and universities, and 2. to conduct filed research in the area. We have talked about the challenges of teaching and examining oral literature in schools. With respect to universities, the problem of funding has been a major challenge. If you have a class of one hundred students, how do you get them to conduct field research? But we also have the problem of getting these students to appreciate traditional rituals such as female circumcision (otherwise referred to as female genital mutilation) can easily be dismissed as backward and counterproductive. But it gets more ticklish and even more problematic when it comes to applying the moral lessons in a traditional narrative to a modern situation.

One day, we were teaching Chinua Achebe’s adaptation of an oral tale called “Uncle Ben’s Choice.” In this story, Uncle Ben, the narrator, drinks and eats on new year’s eve, jumps on his bicycle and goes home, only to find a woman in his bed. At first he thinks it is Margaret, his girlfriend; but when he realizes it is the mythical Mami Wota, the Lady of the River Niger, he
runs away. Mami Wota, so goes the folklore, marries a “crazy white man” called Dr. J.M. Stuart-Young. Let us listen to how the story ends:

The same night I drove Mami Wota out she went to Dr. J. M. Stuart-Young, a white merchant, and became his lover. You have heard of him?... Oh, yes, he became the richest man in the whole country. But she did not allow him to marry. When he died, what happened? All his wealth went to outsiders. Is that good wealth? I ask you. God forbid.

When we asked the students what they took away from Achebe’s story, their faces were blank. But we did not stop there. We asked them more pointedly whether they agreed with the moral of the story: that it is better to get married and have a family than to acquire a lot of wealth but have no family. Put differently: that it is better to be poor and happy than to be rich and unhappy. “Our values have changed,” said one of the students. “These days we say: it is better to cry in a Mercedes Benz than to laugh on a bicycle.” Strange as it may sound, her classmates concurred.

In the Luhya language, which we both speak, we have a saying that goes as follows: Each generation composes and sings different songs. And this is also true of values. The values of Kenya’s baby-boomers, people who were born after World War II, and significantly for us, before Independence in 1963, were associated with the extended family and communalism. We took care of our brothers and sisters, our cousins, our nieces and nephews. We regarded as our relatives the thousands of people who belonged to our clan; and we were not supposed to marry from this group of people. (The popular joke among the Luhya is: You don’t marry a relative, you marry an enemy, who then becomes a friend.) But the generation of Kenyans who were born in freedom, and the generations of their children – these two generations sing different songs, and embrace different values.

This then is the challenge we have in teaching oral literature in our universities: to make our students appreciate the values of traditional society, the values of our ancestors. The sense of community that held us together and which produced the oral literature is on its deathbed. The grandmother who would have told stories to her grandchildren does not live in Nairobi; she lives alone in the rural areas. And what we have now, in place of the extended family, is the nuclear family, an institution that is susceptible to the pressures of modern life, and one that becomes shaky if the parents have no parenting skills. But the Kenyan nuclear family is different from its counterpart in the developed world. If you ask a typical Nairobian where the home is, they will talk of a rural area. In other words, they might have left the traditional society but the traditional society has not left them.

Let us now talk about the family as a source of values. Many children in Kenya grew up in broken homes – commonly, the result of death or divorces. So, we have two parent families or one-parent family. But whatever form it takes, the family environment determines what children become when they grow up. We have a Kisiwahili saying which goes as follows: Mtoto umleavyo ndivyo akuavye. This translates as: the way you raise a child is the way he or she will grow up. Another saying: asiyefunzwa na mamake, hufunzwa na ulimwengu. The person who has not been taught by his or her mother is taught by the world, implying that the world will
teach you difficult and painful lessons if your mother did not teach you. These two sayings underscore the importance of inculcating positive values in our children.

Daisaku Ikeda often talks of the importance of mentors and role models in life, and we want to argue that this should begin with the family. Most parents in Kenya will tell you they impart moral values in their children and they are good role models. But our media is full of stories of parents who physically and psychologically abuse their children. There are parents who habitually cane their children and justify this with the old adage: spare the rod and spoil the child. Such parents cannot be good role models to their children. The inescapable fact is that if we do not show love to our children, they will not have any to show to the world.

The same can be said of the school environment. Our media has told us of teachers who exhibit unspeakable cruelty to their students. Corporal punishment is a crime and constitutes child abuse, and yet many teachers continue to inflict it on our children. Our argument is that teachers who physically abuse the students under their care relinquish their positions as role models. And child psychologists have always told us that an abused child invariably becomes an abuser.

So, as parents and teacher, if we want to instill moral values in our children, we have no choice but to be good role models. Children need to see in us what their hearts desire most: love, kindness, compassion, and empathy. If we do not show them these values, then we should not be surprised when they do not display them in their adult lives.

It is one thing to be a role model, and even a mentor, and quite another to generate and create values. In the rapidly changing society that we live in, parents and teachers have the duty to mould values that reflect these changes. The tribal community that we have talked about is mono-ethnic, with people who speak the same language and adhere to the same belief system. Modern Kenya, and especially the more urbanized part, is more diverse, more multicultural, more multi-ethnic, and more multiracial. In order to create values that correspond to the complexity of the modern society, we need, as parents and teachers, to read and study hard about these different groups. This means that the values that we instill in our children and our students must have a multicultural content; in other words, they must be values that reflect our common humanity.

One way to inculcate a multi-cultural sensibility in our children is to give them storybooks from other cultures and read for them or encourage them to read. Literature is a window into the souls of other communities. Children discover as they read these stories that their counterparts have similar feelings and concerns, and that the ties that bind us are stronger than those that separate us.

In 2009, Wole Soyinka, the 1986 Nobel Laureate for Literature, was interviewed by the BBC on the election victory of Barack Obama. “Obama has really disappointed us” he quipped. “Just when we were about to give up on politicians, he comes along.” We are aware that here in America, opinion on Barak Obama is sharply divided. In Africa, the American President is hugely popular. In his dialogue with Vincent Harding titled America Will Be! Conversations on Hope, Freedom and Democracy, Daisaku Ikeda expresses a favorable opinion of the American
leader. Indeed Ikeda puts Obama in the same league with Dr. Martin Luther King Jr. and Nelson Mandela, two other leaders he admires.

Soyinka’s opinion of Obama, however, brings us to the issue of role models in the larger society. In Kenya, we have never had a Julius Nyerere; we have never had a Nelson Mandela; we have never had a Barack Obama. Instead, we have always had champions of corruption and impunity as our leaders. And if a country does not have rulers who act as beacons of moral probity, it is phenomenally difficult for its educationists to impart values in the youth. A good incorruptible leader acts as a shining example, making the job of teaching values so much easier.

Let us now go back to the issue of the curriculum. The ideal situation is that values should be taught in all subjects and disciplines. However, in practice, the humanities take the first prize. History, philosophy, religious studies, and literature deal directly with human experience and human values.

In Kenya, values are, broadly speaking, taught in a subject called English, which combines language with literature. The thinking is that as the medium of instruction in schools and colleges, and partly for that reason, being a compulsory subject, English can carry the burden of instilling values in our youth. Further, through the integrated format, teachers can teach the values that are affirmed in literary texts, values such as love, kindness, compassion, and empathy. The English teacher is, of course, aware that literature by its very nature, deals with conflict and exposes the ills and shortcomings of society. In the final analysis, however, works of literature, without being preachy, guide and show us the way. Indeed, as the English novelist George Eliot once said they "enlarge our sympathies" for our fellow human beings.

In addition to teaching the traditional language skills – speaking, listening, reading, and writing – the English teacher is expected to sensitize students on so-called emerging issues. These issues include good governance, democracy, gender sensitivity, recognition of our ethnic, racial and religious diversity, environmental conservation and above all moral integrity. If you look at our school textbooks, you will note that the passages that are selected for comprehension and summary exercises are deliberately meant to highlight these emerging issues.

With regard to methodology, the English syllabus goes out of its way to encourage a participatory, learner-centered approach. Teachers typically tell their students to form discussion groups and to report the results of their discussion to the rest of the class. The hope is that by participating in the discussion, students do internalize the values that are mirrored in these emerging issues. In spite of these noble efforts associated with the teaching of English, the Kenyan society has continued to experience a deficit in terms of values. This explains why the education policy makers have in the last decade come up with a course called life skills. We wish, therefore, to examine the challenges and opportunities connected with the teaching of life skills in our schools.

First, let us talk about the content of life skills. We are looking at one of the books on life skills called Mentor Life Skills, published by the Kenya Literature Bureau, and approved by the Kenya Institute of Curriculum Development. Co-authored by one of us, Henry Indangasi, and published in 2009, this book is divided into two sections: the first concerns the skills you need to
manage and cope with yourself, and the second deals with what are called people skills. The self-management skills include the following: self-awareness, self-esteem, coping with emotions, and coping with stress. The people skills section contains the following: interpersonal relationships, empathy, effective communication, assertiveness, responding to peer pressure, conflict resolution and negotiation, and effective decision making.

In this paper, we are primarily concerned with people skills, the skills that facilitate and enhance our relationship with our fellow human beings, and our ability to get along with them. Self-management skills are important for our emotional stability and well-being; but moral values presuppose the existence and presence of other people, and people skills center around these values. In our view, therefore, people skills are the actualization of positive values.

Many books have been written on people skills and in the English speaking world the concept can be traced back to the publication in 1936 of a book by Dale Carnegie called *How to Win Friends and Influence People*. In a section titled “How to Win People to Your Way of Thinking,” Carnegie argues for the need for empathy or what he sees as the capacity to “honestly see things from the other person’s point of view”, and says the following:

If, as a result of reading this book, you get only one thing – an increased tendency to think always in terms of the other person’s point of view, and see things from that person’s angle, as well as your own – if you get only one thing from this book, it may easily prove to be one of the stepping-stones of your career. (180)

True, if we have empathy, if we are able to put ourselves in the shoes of other people, we would not want to hurt them. We would have identified ourselves with them, and hurting them would be like hurting ourselves. The Kenyan Ministry of Education introduced life skills as a subject, but sadly, according to the deputy principal of Alliance High School, one of the top schools in the country, the subject is not taught. The reason, he says, is that life skills are not examined by our Kenya National Examinations Council. And in an examination-oriented educational system such as ours, a subject that is not examined is relegated to the periphery of academic concerns.

The Kenya National Examinations Council does not examine life skills, but this body can do just that if it tried. One way to examine life skills would be to set passages and scenarios that deal with various facets of life skills – empathy, negotiation skills, communication, and conflict resolution – and ask practical questions on the strength and shortcomings in the interactions. For example, you have a character walking through a crime-ridden neighborhood. The criminals want to rob and even kill him or her. You can ask students to complete the passage on how the character “talked” himself or herself out of the situation. Students can also write personal essays on how they dealt with a dilemma in their lives. Finally, the teacher can select passages from novels and plays that deal with issues of life skills and set comprehension or summary questions on them. In short, therefore, we believe life skill can be examined profitably by the Kenya National Examinations Council.

What does all this mean for the future of education in Kenya? There are those who argue that the 8-4-4 system (eight years of primary, four years of secondary and four years of
university) should be overhauled or even replaced by another. They have even proposed a return to the previous 7-6-3 system (seven years of primary, six years of secondary and three years of university). In our view, this is not necessary. What is required is a new methodology of implementation. The emerging issues in the English syllabus which we talked about earlier can be taught more deliberately and with greater conviction on the part of teachers. The teachers can be made to take refreshers courses on these emerging issues. But the English teacher should not be left alone. The teachers in other field should also take up the challenge of dealing with these moral and ethical concerns within the framework of what is called English across the curriculum, such that even the physics teacher incorporates questions of integrity in their lessons. In this way, we retain the 8-4-4 system but inject more ethical content into it.

We have also talked about life skills, and we want to argue that nothing stops educators from teaching and even examining the courses. We know, however, that although the Ministry of Education has drawn up a syllabus on life skills, it has not trained the teachers who should teach this course. As it is, the English teacher is usually the one who is left to fumble helplessly for a way of teaching this important subject. Again, our proposal is that teachers should be encouraged to undertake in-service training so that they are properly equipped to teach life skills. But we want to purpose further that the Kenya National Examinations Council consider examining the course. Kenyan students can be tested in the whole range of life skills; and for it to be effective the test has to be applied. We would not want a situation in which the young people are simply made to memorize definitions of certain people skills for purposes of passing exams. We would want these students to internalize the values that are associated with these life skills.

As educators, we need to teach critical thinking skills. Critical thinking begins with ourselves, with our willingness to re-examine what we think and believe about other people and the world. The most dangerous people are those who have no ability for self-doubt, people who convince themselves, despite evidence to the contrary, that they are right, people who are unbending once they have decided on a course of action. Critical thinking prevents us from seeing the world in terms of black and white; indeed it enables us to see shades of grey, which is what the world is. It also makes us see the world in all its complexity. It makes us more tolerant of people who look different, or who behave differently, or people who subscribe to different belief systems. We can even argue that critical thinking, in the final analysis, is what makes our values sustainable and durable.

As we write this paper, our country is reeling from the shock of the news of a man who killed his wife and three young, innocent children and later committed suicide by throwing himself under a moving bus. The perpetrator of this unimaginable crime is said to have been a graduate from Alliance High School and our own University of Nairobi in Kenya. When the news broke out, most people focused on the name of the schools he went to. On the streets there were a lot of people commenting “How would someone from such schools do such a thing?” This illustrates that parents and society at large focus more on the reputation a school has based on the ranking system in Kenya which focuses on academic excellence rather than concentrating on what values their child will gain. Many parents would look for academically well known
public primary and secondary schools to take their children to. In reality, many children will leave
the house as early as 5am to make it to school on time simply because the “reputable
school” that the parents have chosen is on the other side of town. The parents want their children
to go to a reputable school so that they have a future. Meanwhile, the child is so exhausted for
not having enough sleep, having to travel a long distance in the traffic jam everyday for that
“better future.” Thus, it is an unfortunate truth that many parents and schools in Kenya put more
emphasis on education for education’s sake where students are pushed to academic excellence at
the expense of developing their character. Ikeda, in his essay “The Founding Spirit of Soka
University” states that “school should exist for the sake of students(92).” However, many
schools focus on how well the students can perform in their exams in order for the school to gain
a better reputation and a higher ranking. This needs to change if we want to foster children who
are well-rounded.

So how can we introduce soka education into our education system. One of the effective
ways is through our exchange programmes. In October 2013, our university took a bold decision
to send our student leaders to Soka University. This was a way of helping our student leaders to
learn what it meant to be a true student leader who can bring change to our own university. We
sent ten student leaders from different faculties and professional bodies together with three
lecturers for a 5 day exchange. It was a short exchange programme but our students received the
opportunity to meet with student leaders from Soka University and see how they organize their
university festival. Our students were very impressed by how their counterparts organized the
function entirely on their own from the very beginning to the end and conducted a very
successful event. One of the surprises or rather shock they got was the fact that the public who
came to visit the festival were all respecting the instructions given by the students when crossing
the road and being directed on where to go. The Kenyan students were not only surprised to see
how orderly people were but also surprised that the people were listening to the instructions
given by the university students.

Another shock they got was when they had an exchange meeting with the Soka University
student leaders. During the question and answer session, our students asked their counterpart
what privilege they received as student leaders. The Soka students at first could not understand
what they were being asked about but after some short discussions amongst themselves, one
student explained that the privilege they have was that they were able to share the students’
concerns with the higher authority and that they were listened to. Our students could not believe
that the student leaders took up these roles without having some monthly allowance, free
accommodation among other privileges that our students had. It was an eye-opener to our
students to know that student leadership at Soka was totally different from what they experienced
back home. Just like the politicians who only have their eyes on better pay, our students are
following in their footsteps in becoming selfish leaders who must satisfy their greed first. Thus,
pedagogy of value-creation becomes very important in a country like Kenya if we want to create
a society that respects each and everyone and strives to create happiness and peace.
In Kenya, the tradition has been that university students become rowdy and disrespectful when they have problems such as electricity blackouts in their dormitory, when there is an increase in tuition fees or when they have issues with the university. Talking to our students, most of them feel that since the university does not listen to their problems, the only way to be heard is through protests on the streets which can escalate to violent protests. Some of the students will go to the streets and start stoning cars, demanding money from passers-by, damaging street lights and fighting with the police. It is very difficult for the public to respect our students and we often hear that companies do not want to employ our graduates as they fear that they will be undisciplined employees. And this is why we see the importance of borrowing from the Soka educational philosophy, the value-creating concept and include it into our curriculum.

In a lecture he delivered in 1996 at Colombia University which was titled “Thoughts on Education for Global Citizenship,” Daisaku Ikeda had this to say:

Education is, or should be, based on the same altruistic spirit as the bodhisattva. The proud mission for those who have been able to receive education must be to serve in seen and unseen ways, the lives of those who have not had this opportunity. At times, education might become a matter of titles and degrees, and the status and authority these confer. I am convinced, however, that education should be a vehicle to develop in one’s character, the noble spirit to embrace and augment the lives of others. Education should provide in this way the momentum to win over one’s own weaknesses, to thrive in the midst of society’s sometimes stringent realities, and to generate new victories for the human future. (Ikeda 2010)

Many Kenyans consider education only a gateway to getting well-paying jobs and securing a bright future. However, we all know that education has a more vital role to play – the all-round development of the personality. In his article “The Purpose of Education” which he wrote as a student, Martin Luther King Jr. also shares the same view that education is not simply about academic excellence. He states:

The function of education is to teach one to think critically. But education which stops with efficiency may prove the greatest menace to society. The most dangerous criminal may be the man gifted with reason but no morals…. We must remember that intelligence is not enough. Intelligence plus character – that is the goal of true education.

Martin Luther King Jr. was talking at a time when intelligence was only measured in terms of the IQ. But partly because of Carnegie’s book How to Win Friends and Influence People, scholars started sensing the existence of another kind of intelligence, namely, emotional intelligence. By the time Daniel Goleman published in 1994 his ground-breaking study called Emotional Intelligence Why It Can Matter More Than IQ, the challenge to IQ measurement had already gained momentum. This means that we now have a scientific basis for talking about life skills. And of course, it has turned out that, according to this research, our life skills, propelled as they are by our emotional intelligence, are more critical to our success in life than what we associate with our IQ.
At this juncture let us examine the pedagogy of value-creation as it has evolved in the Soka school and university systems. For Tunesaburo Makiguchi (1871-1944), a career teacher and headmaster for over twenty years during the late 19th to early 20th century, the purpose of education was to enable all children to achieve happiness. His view of the purpose of education was to enable children to become people who will find “meaning, purpose, and happiness in their own individual lives” (49). For Makiguchi, a holistic education that focuses on all aspects of an individual was essential for a child. Makiguchi suggests that education should not be used as means to simply satisfy society’s needs such as economic development or political engagement by leading people to sacrifice their happiness for the sake of the nation. We must put the interests of the child first if we want education to fulfill its true purpose in society.

When focusing on the role of education in society, many people tend to concentrate on the kind of education that should be delivered to fulfill society’s needs. For example, in Kenya, we are trying to achieve the objectives of our new Constitution and Vision 2030. This is important; however, when we focus too much on industrialization and digitalization, we prioritize distribution of laptops to school-going children in public primary schools over building or improving libraries for children to read books that will nurture their souls. After being elected as the fourth president of Kenya in April 2013, President Uhuru Kenyatta made his pledge that all first graders would receive free laptops from January 2014 to ensure the transformation of education to e-learning. This came as a surprise to many of us; as many primary schools lack infrastructure such as classrooms, toilet facilities, electricity and water. Many schools still teach under trees and there is the problem of the lack of adequate and qualified teachers. Up to date, his promise has not been realized owing to a number of constrains including the high cost of this project, which is amounting to close to US$ 600 million. This raises the question, “Is giving each child a computer going to make for a child better?”

When the stakeholders change their way of thinking and consider the role of society that serves the essential needs of education as Ikeda puts it, our focus will be on how hard society must work towards developing the individual’s personality as well as bringing out their full potential. The role of society is important in that it must make a difference in each and every child without discrimination in order for them to live a better life and contribute to the betterment of the world. Societies must encourage the culture of hard work, respect and compassion.

When individuals can create value in their lives and serve others regardless of who they are, then and only then will we begin to make progress toward creating a more peaceful world. These types of individuals, in Ikeda’s view, are the global citizens. Because they possess wisdom “to perceive the interconnectedness of all life and living” (112). Global citizens naturally practice compassion towards others not only in their immediate environment but beyond his/her environment to other parts of the world. Ikeda suggests that education is fundamental in creating peace and positive social change. Humanistic education calls for the fostering of students with self-respect, empathy, and the strength and wisdom to overcome problems and meet all challenges.
Educators in Kenya should place greater emphasize on the importance of teaching in schools how to create value in each and every person’s life if they want to nurture holistic students who can contribute positively in the global arena. The values mentioned are not referencing religious morals such as those taught in Christian Religious Education or Islam Religious Education in the Kenyan schools and which are also examinable, but the basic innate moral compass that all humans possess. As the world becomes more diverse, we cannot base values on one specific religion because it will not cater to everyone. Children belong to different religions and thus, we need moral values that cater to all children from different backgrounds - moral values that teach them to co-exist harmoniously despite their differences. If we want to nurture future leaders who will respect human dignity, protect the environment, and contribute to world peace, then it is necessary to pay attention to the value creating education in schools. We believe that value creating education meets the demand of the twenty-first century Kenya.

As we conclude this discussion, we want to stress that this change in orientation and methodology will require more investment on the part of the Kenyan Government – investment in teacher training, in books, and in other resources and introducing value creating education. And for our part at the University of Nairobi, we would need also to focus more on fostering students who can think beyond themselves and their immediate issues. We need to take a more active role in inculcating in our students how to create value in even the most difficult situation. By teaching students on the importance of creating value, they will be able to respond to their problems in a positive way and work towards a more peaceful co-existence with others. In this regard, investing more in exchange programmes such as those we have with Soka University of Japan will be beneficial not only to our students but also to the university. This programme will help our students, who are the future leaders, to have first hand experience on what it means to be global. We also suggest that soka education pedagogy is introduced in seminars and workshops so that more educators become aware of how soka education can become a model in Kenya to transform the way we think of the role of education. Finally, it is our sincere hope that we will be able to reform our education system by introducing soka education, focusing on developing humanity in each individual so that they can become individuals who would be committed in working for peace and justice.
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Soka Education in the Context of an Autistic Care Center in India

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Abstract

This paper aims to compare the effectiveness of Special Needs Education to the application of Makiguchi's pedagogy of Soka Education through a small therapy center for children with autism in New Delhi, India. The realm of special needs education has been untouched by the ideas of value-creation and this paper aims at assessing this model at the Potentials therapy center as a possible model for the future of special needs education especially in India. As has been seen through past literature, Autism Spectrum Disorder in India has been continually misdiagnosed and stigmatised with increasing family intervention as well as ill-equipped infrastructure and underdeveloped training to work with autistic children, especially in developing countries like India. Keeping this prior research in mind, this paper looks upon the functioning of a small care center in the hub of South Delhi, India with its dynamic functioning and one-on-one as well as group care for children with autism, as well as vast improvement that the clinical interventions provide the children and their families with. This center is compared to certain ideals of Makiguchi's value-creating pedagogy as it works well and can be used as a future module for special needs care in India. This research is towards a better and more hopeful future.
“The goal of education is to enable students to attain a life of happiness.” (Ikeda, 163)

The title of this paper is “Soka Education in the context of an Autistic Care Center in New Delhi, India.” Soka education is different and unique in that it focuses on practically applying the education received. It promotes active learning rather than rote learning or memorizing textual knowledge. Education is known to work best when it teaches the student to create value in each moment of their life, because leading such a life is the key to a happy and healthy life. This paper aims to compare the effectiveness of Special Needs Education to the application of Makiguchi’s pedagogy of Soka Education through a small therapy center for children with autism in New Delhi, India. The realm of special needs education has been untouched by ideas of value-creation and this paper aims at assessing this model at the therapy center as a possible model for the future of special needs education especially in India as seen through the therapies on Autism Spectrum Disorder at this care center namely Potentials Therapy center.

Makiguchi during the times of hardship in Japan during the World War II was greatly disturbed by the consequences on the lives of children who had to bear the effects of imperial expansion. As a result, their education was not a means to an end, but an end in itself pressurizing them to perform and feel demotivated. As Ikeda notes in his text titled *Soka Education* “Makiguchi was determined that the burden of these problems not be passed on to the next generation. From this vow was born his key work on education, *Soka kyoikugaku taikei* (The System of Value-Creating Pedagogy), published more than seventy years ago in 1930. Central to his formulation of Soka, or value-creating, education is the tenet that all children should be afforded the opportunity to develop their potential limitlessly and to lead fulfilling lives undeterred by the destructive influences in society. This tenet continues to be the driving force of the Soka schools today.” (51)

The main ideology behind Soka education can clearly be seen in the functioning of Potentials therapy center. As the name interestingly suggests, the motto behind this care center is that every autistic child can hone the limitless potential that lies within, through the therapy that they obtain at Potentials so that they can develop functionally and partake in regular schooling with other children. This being the goal that drives the center, the one-on-one therapy sessions with the children, closely cohesive professional working environment, sharing of “goals” for each child, holistic-integrative therapeutic model and “Eye to I” pedagogy at Potentials are all aspects that illustrate the functioning of the center in promoting value-creating teaching at the center. These will be further explained in this paper that focuses on filling the gaps observed in special needs education in India, as it relates to Autism spectrum disorder.

As has been seen through past literature, Autism Spectrum Disorder in India has been continually misdiagnosed and stigmatized with increasing family intervention as well as ill-equipped infrastructure and underdeveloped training to work with autistic children, especially in developing countries like India. Past literature notes, “Due to lack of awareness about the condition, often, misdiagnosis or inclusion of ASD under the general category of mental retardation and/or speech and language disorders is commonly noticed.” (Singhi & Malhi, 2004) Further, the unique challenges in the context of rapidly developing countries like India include
the lack of scientific knowledge and application as well as untrained doctors, which makes the role of therapists even more significant in developing countries. Moreover, the increasing family intervention that results in interference in the treatment of the autistic patient by the family members, lack of trained autism specialists as well as misdiagnosis on the part of doctors makes it crucial to understand the role that therapists and therapy centers play in countries like India. Hence, keeping this prior research in mind, this paper looks upon the functioning of this small care center in the hub of South Delhi, India with its dynamic functioning and one-on-one as well as group care for children with autism, as well as vast improvement that the clinical interventions provide the children and their families with. This center is compared to certain ideals of Makiguchi's value-creating pedagogy as has been mentioned before, as it works well and can be used as a future module for special needs care in India. This research is towards a better and more hopeful future because ideals applied at Potentials can be adopted at other care facilities for children with disabilities in India.

**Autism Spectrum Disorder: A Brief Overview**

Autism is a neuro-developmental disorder that affects social and cognitive skills greatly. This disorder has become increasingly prevalent in the world today. The DSM-IV defines Autism as a pervasive developmental disorder marked by social and communication impairments, while the criterion for the DSM IV includes “Social interaction impairments, qualitative communication impairments and repetitive, restricted and stereotyped interests, activities and patterns of behavior.” (Whitman, Thomas, 2004) Autistic children suffer greatly from problems with social interactions. It usually begins during infancy but is detected from the ages of two to five years. Prior literature suggests that two-thirds of autistic children are mentally deficient, but some autistic children can be highly intelligent. The term autism is more a description of range of behavioral traits than a term to describe a single type of person with a single level of potential. Hence, Autism Spectrum Disorder “is a term that groups together five specific disorders under one umbrella: autistic disorder or autism, childhood disintegrative disorder (CDD), Asperger's syndrome, Rett's syndrome, and pervasive developmental disorder. Though this term appears to be focused on autism, the "spectrum" aspect implies that it is not a single condition but rather a disorder that results in individuals presenting a wide range of abilities and disabilities. Individuals vary in development ranging from severe problems to above average abilities.” (Nyeste, 137)

Autism comes in different degrees from mild to moderate to severe which is why it is termed Autism Spectrum disorder because the different degrees affect the development of the brain, but the range of behavior is different based on the severity of the disorder. Since it is a spectrum disorder in which individuals vary considerably from each other, theories and methodologies are needed to assess the reason for those differences. Autistic children generally share a deficit in social communication skills and lack the ability to communicate verbally as well as nonverbally. As Nyeste suggests, “approximately 50% of children diagnosed with autism do not talk or communicate. The 50% that can verbally communicate are said to often repeat
what they hear someone else say.” (137) Autistic children tend to do things in a repetitive pattern and demonstrate disruptive behavior if the routine or rigid pattern is violated. Hence, this suggests a deficit in social interaction and ability to live or function normally in society. As noted in Whitman’s text, “According to Kanner (1943) the major characteristics of autism include an inability to relate to people, failure to use language for communication, resistance to change and preoccupation with maintaining sameness.” (17) Lack of eye-contact is also a huge characteristic reflecting the inability to maintain social interaction due to autism. These characteristics reflect that autism is caused greatly by a deficit in social interaction and communication, because of which Potentials therapy center focuses through its therapies, on enhancing the characteristics that can contribute to better functioning in society and ability to interact with people.

Autism in India: Challenges as Observed through Past Literature Review

The diagnosis of autism is especially hard because the biological causes have not been determined; however, the diagnostic evaluation and assessment are very important for preventive programs to be designed by clinicians for children with autism, as well as to communicate with parents of the child with autism. Furthermore, Autism is becoming a growing challenge, especially in developing countries like India as well as more increasingly prevalent. Due to the severity of the impact on the individuals and their families, as well as the economic burden coupled with a lack of scientific knowledge and application about the disorder make the challenge harder in countries like India.

Based on studies in Asian countries, “nearly 1.7-2 million individuals are estimated to be affected with ASD in India. The extreme complexity in the behavioral, developmental and associated medical conditions across ASD indicates existence of multiple unknown causal factors seen in India specifically,” (3005, Singhal, et al.) making the diagnosis even harder in developing countries like India. Autism was unknown in India until early ‘80’s. It is only now that a lot more awareness is coming up because of different resources that are available like the prevalence of therapy centers like Potentials. The therapy centers employ professionals with better skills about the disorder and the use of integrative therapies that help to show results and improvement in autistic children faster.

One of the major drawbacks of the Indian society is the heightened expectations of the society and the increasing intervention from the family. These make dealing with disorders like Autism even harder. In India especially, since autism manifests itself through multiple behaviors, it affects the daily living of the family concerned, because the society and environment are increasingly interfering. The culture plays a big role in defining the struggle, especially because other people around always have a reaction to give. “The time-intensive process of caring for a child with ASD influenced the quality of relationships with other family members, sometimes resulting in marital conflicts between spouses.” Worse still, “Siblings of the autistic child are also influenced by the comments made by neighbors to their ‘different’ brother/sister.” (Divan, Vajaratkar & others, 2012) These loopholes in the Indian society clearly reflect that along with
working on improving the skills of autistic children, the therapists must strive hard to incorporate family expectations and interventions.

Potentials therapy center works on a clear and transparent model. As one of the therapists working at Potentials suggested, “The transparent protocol used at Potentials, whereby parents are included in the training and therapy of their children, and also taught ways to manage and work with their child at home, so as to improve the social skill development of the child even further, is highly effective. The goals planned for the child’s growth are also regularly sent to parents via email, hence further strengthening the professional transparency maintained at Potentials.” This strategy is effective in working with a cultural context like India whereby parental intervention is huge, because it provides proof of work done with the child as well as improvement that can be observed. Furthermore, it provides a way to not only deal with family intervention but incorporate the family and their expectations in a positive manner, so as to further provide growth for the autistic child. The therapists also use their time to train the parents to continue value-creation and using strategies to help improve functioning of the child even when at home. This encourages the parents and provides a feeling of satisfaction, because they also play a role in helping their child to improve faster.

Another huge limitation in India is the extreme amount of “peer comparison” in the young age. During early childhood, the child is compared to other children of his/her age, making it harder to accept a child with problems like autism. This makes the struggle even harder for the parents. As can be observed through the testimony of a parent of an autistic child in India, “While feeding Neeraj that took forever, most spoonfuls were spat out on the carpet. Witnessing one such mealtime my mother-in-law exclaimed, ‘I have brought up six children successfully.’” (Barua, Lessons from Neeraj) These kinds of expectations from even the extended family as well as society about the competency of parents worsened the struggles for parents with autistic children, especially because of this expectation that came from the culture of India that saw only certain skills and competencies as “normal.” This constant comparison worsens the predicament of an autistic child, who struggles to function normally, and worse still, is compared to other children of his/her age.

However, Potentials therapy center uses the concept of “comparison” yet again in a positive way. Using the ideology as Ikeda quotes in his text *Discussions on Youth*, “I cannot say this too strongly: Do not compare yourselves to others. Be true to who you are, and continue to learn with all your might.” The Daily Record Sheet or DRS used at Potentials works on the strategy of ‘current level + 1.’ The therapists set goals for each child, and based on those goals they set strategies which are used in each therapy which is driven towards meeting those goals and bringing about growth in the child. The idea used is ‘comparison of the child to himself/herself, from yesterday to today.’ These goal sheets are worked upon on a regular basis and modified, based on how the child improves each day from the therapies, in a sense that they incorporate the idea of improving the current level plus one more level, as has been mentioned before. In this way, the constant critical comparison is converted into constructive comparison,
helping the child to grow by comparing him/her to himself/herself on a regular basis, as opposed to comparison to other peers that only results in deterioration of the child.

There is certainly a need for more research on Autism in India because “to date, autism researchers have almost entirely neglected families of diverse background and those in Western countries, and medical anthropologists have virtually ignored the condition of autism.” (Daley, 1325) Indians greatly emphasize conformity to social norms as has been established as “social relatedness may have special significance. Indians ‘know’ autism: Western psychiatry and psychology were imported during colonialism.” (Daley, 1325) The traditional Indian culture places an importance on the intimacy between the mother and the child, thus making social relatedness extremely important. “The child-rearing style of Indian mothers has been described as indulgent and protective. A sort of “protracted intimacy.” Mothers demand social-emotional closeness and they may be alerted to the unusualness of an aloof child, while their need to protect the child may lead to dismiss or deny signs of problematic behavior.” (Daley, 1330) This traditional way of thinking explains another challenge in Indian society that needs to be worked upon in the care for children with autism. Structural inefficiencies, corruption at various levels, lack of funding on the part of government are just some of the problems that make the challenge of dealing with special needs harder in developing countries like India, along with societal expectations and pressure from the family members. The next section focuses on the policies used by Potentials and ideals adapted by the center, that help children with autism function better in a country with already existing loopholes and problems, thus improving and enhancing their skills and development.

**Potentials Therapy Center: Ideologies Parallel to Makiguchi’s Pedagogy**

Potentials therapy center relates to the pedagogy of Soka education in the way that it administers education for children with special needs. The one-to-one focus on each individual respecting their innate differences as well as difference in level or degree of autism, as well as strong student-teacher interactions makes this center a model for special needs education in India. In this way, the center is a possible model for centers and schools working for children with developmental problems or difficulties all over India.

As Makiguchi notes, “Transfer of knowledge is not and can never be the purpose of education. The purpose is rather to guide the learning process and to put the responsibility of learning into the student’s own hands.” (Makiguchi, 6) At Potentials Therapy Center the process of guided learning is known to work best in bringing out performance from children with problems, especially those with autism. Guided learning is the concept of a constructivist instructional learning model that assists in providing the learner the best working environment through the process of a teacher that enhances the process of learning through their guidance. The therapists are known to use Play therapy whereby the therapists teach the child play through imitation, and then play with the child to enhance their social skill development.

Play is generally an important activity that assists with the vitality and growth of young children’s development. Play behaviors are initially reflexive and simple, but become
increasingly intentional and under the child’s control. Children explore and learn about their environment and how it operates as well as how it responds. Children also learn about the permanence and change in structure of the environment, cause and effect relationships, as well as how objects can be used. Today, play therapy has become a major vehicle for understanding and evaluating children’s sensorimotor, cognitive, linguistic, social and emotional development. Hence, this therapy is being used greatly in working with children with autism.

Moreover, children with autism have a difficulty in keeping their attention on a shared activity with others. They are distracted by internal or external stimuli or sidetracked by what we consider irrelevant. Hence, it is hard to participate in a community which is why “setting up games makes it important for making interaction succeed for these children.” Furthermore, these children cannot transform their impulses into appropriate action and their actions often seem out of context. They also have difficulties in grasping the meaning of a situation. “For these reasons, children benefit considerably from structured education in which schedules, records instructions and the like become visual.” (Gammeltoft et. al) At Potentials, Play therapy is the key which in turn helps the Speech therapy and OT (Occupational Therapy) also benefit further, because the need of the child is greatly fulfilled through Play Therapy which includes play and activities that stimulate social development, as a result, the child performs better in other therapy sessions. Play therapy helps to enhance the skills of the child to the fullest and concepts taken from Play were also used by this therapist in Speech therapy so as to make the session interesting for the child.

Furthermore, the Play therapy uses visualization to strengthen the eye-contact of the child with the therapist through a model called the ‘Eye-to-I model.’ “Visualization is a support tool for a person with autism, like a white stick for the blind. By using visualization the children are able to function unaided in a range of contexts in which they would normally depend on the support of grown-ups.” In this way, the autistic child is taught to inculcate the sense of oneself and their inherent potential through a sense of identity through the idea of from the ‘eye’ of the child to the ‘I’ of the ‘therapist’ or the person in front of them. This model is a key in enhancing social interaction through the sharing of emotions and working on the key deficit in autism; “the theory of the mind” or the way that they develop a sense of what others are thinking or feeling.” (Nyeste, 137) In this way, the autistic child learns a sense of self-fulfillment and the center fulfills its main goal of helping the child to realize their innermost potential to the fullest extent.

Hence, the play therapy used at Potentials functions well in achieving social integration and social communication, as well as cultivating a sense of fulfillment in the child. As Ikeda states, the true purpose of education “should be the cultivation of individual character based on respect for humanity.” (Ikeda, 162) This care center accommodates 50-70 autistic children between the ages of 2-18 differing in their level and degree of autism in order to strive to cultivate individual potential along with regarding the differences of severity and capacities of all the autistic children. Ikeda further notes, “It is of primary importance for people concerned with education on the broader scale to believe in the creativity of each young person with whom they come in contact, cultivate it warmly, and persistently endeavor to enable it to bloom brilliantly.” (Ikeda, 169) Potentials Therapy Center is a dynamic team of psychologists that help children
with autism cultivate as the name suggests the innate potential within each child. This team of child psychologists uses coming-of-age therapies to improve the daily functioning of children with autism in India. These children come to the center in New Delhi, from all parts of India, including remote villages and towns to cities. Thus, the center fulfills the economic needs of the different strata of the Indian society and creates value in education.

Being constructive in everything one does, also gives a sense of satisfaction that would not come from rote learning. Soka education focuses on treasuring each individual, where they are not treated as statistics but as real people, and they are admired for their individuality. The mentor-disciple bond, better known as the student-teacher bond is highly strong, where the teacher tries to reach the depths of the student’s life and nurture the hidden potential within them. The process of Special needs education involves systematically monitored and individually planned arrangement of teaching procedures, designed to help learners with special needs achieve a higher level of self-sufficiency in the classroom and community. At Potentials, the strength as a care center is their 1:1 ratio between students and therapists that helps meet the needs of each autistic child to their specific capacities, but also the small group work targeting an enhancement in social-communication skills, along with early intervention programs for the children with difficulties, parental work as well as various training workshops (for parents and professionals).

The integrative therapeutic set-up is key in creating value for the children at Potentials. As one of the Speech therapist working at Potentials suggested, “Every child has different needs, hence integration of therapies helps to cover all aspects of deficits in child’s growth. There is one ‘goal’ for each kid and that is how the integration of therapies works, in order to meet those very goals.” The integrative set-up at Potentials works very well in enhancing the development of children with autism, because all therapies are used to promote and achieve specific goals set for the child. This can be illustrated by an example quoted by one of the therapists at Potentials. “A child with sensory and vestibular issues, was unable to perform in Play. On interacting with the Occupational Therapy professional, the Play therapist learnt a strategy of using a specific Yoga asana to reduce the pressure and movement of the child that helped him to perform better. Each therapy used its own skills in order to reduce the movement and vestibular issues that the child had, that further enhanced his functioning during therapy. In this way, the integration of the therapies towards one goal worked very well in enhancing the development of the child and removing his problem, because all therapies worked together towards that one goal.”

Makiguchi notes, “Teachers must leave fact-finding to books and assume a supporting role to the student’s own learning experience. Teachers must decide if they are to be organizers of information or arousers of students’ natural interest and curiosity” (Makiguchi, 7). They administer interventions through individual sessions (with one student and two therapists) as well as group sessions (with three students and four therapists). The individual one-on-one therapy work on enhancing the skills of the child, while the group therapy help to improve social interaction in a set-up with other children with the same skills further working on the autistic child. The group therapy blended with the one-on-one sessions work perfectly in enhancing
social skill development. The sessions are designed to creatively teach the child skills that s/he learns independently by observing the therapist, as opposed to using fact-finding or structural rote learning that does nothing to help improve the growth of the child.

Not only that, but even the therapist is left independent to explore freely and create their therapy, as a result of which the benefits are increased exponentially. The environment at Potentials is unique and supportive because the therapists work together to help the child improve and meet their goals through an integrative set-up of therapies. The staff meetings once every week, create a stimulating environment for each therapist to learn and grow because each child and their progress or challenges are discussed at the meetings. As one of the speech therapists explained, “the encouraging environment at Potentials helped me as a professional to move from a structural to a more functional and applicable form of therapy. As a result, I grew as a therapist and was able to bring about better improvement in the children through an integrated Speech therapy, taking from aspect of Play therapy.” This reflects the model of Potentials to “Create therapists, not implementers.” The freedom given to the therapist to explore and experiment results in creating value in the session further resulting in better improvement for the children. This is very similar to the one-one-one and closely stimulative class environment noticed in the Soka school system, especially the Soka University. This strong student-teacher bond is a huge driving force behind the high academic achievement and model of global citizenship that nurtures and raises leaders for the future through the Soka school system.

**Conclusion: Towards a Value-Creating Future**

As Ralph Waldo Emerson has said, “The secret of education lies in respecting the pupil.” The main purpose of education is the happiness of the learner. As has been noted in Makiguchi’s pedagogy, “the emphasis is not so much on teaching as the work of carefully guiding the students’ own process of learning.” (Ikeda, 14)

The main goal at Potentials is not only to improve the functioning of the children with autism, but also to integrate them into a normal school set-up with other children without any problems. Taking from Makiguchi’s theory of value, Potentials therapy center in this way, used the concept of beauty, benefit and good, by not only providing benefit to the autistic individual, his family and relatives, but also to the society at large. The ideology of creating individuals that are taught to live independent lives, despite problems like autism, is a great model that can be adopted by all centres in India.

At Potentials, one of the therapists worked in an integrative set-up which meant that she was sent to a school called ‘Little Wonder’ whereby she worked to integrate the autistic children at the normal school set-up with the help of the teachers at the school. Thus, this center after helping a child with autism become more independent and able to function better through the therapy, provided for a few years, also worked at integrating the child successfully in a normal schooling environment to continue enhancing the growth and development of the child, providing benefit not only to the individual and his/her family, but also the society at large.
Besides, teaching the child to enjoy what they learnt through therapy, the center helped a child to create value in many other ways. Creating the joy together, in the shared space between therapist and child, the center promoted a holistic aspect of learning. The integrated model of therapy improved the quality of life as a whole, by focusing and working on all the different skills of the child. This inter-disciplinary aspect can be observed clearly in the model of the Soka school system that promotes holistic education driven towards critical thinking skills. In the same way, the autistic child not only learns behaviors but is also taught to think about what they learn before. Greetings, holding conversation and norms of behavior are all taught at Potentials. All of these ideologies and skills help the child to function as an able-bodied individual in the society. They produce functional adults for the future, just as Soka schools raise global leaders for the future. In both systems of education, the happiness of the learner and their ability to critically think for themselves are the results that are hoped to achieve.
Works Cited
Interviews with therapists at Potentials therapy center, New Delhi, India. First-hand Data Collection.
The Future of Global-Physician-Citizens: Why and How Soka Should Improve Medical Education

Jacqueline M. Mills

Abstract

The system of medical education in the United States provides excellent technical training to students, but has many shortcomings. Scientific progress supplanted happiness of the physician and their patients as the ultimate goal of medical practice. Premedical and medical education place no focus on formal academic training in humanities, culture, and the social and behavioral sciences, and physicians tend to lack training in their own character. Soka Education and Soka University of America provide remedies for each of these shortcomings. The main tenet of Soka Education is that the purpose of education is contributive citizenship and happiness of the learner. SUA teaches a broad based, unique liberal arts curriculum to students. Soka Education, particularly as SUA implements it, has as a primary objective the development of the student as the whole person and engages students in a hidden curriculum that facilitates intellectual and spiritual creativity and an understanding of their own lives.

I propose that SUA should work to create a biomedical sciences concentration within the liberal arts curriculum through a multi-phase process. SUA should also create a pre-professional advising office, including pre-health advising. SUA students hoping to enter into a medical career would benefit, the university would advance new frontiers of premedical education, and society would gain from having the compassionate, multi-cultural, and contributive SUA alumni working in the field of medicine.
Introduction

To address the deplorable state of US medical education at the beginning of the 20th century, the Carnegie Foundation for the Advancement of Teaching commissioned Harvard-educated philosopher and education scholar, Abraham Flexner, to visit every medical school in the United States and create a comprehensive list of recommendations for a standardized medical education curriculum (Duffy 271). Alarmed by the large number of ill-trained physicians emerging from institutions around the country, Flexner declared in his 1910 report that his purpose was “not merely to define the ideal training of the physician,” but to “distribute as widely as possible the best type of physician so distributable” (13).

Flexner developed a structure for medical school curriculum consisting of two years of coursework and two years of clinical apprenticeship. Additionally, Flexner strongly advocated for all physicians to contribute to scientific progress in laboratory science and clinical medicine (Flexner 52–105). He instilled within the standards of medical education high regard for experiential learning and a strong emphasis on scientific rigor and discovery. This education system still exists in most US medical schools today.

The system of medical education in the United States provides excellent technical training to students. However, this same system has many shortcomings in facilitating students’ development of compassion, cultural aptitude, sense of self, and an understanding of humanity beyond biological phenomena. The values and liberal arts curriculum of Soka University of America could address these fundamental criticisms of US medical education. SUA aims to establish within students a strong moral, philosophical, academic, and cultural foundation. Such an education would help future doctors skillfully tackle professional and personal struggles inherent to the practice of medicine.

Soka University of America, however, does not yet have an official system for sending graduates into the field of medical science. Among the alumni, current students, and prospective students who are attracted to the university’s mission statement of contributive global citizenship, many choose to pursue careers in medicine because this field offers solutions for combating humanities most fundamental sufferings. SUA should begin offering and strengthening opportunities for students within the scope of biomedical sciences and foster the development of skillful physicians among the ranks of its graduates.

The purpose of my research is to explain the shortcomings of the pre-medical and medical education system in the United States, to demonstrate how Soka Education and SUA address these shortcomings, to argue the need for a premedical track at SUA, and to propose a means by which SUA can develop such a program.

Criticisms of premedical and medical education and how Soka Education and Soka University of America resolve them

While the Flexner Report did vastly improve the state of medical and premedical education in the country, this modern curriculum faces criticism for three main reasons. First,
scientific progress supplanted happiness of the physician and their patients as the ultimate goal of medical practice. Second, premedical and medical education place no focus on formal academic training in humanities, culture, and the social and behavioral sciences and physicians therefore tend to be deficient in skills related to these disciplines. Third, physicians tend to lack training in their own character, which many scholars have attributed to the neglect of the liberal arts in premedical education.

Soka Education and Soka University of America provide remedies for each of these shortcomings. The main tenet of Soka Education is that the purpose of education is contributive citizenship and happiness of the learner. SUA teaches a broad based, liberal arts curriculum to students, incorporating the unique attributes of Core philosophy courses, foreign language and study abroad requirements, and mandatory capstone projects. Moreover, Soka Education, particularly as SUA implements it, has as a primary objective the development of the student as a whole person and engages its students in a hidden curriculum that fosters intellectual and spiritual creativity and an understanding of their own lives. In the following three sections, I will explain in detail these three major criticisms of premedical and medical education and how SUA could address each of them.

I. Care, Compassion, Contributive Citizenship and Happiness

Many physicians train rigorously in the sciences and expand the frontiers of medical knowledge, but their careers no longer prioritize improving the happiness and wellbeing of their patients and people in their communities. Previously, the hallmark of a great physician had been their ability to treat patients skillfully and improve their health and quality of life. Flexner established the scientific standards of medical education and even inspired the development of state standards for medical practitioners (Barzansky 19), but the role of physicians as caring healers began to fade after the implementation of his recommendations.

On the 100th anniversary of the Flexner Report, Yale Medical School Professor Thomas Duffy wrote, “Did the Flexner Report overlook the ethos of medicine in its blind passion for science and education? What was the cost of our success, and who has borne that burden?” And later he added, “[T]he oversights of Flexner and his associates need not have occurred if these leaders had recognized the primary role of physicians as beneficent healers […] Flexner’s corpus was all nerves without the life blood of caring.” (273)

Diverting the focus of physicians away from the compassionate care of patients affects patient health and their happiness as well. This has also resulted in many repercussions beyond medical education and fully into medical practice, including increased patient turnover, decreased face-to-face contact with patients, and increased time completing paperwork. These trends coupled often leads to diminished mental health of physicians as well (Meltzer-Brody).

In a recent article addressing physician burnout, Indiana University Medical School Professor Richard Gunderman wrote, “physicians are human beings too, and their suffering should summon no less compassion and concern than anyone else's” (1). Physicians, as
compared to the general population, notably do not care for their own wellbeing. Burnout and suicide rates can perhaps serve as proxy indicators of this trend. In 2012, one study found that the physician burnout rate was 10% higher than that of workers in the general US population. Furthermore, while individuals with bachelor’s or higher degrees were at lower risk of burnout than those with only high school diplomas, medical doctors were at an increased risk of burnout compared to high school graduates. (Shanafelt TD et al.). Burnout is not only indicative of diminished mental health of physicians, but also correlates with poorer patient outcomes, decreased patient satisfaction, decreased physician-patient communication, and increase in inappropriate prescribing patterns and unethical behavior (Freeborn; Gundersen).

In the United States, the prevalence rate for physicians experiencing major depression in their lifetime is 12.8% and 19.5% for males and females, respectively. The depression rate for male physicians is slightly higher than that of the general male population. While the rate of major depression for female physicians is the same as that for the general female population, the suicide rate for female MDs is quadruple that of the general population (Center C et al.). A meta-analysis including 25 international studies found similar trends throughout the world (Schernhammer and Colditz).

Gunderman highlighted the connection between individual happiness of the physician and the importance of fostering within them a sense of service to their patients and their community. He writes:

Medicine is not a job. It is not even a career. At its heart, medicine is a calling […] we must begin early in medical education to help medical students and residents explore and connect with a sense of calling to the profession. Even late in their careers, physicians need to recall that they are summoned to something older, larger, and nobler than themselves. They must never forget that a career in medicine represents one of life's greatest opportunities to become fully human through service to others. If we are genuinely concerned about physician burnout, we need to focus less on reducing stress and more on promoting what is best in physicians: compassion, courage, and above all, wisdom. (2)

Few institutions of higher learning, particularly those intended for the training of future physicians, have as their focus the student’s happiness and a high regard for service to others, rooted in the development of the student’s compassion, courage, and wisdom. This component of a physicians training, which is essential to their individual happiness as well as to the health and happiness of their patients, does not yet exist.

The remedies for this problem in the training of physicians, however, could be found in Soka Education. Tsunesaburo Makiguchi wrote that the purpose of education should be the happiness of the student and that this happiness necessarily includes contributive citizenship. He explained that education should enable individuals “to become responsible, healthy cells in the social organism, to contribute to the happiness of society and, by doing so, to find meaning, purpose, and happiness in their own individual lives” (22). Makiguchi also clarifies that “health is the physiological foundation of happiness”(27). If we were to apply these principles of Soka
Education to medicine, the priority of doctors and medical students would first be the compassionate care and improved health of their patients. Coupled with continued rigor in scientific training, this would then lead to improvements in societal health and happiness. In addition, according to Makiguchi’s theory, this would in turn contribute to happiness of the physician.

The mission statement of Soka University of America emphasizes living a contributive life, not simply to instill within the students a commitment to service, but also to remind students that within this sort of existence we can find purpose and ultimately happiness. I have found in my personal experience as a student, staff member, and alumna of the university, that the faculty, staff, students, and donors take these ideals of Makiguchi very seriously. Some may argue that we cannot definitively declare that Soka Education can affect the level of happiness of students and while admittedly metrics of ever-popular college ratings are not always sound, Soka University of America did rank third nationally for having the happiest freshmen students (Amondson).

Also, although not exclusive to Soka, scholars have found that the curriculum of liberal arts programs can also contribute to a physician’s level of happiness. Schwartz et al describe:

"Studying the humanities may provide much needed opportunities for self-reflection about the intensive process of becoming a physician and may ease feelings of isolation or burnout. Educational interventions have been shown to have a positive impact on the health habits and self-care practices of medical students, which may in turn increase their ability to be resilient to the challenges of medical school." (377)

One randomized, controlled study found that among third and fourth year medical students, those that took a course on writing about emotional topics had a significant decrease in the rate of depressive symptoms 3-months after taking the course (Austenfeld, Paolo, and Stanton 267).

Whether due to having the explicit educational objectives or through reading literature or writing narrative, education needs to help future physicians develop their capacity for contributive citizenship and happiness. Improving the level of compassion that physicians can show toward their patients, community, and themselves can have vast impacts on the happiness and health of society.

II. Formal academic training in the humanities, culture, and the social and behavioral science

After medical schools began implementing the recommendations set forth by Flexner in 1910, scientific rigor in medical education began to improve, but weaknesses in the formal curriculum became apparent. In 1925, even Flexner himself wrote, “scientific medicine in America- young, vigorous, and positivistic- is today sadly deficient in cultural and philosophic background” (American Medical Student Association). Wolf wrote in the New England Journal of Medicine, “My concern is that we […] are bringing into medical school young men and women who lack a civilizing background in the humanities” (949). Very often, medical students train in their university education to regurgitate correct answers to technical questions, but they
lack formal education that would help them understand the complexity of humanity and navigate the uncertainty that accompanies work so intricately involved in the human experience.

Understanding language, culture, the environment, economics, psychology, and sociology is vital to the improvement of health in society. Current trends in Boston illustrate this well. The average life expectancy at birth of people born in Boston from 2000 to 2009 is 77.9 years. People in the Back Bay neighborhood, however, have a life expectancy almost 10 years more than the people living located 3 miles away in the Roxbury neighborhood in Boston (Boston Public Health Commission). Back Bay has a predominantly English-speaking, wealthy, white population. Roxbury has a relatively large Hispanic/Latino and Black/African American population. Median household income in Roxbury is 36% of that in Back Bay. Of the 138 “distressed buildings” in Boston in 2011, 66 of them were in Roxbury. None were in Back Bay (City of Boston, “Back Bay/Beacon Hill Data Profile: Population Demographics”; City of Boston, “Roxbury Data Profile: Population Demographics”).

A complex array of factors beyond just genetics determines the health of an individual and their society. The ability for a person to convey to their doctor the nature of their ailment and understand their doctor’s instructions, pertains not just to English or foreign language ability, but also to education level, psychological state, and social context. Does a patient have constant respiratory problems because they do not understand how to take their medicines? Is it because they cannot purchase their prescription? Do they live in poor housing conditions and are they constantly breathing in mold? To be able to adequately contribute to the health of their patients, doctors require knowledge of the human condition beyond molecular physiology. Having an understanding of language and the social sciences can help physicians implement health interventions that can drastically change the outcome of a person’s life.

Also, having a strong foundation in philosophy and ethics is would also be imperative for a skilled doctor. All US medical students learn the four basic principles of medical ethics: autonomy, justice, beneficence, and non-maleficence. Beyond learning these four terms, they do not have time in their curriculum for discussion and debate of these values. Medical students and physicians, however, often encounter situations when the correct course of action based on one ethical principle counters the correct course based on another. Many clinicians lack the training in skills that would help them critically analyze the discordance they face in these ethical dilemmas. Even further, some global health scholars argue that these four principles of ethics do not apply universally and do not accord with many cultural traditions. They argue that medical ethics must be more malleable to culture context. If this is the case, medical education needs to train physicians to understand how to navigate ethical decision-making in this even more amorphous context. I believe that the foundation for this training can come from rigorous coursework in the social and behavioral sciences, philosophy, ethics, and culture.

The Association of American Medical Colleges (AAMC) has begun to recognize this curricular deficit and has begun instituting changes to the Medical College Admissions Test (MCAT) to reflect the need for medical students to have greater knowledge beyond the basic sciences. In January 2015, the AAMC introduced a new section specifically covering sociology.
and psychology to assess student knowledge of the “behavioral and sociocultural determinants of health and health outcomes.” Although the Critical Analysis and Reasoning section of the MCAT had since 1991 included the social sciences and the humanities, the 2015 MCAT also added further emphasis explicitly on cultural studies, population health, ethics, and philosophy. While these standards for the AAMC are begin to shift, the focus of premedical programs is still overwhelmingly on basic sciences at the neglect of other important fields.

Soka University of America prepares its students for tackling problems that require interdisciplinary approaches and creative solutions through its liberal arts curriculum. SUA outlines learning objectives for general education students as follows:

1. To live, work, and provide leadership in a rapidly changing world
2. To think critically and creatively
3. To be effective at various modes of expression and communication
4. To interact with and appreciate other cultures and traditions
5. To take constructive action for a better society

These are all objectives that many believe should be an integral part of a physician’s education as well. The university takes action toward fulfilling these objectives through the Core courses, the general liberal arts curriculum, and foreign language and study abroad requirements.

The formal educational experience at SUA begins with Core 1- Enduring Questions of Humanity. Through the study of philosophical and religious writings from Western and Eastern civilizations, this course and later Core II Enduring Questions in Contemporary Context provide students a forum for examining fundamental questions that do not have “right” answers and encourage students to develop a greater understanding of cultural norms, beliefs, ethics, and biases. The university describes:

Upon completing the Core, students will be able to question and probe the commonalties and differences of the human experience and thus their own lives from multiple perspectives. They will be provided the tools to speak and write intelligently about those perspectives and more generally about the difficulties and nuances of cross-cultural description, in preparation for the day when they will take their place as citizens of the world (SUA Office of the Registrar 41).

The knowledge and wisdom students gain from taking Core are relevant to issues that may arise when caring for diverse patient populations and when confronting questions about life and death. SUA provides its students many other courses in the literature, visual arts, social and behavioral sciences. While many may understand how courses like economics and psychology may benefit a doctor’s medical practice, reading literature and studying the visual arts can do so as well. Several studies have shown that when medical students trained in formal observation of visual arts, their skills in clinical observations improved (Naghshineh et al.; Shapiro, Rucker, and Beck). One study conducted at the University of California, Irvine showed that students in the formal visual arts training program expanded their capacity in “emotional recognition, cultivation of empathy, identification of story and narrative, and awareness of multiple perspectives” (Shapiro, Rucker, and Beck). Another study found that medical students who
studied literature displayed higher levels of empathy as compared to their classmates and many study participants noted that literature helped them cope with stress due to their medical training (Shapiro, Morrison, and Boker).

The curriculum at SUA also instills cross-cultural skills in students through foreign language and study abroad requirements. The acquisition of a foreign language is not only a tangible skill that can improve doctor-patient communication, but it can also instill a greater understanding of culture and beliefs. Studying abroad in a foreign language creates for students a unique opportunity to examine the beliefs, norms, and values that may have been taken for granted in their home country. They can also tangibly learn about health systems and differences in medical care abroad. The Harvard University Medical School admissions committee succinctly describes the importance of language acquisition by stating, “mastery of a foreign language […] is a valuable skill that expands intellectual and cultural horizons and that reinforces preparation for patient care in a multicultural society” (Harvard Medical School).

Lewis Thomas, former Dean of Yale Medical School and New York University School of Medicine, insisted that courses in the humanities and foreign languages should be the primary prerequisite coursework for medical school admission. He declared that the greatest benefit of these requirements would be to society. He states, “We could look forward to a generation of doctors who have learned as much as anyone can learn, in our colleges and universities, about how human beings have always lived out their lives. Over the bedrock of knowledge about our civilization, the medical schools could then construct as solid a structure of medical science as can be built, but the bedrock would always be there, holding everything else upright” (141).

III. The development of the whole self

The overwhelming task for pre-medical and medical students is the memorization of technical facts. This has resulted in a system in which young students are encouraged to pursue courses and extracurricular activities not for the purpose of truly developing their character, but rather merely to demonstrate what may appear as character-development to medical school admissions committees (Gross et al.). Almost all entering medical students have high GPAs, high MCAT scores, volunteer experience, and extracurricular activities as though these were tasks to check off a checklist. Fulfilling these requirements, rather than genuine character development, becomes the goal of undergraduate education.

Students, so focused on maintaining high GPAs, often intentionally avoid courses such as philosophy or literature for fear that they will get a low grade. However, these courses provide students far more than intellectual exercise. They teach students to think, to analyze ideas, and to be creative. They can help students learn about and confront essential struggles of the human experience and develop courage, wisdom, and compassion toward dealing with them. In his article entitled I can’t afford a B, Wolf criticized the science-heavy admissions criteria of medical schools and encouraged promoting courses in the liberal arts. He writes:

Are the clearly specified and hence readily defensible criteria for admission those most likely to yield a wise and cultivated doctor — a person capable of dealing
with uncertainty, of compassionate understanding and wise judgment? Can such an ideal physician be expected from an intellectual form frust who has spent his college years only learning the "right answers"? Less structured college courses that depend on classroom discussion, individual intuitions, judgments and ideas may be needed to sharpen the student's perspective and to enable him to make discriminating judgments where there is no "right" and "wrong." (949)

What is important about these courses is not just the information a student can learn. Education shapes the type of people students become. These less-structured courses can provide insight into how to think about complicated problems, approach ethical dilemmas, and demonstrate genuine compassion— all tasks that require a mental strength developed from cognitive exercise beyond rote memorization of facts.

Life consists of far more than quantifiable factors. Medicine is not just blood counts and antibody levels. How often do physicians debate whether or not to take measures to prolong life? What is the benefit of another day of life if a person is to live that day in pain? What purpose do life-saving measures serve if the patient for the rest of their lives will require assistance to accomplish the most essential of tasks? A person who has never pondered the purpose of life may have difficulty exhibiting compassion and wisdom to a patient who faces a debilitating disease or life-threatening illness.

The study of literature, philosophy, and poetry can help an individual understand their own experiences in the world, train them to learn about and evaluate their own values, and understand those of others. Reinke called out to the medical community about the importance of the non-academic benefits of liberal arts education when he stated as follows:

Medical colleges should [...] consider the education of the whole man [...] Certainly there is no field in which this need is greater; for where life and death are at issue the practitioner needs, in addition to technical training, every resource of mind, will, “heart” and body. (1058)

He and many others have emphasized the need for doctors to find this education through literature and the liberal arts more broadly.

This “education of the whole man” is what SUA provides students. When describing happiness as the purpose of education, Makiguchi added that inherent to happiness is a “sense of becoming.” Students should discover themselves and begin to identify how they wish to exist in the world. Dr. Vincent Harding, African-American historian and civil rights scholar, stated, “[Soka University of America] is a place where [...] young people from all over the world gather to discover their purpose in life. They come not simply to get what we call ‘an education’ and certainly not just…to receive educational credentials. They come to be challenged to discover themselves as world citizens and as leaders whose ultimate purpose is to recreate their societies and the world” (Harding and Ikeda 227). Soka education has as its purpose developing within students, genuine character and a sense of their place and purpose within the cosmos.

The SUA course catalog describes, “Education is an integrating process in which students gain an awareness of the interdependence of themselves, others and the environment. Wisdom,
courage, and compassion — values treasured by the university — do not exist in isolation. They emerge in individuals as they learn the importance of service to others, to the natural world around them, and to the great cause of peace and freedom” (6). Physicians of the future require this kind of laborious training of the mind and soul in their education now if they are to become truly compassionate and competent doctors.

SUA should begin training physicians of the future

SUA excels in its liberal arts curriculum and cross-cultural education, but as a university we must acknowledge the vast area of human suffering that we do not yet address. Globally, more than 10% of GDP was spent on health care. In 2012 greater than 17% of the United States’ GDP was spent on health care (World Health Organization). Whether from the perspective of job market or general human need, as an institution, SUA fails to take part in this sector of society. William Welch, a former dean of the Johns Hopkins School of Medicine and friend of Flexner once boldly stated that the most noble work a university could do would be the promotion of medical studies (“William Henry Welch”; Duffy). While I do not agree with this entirely, the creation of a biomedical sciences concentration at SUA would benefit Soka students, society, and the university itself.

Given that many students are attracted to SUA’s values of upholding the sanctity of human life, we will invariably find from within our ranks individuals who are interested in leading lives dedicated to human health and improving quality of life. Numerous prospective students and individuals SUA has accepted, however, have turned down attending SUA, noting in particular its lack of a premedical track. Without the institutional support from SUA, students and alumni are already pursuing careers that infuse their value creation education into careers in the biomedical sciences, even though they face great difficulty doing so. Of the nine classes of students that have graduated from SUA, only three alumni have attended medical school in the United States. Of the nine classes of students that have graduated from SUA, only three alumni have attended medical school in the United States.1 All three completed a vast majority of their required premedical coursework at institutions other than SUA and spent an average of three years doing so, although students can complete it in 15 months. Several other alumni have begun taking premedical coursework, but either did not complete it or have not yet been accepted to medical school. The financial burden and time commitment for SUA graduates pursuing medical careers is much greater than that of traditional premedical students. I believe that SUA is doing a disservice to its students and alumni by not providing a clear track to careers in medicine.

Society would benefit greatly from having the compassionate, multi-cultural, and contributive SUA alumni working in the field of medicine. Edward Slingerland, Professor of Asian Studies and Canada Research Chair in Chinese Thought and Embodied Cognition at the University of British Columbia wrote:

1 Other alumni have however attended or are pursuing programs in chiropractic medicine, nursing, pharmacology, and pharmacy.
I will go out on a limb and predict that we will never have a multibillion-dollar center dedicated to semiotic cultural anthropology or deconstructive unpacking of Elizabethan sonnets, simply because such activities seem so patently self-indulgent and pointless to most people. Money is pouring into the sciences because they are achieving results and discovering exciting new things about who we are and the nature of the world in which we live.

Society yearns for skilled healers and great advances in medicine. The university too would benefit from having an increased focus on biomedical science. The environmental science, social and behavioral sciences, and international studies courses can benefit from the addition of the biomedical discipline. Many rapidly emerging fields, like global health and environmental health, require an interdisciplinary approach, because human health is a factor in all of these concentrations. Dual degree programs at medical schools (MD/MBA, JD/MD, MD/ MPH, MD/MPP, MD/MPA) are also becoming more widely available precisely because people understand the benefit of multidisciplinary approaches in medicine and other related fields.

The humanities concentration can also benefit tremendously. For example, an understanding of neuroscience can inform philosophical discussions on consciousness and human nature. A person who develops achromatopsia, the loss of the ability to perceive color, can also lose the ability to recall colors from their memory (Damasio). The anti-malaria drug Mefloquine often causes psychological side-effects, including nightmares, paranoia, delusions and hallucinations (PRI). Certain regions of the visual cortex only synapse when a person is looking at human face, but only if the human face is not completely upside-down. Neurotransmitters can affect violent behavior, falling in love, or even feeling compassion for another human being. Many of our philosophical discussions at SUA can begin with a foundation of scientific facts.

Some many argue, however, that the university was not founded with the intention to produce technical clinicians, but the legacy of humanistic science and medicine has been a part of this campus since its founding. Dr. Linus Pauling, for whom SUA named one of its original buildings, won undivided Nobel Prizes in Chemistry and Peace. In commemoration of the opening of the Linus and Ava Helen Pauling Hall Daisaku Ikeda wrote:

Dr. Pauling’s commitment to peace and humanitarianism never faltered and he would advance onward […] pledging allegiance not to any nation, but to humanity alone. Even in his nineties, Dr. Pauling stood at the forefront of modern medicine, looking less like an aged scholar than an eager student with rosy cheeks and radiant eyes- and a mind thirsting for discovery. During one of our meetings, which regrettably proved to be our last, he related his latest research on the efficacy of vitamins as a treatment for heart disease. I was stunned to learn that he had already seen three patients and had them treated before he came to see me that day. His was a life of challenge, of deed and conviction. (Ikeda, Message:}
Opening of the Linus and Ava Helen Pauling Hall and the Linus Pauling & the 20th Century Exhibit

During Pauling’s 1963 acceptance speech for the Nobel Peace Prize, he included among his interests, world peace, explosives, atomic structure, and the philosophy of cells and the cosmos. He also declared that he was a happy man and had been a happy man throughout this adult life (Pauling). Pauling’s life accords with exactly what Makiguchi outlined as the purpose of education. He lived a creative, contributive life, advancing the cause of peace and the alleviation of human suffering, and he led a happy life as a result. This is our legacy and this is how SUA students and alumni should move forward into the future.

Biomedical Science at SUA

I propose that the development of a Biomedical Science (premedical) track at SUA should occur in three phases.

Short term- 1 year

Soka University of America should officially begin supporting students who are interested in applying to medical school. This support could include gathering and providing information about post-baccalaureate premedical programs, medical school, the MCAT, and American Medical College Application Service®. Information on where alumni have done their pre-requisite coursework and where they have attended medical school should be available to students. Additionally, the university should provide information to current, accepted, and prospective students concerning early assurance programs directed toward liberal arts students.

Notably, the Icahn School of Medicine at Mount Sinai offers the Humanities and Medicine Early Assurance Program as a part of their FlexMed program, named in honor of Abraham Flexner. The program is dedicated to “cultivating future physicians who are self-directed in their learning, thrive on a culture of academic rigor and mentorship, and have a strong appreciation of human rights and social justice” (“About the FlexMed Early Medical School Admission Program”). This program may be ideal for students who wish to expedite their route to medical school while still being able to attend SUA. This program does not require that students take the full range of premedical coursework or take the MCAT, but most students who enter this program become general practitioners or, if they specialize, mainly do so in psychiatry. Thus, this program may not suit many SUA students interested in other specialties in medicine. The program application requirements are stringent and thus students will benefit greatly from having the information about program early in their freshman year or even before they matriculate at SUA.

Medium term- 1-5 years

Before SUA develops its own biomedical sciences program, the university could partner with a reputable, nationally recognized institution that can provide the full suite of prerequisite laboratory-based science courses to SUA students interested in applying to medical school. Many universities have established relationships with medical schools though early assurance programs, linkage programs, or liberal arts to medical school programs. These sorts of university
partnerships are numerous and varied in purpose. Bryn Mawr College’s post-baccalaureate premedical program, for instance, has linkage partnerships with twenty medical schools, including those at Boston University, Brown, Columbia University, Cornell, Dartmouth, and Mount Sinai.

For most medical schools, the prerequisite courses required for admission are one year each of biology, chemistry, and physics and either one year of organic chemistry or one semester of organic chemistry with one semester of biochemistry. Given the time commitment of these courses, I believe that a 5-year program, using some summer session time, would allow for students to complete their normal SUA coursework as well as their premedical requirements at the partner university. Any extra tuition for such a program should ideally be less than what a traditional post-baccalaureate pre-medical certificate would cost.

The following universities in southern California already have post-baccalaureate premedical programs and could thus potentially provide a succinct package of premedical courses to SUA students: California State University- Fullerton, California State University- Los Angeles, California State University- San Marcos, Chapman University, Charles R. Drew University of Medicine and Science, Loyola Marymount University, Scripps College, University of California- Irvine, University of California- Los Angeles, University of California- San Diego, and University of Southern California.

Long term- 5+ years

As SUA and members of the Sohokai have begun establishing a strong reputation among medical schools, SUA should develop a biomedical sciences concentration within the liberal arts major. SUA can offer a truly unique premedical experience. Currently, basic science courses at most other institutions entails professors delivering an onslaught of facts and minutia via didactic lectures to halls filled with many hundreds of students, but this sort of impersonal educational experience is not necessary for the rigorous training of future physicians. The small class size and creative learning environment of SUA could be the ideal environment to learn science.

Currently, SUA offers one-semester biology and chemistry courses with strong lecture and laboratory components. In order to create a comprehensive biomedical concentration that meets medical school admission standards, these courses would need to expand to a full year and the biology course should emphasize human biology. The university would need to offer biochemistry, genetics, and lecture- and lab-based physics and organic chemistry. The addition of these courses would be contingent upon the hiring of skilled faculty who can teach these subjects rigorously but with the student-centered quality notable to SUA courses.

In addition to curriculum changes, SUA would need to develop the career services office to include pre-professional advising. Many other universities use pre-professional advising offices to prepare students for applying to medical and law school. Pre-health advising offices typically provide students with information pertaining to the MCAT and application timelines, help them track completion of medical school prerequisite courses, connect students with alumni who have gone into medicine, and work to establish research, shadowing, and volunteer
experiences at neighboring hospitals and medical schools. These offices also often write committee letters for all students applying to medical school.

Conclusion

Soka Education, as practiced at Soka University of America, develops students’ capabilities in ethics, cultural understanding, empathy, and self-awareness. The environment and education that SUA provides students, when applied to premedical setting could have profound effects on future physicians. This training would strengthen their ability to tackle ethical decision-making, to care for their patients and themselves, and to address complex challenges found working with health, illness, life, and death in a multicultural setting.

SUA excels in its liberal arts curriculum, cross-cultural education, and in fostering a steady stream of contributive, global citizens, but as a university we do not yet address a vast area of human suffering. The university could and should begin training brilliant, compassionate future physicians and begin to advance the field of humanistic medicine. A biomedical science concentration and pre-professional advising office are the first official steps the university can take toward making this a reality. I hope that from the ranks of SUA graduates many will become great doctors and that SUA will forever “distribute as widely as possible the best type of physician so distributable.”

SUA stands tall as a beacon of hope that brightens the future of humankind.
We live in an era that yearns for the day that you assume the lead on the grand stage of the world.

(“Message from SUA Founder Daisaku Ikeda To the Fourth Undergraduate Commencement Ceremony Soka University of America”)

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52–53. Print.
Inquiry of Knowledge and Value through Play

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Abstract
In this writing, I examine applicability of Tsunesaburo Makiguchi’s (1871–1944) value-creative pedagogy in contemporary foreign language learning by extrapolating the difference between the knowledge cultivation model (chishiki keihatsu shyugi) and the knowledge transmission model (chishiki dentatsu shyugi). I will draw connections between Makiguchi’s principle and various scholars’ viewpoints to show how knowledge needs to be cultivated instead of being transmitted. I will also argue for play as a method of applying value-creating pedagogy in foreign language class. In doing so, I will articulate what it means to construct knowledge and become a creative being in a sociocultural context.
Inquiry of Knowledge and Value through Play

According to Gee (2012), there is a prevalent misunderstanding regarding language and learning in current educational practice: the correct linguistic knowledge is stored in proficient speakers’ or writers’ heads and it can be neatly packaged like a gift. This gift is unpackaged by hearers or readers and eventually it is placed in their heads. This view that objective knowledge that exists outside of learners and regarding learning is mental transfer of knowledge from a teacher’s head to students’ heads is evident in how teaching is described. For example, “Ms. Johnson taught English to her students” contains the same structure as “Ms. Johnson gave pencils to her students” in which language is a thing to be transferred and the teacher is the agent. Gee (2012) also argued that even simple idioms such as, “I catch your meaning”, “I cannot grasp what you are saying”, “I’ve got it”, “Let me put the matter in plain terms”, and “I can’t put it into words” (p. 93) reflect how the nature of knowledge, language, and learning are viewed. Objective knowledge and the belief in its transferable nature certainly affect methods of contemporary foreign language education.

Gee (2007, 2012) argued that teachers who believe in the nature of objective knowledge and its transferability would consider that linguistic knowledge to be a collection of ready-made formulas and procedures with a massive amount of vocabulary. Thus, foreign language teachers who hold this model would believe that language skills are abilities to use these formulas and procedures by mechanically filling in with the correct vocabulary words. Students practice the target language as an asocial cognitive skill that is divorced from real people and the real world. It turns their lessons into answer-getting practices by recalling correct formulas, procedures, and vocabulary words. For all intents and purposes, the answer-getting practices based on the belief in objective knowledge and its transferability reduces foreign language skills to a collection of routinized procedures to obtain correct answers.

To rebut such belief of knowledge and learning, I suggest an alternative paradigm I call the knowledge cultivation model, and a teaching method known as value-creating pedagogy, which was innovated by Tsunesaburo Makiguchi. In order for teachers to engage in effective and sound teaching practice, it is essential for them to hold a view that is in accord with the reality of knowledge and the process of knowing (Makiguchi, 1981-1988, Vol. 8). Makiguchi’s model does not assume the nature of knowledge to be objective, ready-made, and transferable; but instead, it clarifies what humans can know and how humans know what can be known. Moreover, based on this model of knowledge, value-creating pedagogy laid out its framework for teachers to methodologically bring their students from not-knowing to knowing.

The knowledge cultivation model explains the nature of knowledge from social constructivist perspective. By viewing learning as both cognitive and social activity, the knowledge cultivation model and value-creating pedagogy are capable of explicating a more comprehensive and dynamic view of foreign language learning than the knowledge transfer model does. Unlike the knowledge transfer model’s static and asocial view of knowledge, the knowledge cultivation model emphasizes the real social situations and real interactions with people that present opportunities for learners to come to understanding together through sense
making, negotiating, and contesting. In this paper, I will argue that foreign language teachers who hold this view would design lessons with real opportunities for their students to create valuable and substantial outcomes by using the target languages. I will start by explaining the knowledge cultivation model first. Then, I will argue for play as an actual teaching methods of foreign language, which fits in the framework of value-creating pedagogy.

Knowledge Cultivation Model (Chichiki Keihatsu Shyugi)

In order to understand value-creating pedagogy and apply it to contemporary foreign language education, it is essential to explicate Makiguchi’s idea of learning, knowledge, and happiness. Grounded in Pestalozzi’s educational philosophy, Makiguchi (1981-1988, Vols. 5-8) proposed his knowledge cultivation model (Jpn. chishiki keihatsu shyugi), which aims to nurture happy children who live contributively in their society. Pestalozzi (1951) wrote, “The foundation of good school is like that for any kind of happiness; it is nothing else but true wisdom in living” (p. 35). Possessing knowledge alone won’t make one’s life happy; it is the wisdom to perceive the interconnectedness of one’s life with others and the environment. To attain wisdom in living is to master the method of scientific inquiry as well as to practice making contributions to one’s society through application of knowledge in everyday life (Garrison, Hickman, Ikeda, 2014). Children cannot achieve knowledge or discover effective ways of applying knowledge when they are treated as passive recipients of knowledge. Makiguchi (1981-1988, Vols. 5-6) asserted that accumulating knowledge that has no meaning or connections to children’s lives, especially when it is done in a competitive manner, would cause anxiety in learning and make children unhappy. The knowledge cultivation model aspires to stimulate children’s natural interest and curiosity in the world to cultivate their desire for learning so that they can become self-directed inquirers of knowledge and its application methods. Value-creating pedagogy is a method of actualizing the knowledge cultivation model into practice so that education can help children to lead happy and socially contributive lives.

Gebert (2009) explained this inquisitive model as learning to learn (chishikisuru), that is “children now in school would live as adults in a world that would be economically, politically and culturally very different from the present one. To survive and succeed—and, most critically, to become capable not only of adapting to those changes, but actively shaping them—children would first need to learn to learn the methods of research” (p. 147). Knowledge is certainly important; however, the most important aspect of education is not knowledge itself but the methods of discovering knowledge. It is impossible to anticipate all potential future problems and prepare for unknown problems by storing knowledge; however, it is possible to solve any problem if students can research the necessary knowledge to approach their problems strategically.

Makiguchi’s knowledge cultivation model was his response to the knowledge transmission model (Jpn. chishiki dentatsu shyugi), which is notably similar to Paulo Freire’s (2012) banking model and the previously introduced knowledge transfer model (Gee, 2012). The rapidly growing industries and new businesses of the era projected their view of ideal workers to
the Japanese education system in order to secure competent workers. The ministry of education responded to their requests by demanding schools to produce students who are competent in certain basic knowledge and skills. As a result, teachers implemented methods such as rote memorization for students to pass exams by storing vast quantities of knowledge. Studying to obtain higher grades and enter better schools instead of becoming happier by improving their lives and the lives of those around them became the primary goal of education (Kumagai, 2004b). To solve this educational crisis, Japanese educators searched for and imported new methods; however, they failed to realize that their struggle required an epistemological paradigm shift to overcome it.

Scientific Inquiry as the Process of Cultivating Knowledge

Makiguchi (1981-1988, Vols. 5-6) asserted that educational theories and pedagogies should be founded upon scientific inquiry because the scientific method is the single most effective procedure of discovery and verification. To clarify the meaning of scientific inquiry, he used pure scientific inquiry as an example. Pure science investigates the natural world to discover universal laws that provide more sophisticated and accurate descriptions of reality that are observable and demonstrable. It challenges currently held truth claims about the world by making observations to collect evidence, forming a hypothesis, testing the hypothesis against evidence, and constructing abstract models or explanations that do not conflict with the evidence. When constructed models or explanations are demonstrated and verified, the models or explanations are regarded as the current and the most accurate description of the observable reality. This is how pure science revises and replaces truth claims about reality and makes progress in understanding of the natural world.

Makiguchi (1981-1988, Vol.5) asserted that this scientific method, applied science to be more precise, should be employed in education. Both pure science and applied science follow the scientific method of inquiry; however, they differ in their aims. Pure scientists aim to revise and replace previous models and explanations of the natural phenomena with more sophisticated and accurate models and explanations; whereas, applied scientists aim to revise and replace previous wisdom, skills, and techniques to cause more valuable outcomes through application of knowledge in everyday life. People who practice applied science are usually regarded as technicians or engineers instead of scholars; teachers are technicians of knowledge cultivation who help children discern the ways of causing positive effects from less valuable or even negative effects through the scientific method. For this reason, the discovery of knowledge is as important as becoming wise is through better understandings of applying knowledge.

Makiguchi (1981-1988, Vol. 5) elaborated on another crucial aspect of applied science by comparing it to the field of normative science. Normative science is an inquiry into the value-based principles that guide decision-making processes. Although pure science attempts to answer the question of what it is and how it works by observing nature and conducting experiments, normative science attempts to formulate principles that answer the questions of what we should do based on what we know. The formation of decision-making principles is also the foundation
of applied science because individuals require such principles to make sound decisions about the application of knowledge in order to live peacefully and productively in society (Fujikawa, 1993). Makiguchi (1981-1988, Vol. 6) called this systematized value-based decision-making principle *toui no housoku*. *Toui* is a philosophical term that can be restated as actions that should be done in order to accomplish valuable outcomes. I chose to translate *toui no housoku* (Jpn.) as *directive principle*; it refers to the thinking and judging process of the best course of actions by anticipating the potential outcomes that stem from possible choices; it refers to the critiquing or evaluating standards that individuals employs to measure the effects of their choices that they made or are about to make in a future; and it refers to the creative thinking by imagining what can be considered to be innovative and novel by people who share the same principle.

Makiguchi (1981-1988, Vol. 5) claimed that forming directive principles in normative science is the same as applied science in its content and nature. Just as pure scientific discovery can make truth claims about the natural world by explaining the laws of nature, Makiguchi asserted that applied science and normative science could formulate valid and universal principles of applying knowledge to create valuable results for human society. For this reason, learning is a process of discovering knowledge as well as constructing directive principles to apply knowledge to produce valuable effects in lives. Furthermore, when people encounter new experiences that challenge their current directive principles, they redesign them to fit and guide their lives more effectively. It is the same process by which a new scientific discovery challenges and disproves the conventional laws and theories of nature. Consequently, these laws and theories are revised or replaced. Redesigning does not always mean that the previous principle was totally wrong or evil; redesigning or replacing simply means that the new principle is a more complex, sophisticated, and better understanding of reality that people who adopt a new principle can guide their own actions in more harmonious ways with reality. Knowledge cultivation is not static at all, but it is rather a constant scientific inquiry of better principles.

**Makiguchi’s Paradigm**

In order to understand value-creating pedagogy as a methodology of cultivating knowledge, his paradigm, especially his ontological and epistemological viewpoints, needs to be articulated. Guba and Lincoln (1994) wrote, “Questions of method are secondary to questions of paradigm, which we define as the basic belief system or worldview that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways” (p. 105). In short, pedagogy is a method of teaching and learning; therefore, it must be guided by one’s basic belief system or worldview. An ontological worldview is one’s basic belief about the form and nature of reality that can be known by inquirers, and an epistemological worldview is

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*Toui* (当為) is derived from German word of *sollen*, which is the English equivalent of *should*. *Housoku* (法則) means law, rule, and principle. All together, *toui no housoku* means *as a matter of course* in English. In original text, Makiguchi also used the word, *fukyafu* (不許不) that is equivalent to *toui*.
Okamura

one’s basic belief about the relationship between a knower or a would-be knower and what can be known. Thus, methodology (pedagogy) represents a teacher’s view on the course of actions that a knower or a would-be knower (a learner) takes to inquire about whatever the teacher believes can be known. Articulating Makiguchi’s ontological and epistemological positions by contrasting with the knowledge transmission model can clarify his fundamental beliefs on knowledge and learning; thereby, it helps contemporary educators to apply his pedagogy in their lessons.

The knowledge transmission model is classified as positivism. Its ontological position claims “knowledge of the ‘way things are’ is conventionally summarized in the form of time- and context-free generalizations” (Guba & Lincoln, 1994, p. 109). Its epistemological position claims, “the investigator and the investigated ‘object’ are assumed to be independent entities and the investigators to be capable of studying the object without influencing it or being influenced by it” (Guba & Lincoln, 1994, p. 110). Value systems of investigators and values of objects are excluded in order to know, in principle, the true state of affairs. Teachers who adopt the positivistic paradigm are prone to adopt the knowledge transmission model as their understanding of knowledge and learning. They believe that abstract time-, context-, and value-free generic knowledge can be duplicated and passed down from a teacher to a student. Thus, positivistic teachers strive to transmit knowledge to their learners’ minds as accurately as possible.

On the contrary, Makiguchi’s knowledge cultivation model is classified as constructivism. Its ontological position claims, “realities are apprehendable in the form of multiple, intangible mental constructions, socially and experientially based, local and specific in nature” (Guba & Lincoln, 1994, p. 110). Its epistemological position claims that knowledge is constructed through dialogue among investigators and respondents during the course of inquiry (Guba & Lincoln, 1994). This constructivist paradigm concurs with Makiguchi’s (1981-1988, Vol. 8) assertion that learners construct knowledge in their minds based on their sensual experiences and systematizes them as directive principles; the validity of directive principles are verified through collaborative experiments. Constructing knowledge based on physical and social experiences is only half of the learning. Another half is to verify its validity and effectiveness by assessing the value of the outcomes because knowledge is impractical unless it is accompanied by the wisdom to apply it value-creatively.

**Intuition and Understanding**

It is evident in Makiguchi’s writings that there were numerous philosophers and scholars who influenced him to develop this constructivist paradigm. In this section, I will examine the impact of two philosophers, Immanuel Kant and NeoKantian philosopher, Heinrich Rickert, to provide more a thorough explanation of his paradigm. Makiguchi (1981-1988, Vols. 4-6) went great lengths to articulate the philosophical foundation of recognition, the process of how humans come to know things. In his effort to assert value-creating pedagogy as an effective method of recognition, he presented parallels between value-creating pedagogy and the
mechanism of recognition. Makiguchi wrote, “In order for humans to recognize an object, they employ two different acts of recognition. The first act is called *intuition* and the second act is called *understanding* through apperception” (1981-1988, Vol. 5, p. 275). Knowledge arises only from the union of intuition and understanding, and value-creating pedagogy is a systematic approach to construct knowledge.

In regards to recognition through intuition and understanding, Makiguchi owed a great debt to Immanuel Kant. Kant’s (2007) explanation of intuition and understanding follows:

> Whatever the process and the means may be by which knowledge refers to its objects, *intuition* is that thought which it refers to them immediately, and at which all thought aims as means. But intuition takes place only insofar as the object is given to us. This again is only possible, for us human beings at least, when the mind is affected by the object in a certain way. The capacity (receptivity) to obtain representations through the way in which we are affected by objects is called *sensibility*. Objects are therefore *given* to us by means of our sensibility.

Sensibility alone supplies us with *intuitions*. These intuitions are *thought* through the understanding and from the *understanding* arise *concepts*. (p. 59)

Recognition consists of the human capacity to intuit and to understand. Intuition is the capacity to sense through the sensual organs, such as eyes, ears, nose, tongue, and skin; understanding is the capacity to construct concepts from these sensual experiences. Everything in reality that can possibly be known by humans is given through their intuitions, and the intuited experiences are understood when they are apperceived into concepts. Kant (2007) claimed, “Thoughts without content are empty, intuitions without concepts are blind. It is, therefore, just as necessary to make our concepts sensible as to make our intuitions understandable” (p. 86). Without intuition, no object could be perceived; without understanding, no object could be thought. Intuition and understanding simultaneously and interdependently constitute recognition, and neither of these functions should be preferred to the other.

**Direct Observation**

Kant (2007) wrote, “With respect of time, therefore, no knowledge within us is antecedent to experience, and all knowledge begins with experience” (p. 37). For humans to know anything, they must experience an object because it is the gateway to construct knowledge. When humans experience an object, they construct multifarious representations of the object in their minds. This act of constructing raw images of reality through sensual experience is called *direct observation*. To incorporate the notion of direct observation into value-creating pedagogy, Makiguchi integrated the notion of *Jitsubutsu kyoujyu* (1981-1988, Vol. 4). *Jitsubutsu kyojyu* was originally introduced by Pestalozzi as real-object instruction, which emphasized the importance of incorporating realia, samples, and specimens (Pestalozzi, 2012). This idea compelled educators to incorporate more visuals and tactile teaching tools to their instructions

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iii 実物 (Jitsubutsu) means real object and 教授 (Kyojyu) means instruction or lesson.
when the conventional teaching method was heavily focused on text reading and aural learning (Kumagai, 2004a and Makiguchi, 1981-1988, Vols. 4 & 7). The direct observation integrated by Makiguchi should not be understood as careful observation of an object but rather complete immersion in the target phenomenon to engage in the multi-sensory experience. In value-creating pedagogy, Makiguchi advanced Pestalozzi’s idea of real-object instruction by adding a social aspect. Makiguchi (1981-1988, Vol. 4) wrote:

The meaning of real object includes actual social phenomena that children need to experience in order for them to gain basic concepts. I regard the direct experience of social phenomena as the most vital aspect of learning. Instead of showing specimens and samples in a classroom, we must bring students to the actual setting where the target objects exist in relation to the surrounding environment. (p. 208)

Makiguchian direct observation of a real object occurs during social phenomena in which learners directly observe a real object at the very moment when it is used to harness its potential value. In a framework of apprenticeship described by Gee (2007), direct observation is the initiation to a field that all novices must go through. Apprenticeship starts when novices start directly observing experts in their groups acting value-creatively to consciously produce desired outcomes.

Makiguchi incorporated a social aspect into his value-creating pedagogy because he saw a strong connection between knowledge and value in social phenomena. For children to learn a concept, they must directly observe the manifestation of the concept in context. Makiguchi (1981-1988, Vol.4) wrote, “The essence of knowledge is false unless it is obtained through direct observation. Meanings of words are especially obscure to children even though indirectly observed words, such as definitions from dictionaries and textbooks, appear to be comprehensible. Unless children directly observe the words in their social contexts, they would not construct true knowledge of the words” (pp. 206-207). Reading and listening to meanings of words will never result in the construction of mental images that correspond with reality. Linguistic concepts always remain obscure to children until they directly observe the language in its social contexts.

Gebert (2010) and Goulah (2010 & 2013a) elaborated on Makiguchi’s (1981-1988, Vol. 3) idea of community studies and applied his ideas to contemporary education. They argued that children’s immediate surroundings are the prime location for them to observe and form basic concepts that become background knowledge. They can later use this foundation to make connections to concepts outside of their everyday experience. Instruction should start by directly observing something familiar, close, and concrete; then gradually shift to something less familiar, far, and abstract. This is another idea, originally proposed by Pestalozzi (2012), that Makiguchi integrated into his value-creating pedagogy because it concurred with the course of knowledge construction. For example, students can take a field trip within their local communities to directly observe local businesses before they are introduced to the concept of international trade. Concrete knowledge of their local industry and business exchanges serves as
background knowledge for students to infer trading among nations that can be only imagined based on the descriptions from texts and visuals.

Although Kant (2007) regarded direct observation as an intellectual inquiry of truth, Rickert, a neo-Kantanian philosopher, revealed another dimension of recognition. Rickert (1925) argued that humans recognize an object when they make emotional judgments or responses toward its value. Makiguchi (1981-1988, Vol. 5), who was influenced by Rickert’s view, realized the necessity of the emotional aspect in recognition because intellectual recognition alone would result in the construction of knowledge reflecting only superficial aspects of the object. This realization convinced Makiguchi to consider truth as a separate notion from value; consequently Makiguchi asserted that recognition is an inquiry of truth and value. Makiguchi wrote, “Education is having students discover value in the environment. It is the inquiry of physical and emotional principles that cause valuable phenomena” (1981-1988, Vol. 6, p. 285). Direct observation in the value-creative pedagogy is just as intellectual as it is social and emotional so that learners can recognize both truth and value of the teaching content.

**Apperception**

Kant (2005) explained that humans cannot recognize anything through intuition alone because what humans perceive through direct observation is still raw and does not make sense yet. In order for humans to understand their experiences and integrate them as parts of their internal world of concepts, their minds must edit the experiences to make them fit together. Thinking is an attempt for human minds to make sense of the seemingly chaotic world by linking and organizing various experiences. Kant called this thinking process apperception, and it contains two actions. First, manifold experiences are analyzed and decomposed into smaller portions so that random factors can be eliminated while common factors can be extracted as the essence of the experiences. Then, the previously unrelated experiences are synthesized based on the common factors so that they can fit together. Apperception is similar to weaving a new textile from colorful threads from other textiles or creating a collage by figuring out which pieces and fragments can fit together under a theme. Every new design is a synthesis of threads and fragments that can be traced back to the original works.

Both Kant (2005) and Makiguchi (1981-1988) claimed that when human minds apperceive, they employ certain frameworks called categories to synthesize experiences in an orderly manner instead of randomly jumbling them together. Categories are the structures that human minds use to give orders and make meanings from manifold experiences. Although Kant and Makiguchi differ in details about the numbers and specific functions of their categories, they both agree that human minds finally understand new experiences when they successfully link and organize their various experiences according to the categories. Kant’s (2005) categories are arranged into four major groups with three subgroups: quantity (unity, plurality, totality), quality (reality, negation, limitation), relation (inherence, causality, community), and modality (possibility, existence, necessity). On the other hand, Makiguchi separated his categories into two branches: the framework of
causality is one of the significant categories that both Kant and Makiguchi focused on meaning making and regarded as the prime structure. Causality creates a new meaning and understanding of the world by connecting completely isolated concepts from experiences, such as X and Y, into one knowledge item so that it can be understood as “X causes Y as the result.” Causality is the framework of how things work as a whole; therefore, learning from new experiences means to see things in causal relationships. The process of constructing knowledge is finalized when new experiences become parts of the internal world of causality.

Here again, neo-Kantian philosopher Rickert’s philosophy had effect on Makiguchi’s (1981-1988, Vol. 5) thinking to divert and advance Kant’s notion of apperception. According to Rickert (1927), recognition is an emotional act of determining a person’s attitude toward the value of an object. When people experience an event, they do not recognize everything but certain aspects of the event. The characteristics that have strong emotional impact to people’s value systems get more attention than things that are unexciting and uninteresting. Attractive, gainful, and right aspects are actively integrated in knowers’ directive principles while repulsive, losing, and wrong aspects are consciously eradicated. Makiguchi’s (1981-1988, Vol. 5) second branch of the categories explains how humans apperceive their experiences by judging according to three value categories. First, experiences are judged according to the categories of attraction, intimacy, and profit to measure their attractiveness, intimateness, and profitability. After the initial judgment, experiences are understood for their capacity to affect aesthetically (beauty), economically (gain), and morally (good). Makiguchi called this part of recognition as evaluation because it evaluates the effect of knowledge on one’s own life. As a result of evaluation, things that are strong in relational force to beauty, gain, and good are brought into consciousness to be apperceived and actively integrated into one’s value system. Makiguchi’s apperception synthesizes concepts from various experiences into a value-creating causal relationship; for example, “By doing X, I can cause valuable result, Y.” Therefore, construction of knowledge in a value-creating system requires cognitive, social, and emotional direct observation as well as apperception.

Language and Recognition

Makiguchi (1981-1988, Vol. 5) argued that a human mind must employ symbols, mainly language, to recognize the world by creating internal models that correspond to reality. It is possible for humans to know something because language functions as “the vessel to apprehend reality” (Makiguchi, 1981-1988, Vol. 5, p. 263) and also as the building blocks to construct knowledge in human minds. Makiguchi described the relationship between the object of recognition and what people actually recognize in their minds as the relationship between the existence (space, quality, reality, quantity) to understand truthfulness, and the framework of relation (causality, attraction, intimacy, profit) to understand the effect.

Makiguchi’s first branch of categories understands experience through the frameworks of truth or untruth by applying the law of contradiction. Recognized knowledge is considered to be truth until it is presented with new evidence that contradicts it.
actual object and its symbolic representation, such as a hieroglyphic. All abstract symbols in people’s minds must have risen from concrete sensory experiences and have been edited through thinking processes that employ language. This epistemological worldview is the foundation of Makiguchi’s language education. Linguistic knowledge should not be taught for the sake of linguistic knowledge; nevertheless, it must be taught as the means to explain what is directly observed and as the building blocks to construct abstract internal models of reality.

Makiguchi’s viewpoint on the relationship between knowledge and language concurs with cognitive linguists and scientists George Lakoff and Raphael Núñez. Lakoff and Núñez (2000) argued that human minds recognize patterns and regularities through their embodied experiences, and they use symbols and languages to express in forms of abstract systematic models that are extracted from these patterns and regularities. They wrote, “No one observes laws of the universe as such; what are observed empirically are regularities in the universe. Regularities in the universe exist independent of us. Laws are mathematical statements made up by human beings to attempt to characterize those regularities experienced in the physical universe” (Lakoff & Núñez, 2000, p. 344). This view connotes that everything that a human can ever know, even as abstract as mathematical equations, is the result of human embodied cognition. Humans can only distinguish and comprehend regularities in the world by using the recognition systems that the body and brain afford, and human minds must employ symbols and languages to apprehend the experiences and construct understandings in the form of abstract conceptual representations that accord with the experiences.

Lakoff and Núñez’ (2000) argument confirms the soundness of Makiguchi’s knowledge cultivation model from the perspective of cognitive science because all that can be known is human body-brain-language based knowledge. Humans have no choice but to use their own bodies to directly observe the world and use their own brains to apperceive their bodily experiences. Notably, humans require symbols and languages to learn because brains employ symbols and languages to process the experiences and create understandings. In other words, knowing is an act of human efforts and struggles to explain their physical and social experiences by using their bodies, brains, and languages. There is no guarantee that what we know is Truth with the capital letter T.

Lakoff and Núñez’ (2000) view is supported by the sound cognitive scientific research; however, there is no evidence that this humanly created knowledge is transcendentally true of this physical universe. Because observable physical regularities can be stated concisely in terms of rules or laws, people often misinterpret this fact to mean that the universe runs according to the laws, “as if the laws came first and the physical universe ‘obeyed’ the laws” (Lakoff & Núñez, 2000). This explains why teachers are prone to believe in the existence of disembodied objective knowledge and adopt the knowledge transmission model. Because they are not aware of the fact that their belief about knowledge not only lacks in its evidence to support its ontological and epistemological claims but also it is based on a misguided worldview.

Since Lakoff and Núñez’ (2000) paradigm is in accord with Makiguchi’s knowledge cultivation model, it is worth elaborating their perspectives in knowledge and language. One of
the notions that they used to explain how language is used to recognize the physical universe is *image schema*. Image schemas are conceptual primitives that enable human minds to make sense of perceptual experiences. Lakoff and Núñez (2000) wrote:

[Image schemas] are both perceptual and conceptual in nature. As such, they provided a bridge between language and reasoning on the one hand and vision on the other. Image schemas can fit visual perception, as when we see the milk as being in the glass. They can also be imposed on visual scenes, as when we see the bees swarming in the garden, where there is no physical container that the bees are in. (p. 31)

Another example of image schema is the English word *on*, which is constituted of three conceptual primitives: the above schema, the contact schema, and the support schema. When people hear the two words “cat, table” they cannot visualize the accurate spatial relationship between the cat and the table. However, the three words “cat on table” can provide only one image that the cat is above the table, the cat is touching the table, and the cat is being supported by the table.

Another notion that Lakoff and Núñez (2000) provided as the verification of language’s role in recognition is *motor-control schema*. Motor-control schemas are neural structures that are necessary to operate bodily actions smoothly, and they are expressed in the grammars of languages. Lakoff and Núñez (2000) wrote:

This general motor-control schema has the same structure as what linguists have called aspect – the general structuring of events. Everything that we perceive or think of as an action or event is conceptualized as having that structure. We reason about events and actions in general using such a structure. And languages throughout the world all have means of encoding such a structure in their grammars. (p. 35)

For example, the concept of completion is understood as either internal to the process or external to the process. This concept of completion itself does not exist in reality but human minds conceptualize it through the structure of language. The word “jump” internally contains the concept of completion because the act of jumping includes taking off, moving through in the air, and landing on the ground. The landing part completes the process of the entire action. For example, when one says, “Bob jumps on the chair,” listeners can visualize Bob completing his jump by landing on the chair. On the other hand, the word “fly” does not contain the concept of completion because the act of landing, which is the completion of flying, is not conceptualized as part of flying. In order to communicate the concept of completion in flying, one must use other verbs. For example, one could say, “The airplane lands at the airport” or use the present perfect as in “The airplane has flown to the airport” (Lakoff & Núñez, 2000).

Lakoff and Núñez’ (2000) argument verified Makiguchi’s position on language and recognition from the cognitive science perspective. Humans make sense of their visual experiences through image schemas and their bodily actions through motor-control schemas or
grammars. When humans directly observe reality by seeing and doing, they must use language to understand what they see and do. Human reasoning inherently requires language, particularly the linguistic concepts and structures that these schemas provide, to make sense of sensory experiences. This process is consistent with how apperception takes the form of categories, the frameworks of meaning making, to organize directly observed manifold representations. Without language, accurate recognition of reality and accurate communication of one’s thoughts to others are impossible. Thus, the purpose of direct observation and apperception in value-creating pedagogy is to make sense of sensory experiences through linguistic concepts and structures.

**Application of Value-Creative Pedagogy**

**Cultivating Foreign Language Knowledge**

Makiguchi did not work in foreign language education and his ten volumes of complete works do not contain essays about foreign language education; however, his knowledge cultivation model and value-creating pedagogy can suggest what it means to know foreign language and how such knowledge can be constructed. According to Makiguchi’s paradigm (1981-1988), foreign language knowledge is specific to sociocultural memberships and activities. What is recognized as foreign language knowledge are directive principles of the target sociocultural phenomena, which enable learners to become value-creative participants of the target sociocultural activities by thinking and acting like the rest of the group members. Constructing directive principles for foreign language is deeply connected with a learner’s identity and a particular sociocultural activity. Gee (2007 and 2012) argued that any language is not monolithic; it is a collection of many different varieties of sub-languages called social languages. For example, no one knows and uses English in generic way; however, people know varieties of English social languages and use them appropriately by choosing the right one for the given social context. Within a social language, a meaning of a word and its usage are actively negotiated and contested among its affinity group members. Knowing a word means to know the agreement of what the word means and how it is used by its affinity group. Meaning and usage of language are deeply embedded in how an affinity group conducts its business, and learning their social language means learning to be members of the affinity group and adopting their worldviews.

Makiguchi (1981-1988) and Lakoff and Núñez (2000) clarified that human knowledge is merely an internal representation of empirically observed regularities based on a specific time and place. No knowledge can ensure objective truthfulness or value for the entirety of humanity. They also clarified that language is used to construct internal models of a truth and value system. Therefore, to learn any language is to learn the particular social language used by an affinity group; through particular social language, learners construct an internal model of a truth and value system that is coherent with the rest of the affinity group members. Therefore, what a foreign language learner can achieve is new identity of a particular affinity group member who
Okamura uses his or her social language to conduct their sociocultural activities collaboratively and value-creatively.

Makiguchi (1981-1988, Vols. 3-8) argued the importance of basing curriculum on concrete experience of everyday life as well as bring back what they learned to everyday life. This framework is called *life to learning* (Jpn. seikatsu no gakumonka), and *learning to life* (Jpn. gakumon no seikatuka). Life to learning is the starting point of knowledge cultivation, in which learners induce internal models of a truth and value system from embodied recognition, and learning to life is the ending point of knowledge cultivation, in which learners test the validity of their internal models of a truth and value system as the learners deduce from these models. I believe that play is a natural setting where children use language to construct truth and value system, as well as to confirm the validity of their truth and value system by playing with other children. Each and every playful experience is enjoyed and appreciated by a particular affinity group; therefore, children can learn the social language of foreign language by becoming affinity group members through play (Gee, 2007). I argue that play can be one of the actual methods concretizing the knowledge cultivation model and value-creation because it follows the framework of recognizing and applying knowledge through scientific method. In the following section, I will introduce and analyze Makiguchi’s essay on play as well as supporting arguments and empirical studies to strengthen this point.

**“Hand War”: Makiguchi’s Essay on Play**

Makiguchi (1981-1988, Vol. 7) encouraged other teachers to study and report how their students play in his essay called *Children’s Continuous Interest in Play* (Jpn. Kyomi no Eizokuseru Yugino Issyu). According to Makiguchi, play is an ideal setting for teachers to discover their students’ interests as well as to witness their ability to think critically and creatively. Furthermore, play is an everyday experience through which students learn new concepts inductively and apply what they learned deductively. Its inherent framework of life to learning and learning to life makes play as an empirical learning environment where students can scientifically acquire knowledge. And most importantly, when children are able to play better by contributing their team’s victory and displaying more sophisticated techniques to help their teammates, they feel a sense of accomplishment and happiness.

In this essay, Makiguchi (1981-1988, Vol. 7) introduced one of the popular games in his school called *Hand War* (Jpn. Te Gassen). The Hand War was inspired after his students saw a demonstration of sword fights by high school students who visited the school. The enthused students decided to play something similar to the sword fights by imagining themselves as samurai warriors. During recess, they separated themselves into two groups of armies and fought sword battles by pretending their hands were swords. The game did not require any special equipment or did not limit its participants by their ages. In fact, Makiguchi often witness that the game was played by multi-aged group of students that ranged from elementary students to middle school students.
Makiguchi (1981-1988, Vol. 7) reported that original rules of Hand War stated that “slashing” an opponent’s head, hands, or torso counted as a “kill,” because these body parts are the spots where the original sword fight contestants were supposed to hit. Eventually, this particular rule was revised to be that slashing the chest or back counted as a “kill” because they realized that hitting the head was dangerous and hitting hands was confusing since their hands were weapons too. Later, the rule was revised again that slashing the back or leg counted as a “kill” because the chest was too difficult to hit. They also added another rule called “capturing the enemy base.” This rule required each army to pick a pole with a hole as their base. When an opponent sticks his or her hand into the hole, the base is seized, which caused the team to be defeated regardless of the number of remaining soldiers. After this revision, the game was no longer about just slashing opponents. Hand War became more complex and fun because the players could strategize, plot, and be involved in various missions.

Makiguchi’s (1981-1988, Vol. 7) essay revealed that play has a great potential to be the natural learning environment for children to cultivate knowledge. Makiguchi reported that his students edited the rules of Hand War multiple times in order to increase the pleasure and safety. The final version of the rules was quite different from the original sword fight demonstration that the students saw; however, his students did not mind this fact at all. Because the original sword fights did not reflect the value of pleasure and safety for young children, they were willing to revise the rules until the rules became coherent with their value. The evolution of the rules proved that children would think critically on their own free will when they consciously cause valuable outcomes.

Makiguchi’s (1981-1988, Vol. 7) description revealed a significant relationship between knowledge and identity. Makiguchi described Hand War as, “These children rather fought their battles advantageously by surrounding fewer opponents with many soldiers of their own team. When they saw that their comrades were outnumbered, reinforcement was sent to carry out counterattacks. The battles reminded me the scenes of intense strife from the Genki and Tensho eras” (1981-1988, Vol.7, p. 348). Genki and Tensho eras were the names of the late 16th century in which samurai warriors fought in organized groups by using group tactics. If his students had exchanged their names to ask for fighting in a single combat, Makiguchi would have identified Hand War as a game of noble battles from the Kamakura era. Kamakura samurai, who lived in 12th century, honored the code of samurai and fought bravely in a single combat; they would have contempt for group tactics as acts of cowardliness. Although the identity of a Kamakura samurai warrior holds glorious values, none of the students recognized its values for the obvious reason; acting like a Kamakura samurai among the samurai warriors from the late 16th century would be suicidal. It is impossible to take part in a game and play well when a player does not understand the tacit agreement of the game. For any players who want to play the

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vi The Genki period was from 1570 to 1573 and The Tensho period was from 1573 to 1593. These time periods were the peaks of Japanese civil war and they are a synonym for the most intense samurai wartime.
game well, their internal models of truth must be consistent with the game world and their value system must be consistent with the rest of the players’ models.

**Makiguchi’s Idea of Play and Vygotsky’s Idea of Play**

Makiguchi’s (1981-1988, Vol. 7) observation proved that his students successfully adopted some of the late 16th century samurai warrior’s internal truth and value system; moreover, thinking like late 16th century samurai warriors facilitated new strategies or group tactics to outsmart the opponents. If players had taken on wrong identities, they would have played the game poorly or even worse - they could not have fun. Vygotsky (1978) described this struggle between the desire to do whatever they want and the desire to obey the rule as the primary paradox of play. While every participant is allowed to act on their impulses and do what they please, they are urged to renounce such impulses in order to maximize the chance to win and have pleasure. Thus, players have very limited choices of identity to choose from.

This connection between rules and identity can be elaborated through Vygotsky’s argument on play. Vygotsky (1978) argued that every game contains two different sets of rules: overt rules to be obeyed and covert rules of behavior. An example of the overt rule in chess is the rook can only move vertically and horizontally but not diagonally. All players must agree to play by the overt rules, which provide limited numbers of choices to players. As soon as an infinite number of possibilities for actions are ruled out by the overt rules, the game immediately turns into an imaginary situation. The imaginary situation requires players to figure out covert rules of behavior. Vygotsky (1978) wrote:

> Whenever there is an imaginary situation in play, there are rules - not rules that are formulated in advance and change during the course of the game but ones that stem from an imaginary situation. Therefore, the notion that a child can behave in an imaginary situation without rules is simply inaccurate. If the child is playing the role of a mother, then she has rules of maternal behavior. The role the child fulfills, and her relation to the object (if the object has changed its meaning), will always stem from rules. (p. 95)

While players contrast the potential choices by imagining consequences choices, they realize that only certain courses of actions should be taken. To know covert rules of behavior means to be able to select the actions that would result in the most valuable outcome by imagining the causal chains of actions. This Vygotsky’s idea of covert rules of behavior coincides with Makiguchi’s idea of directive principle. Makiguchi (1981-1988, Vol. 5) defined skill as the ability to apply knowledge value-creatively and people who are good at applying knowledge are called technicians and experts; Vygotsky (1978) argued that experts are the people who are good at solving problems based on the covert rules of behavior. Possession of accurate and sophisticated directive principles is what separate expert players from novice players.

Unlike overt rules, covert rules of behavior are not explicitly written. Players must figure out or theorize from their experience. Gopnik and Walker (2013) provide a framework to understand how someone becomes a better player through theorizing covert rules of behavior.
Games provide opportunities for players to reason about underlying causal relations and imagine possible worlds, and further, that ability to imagine alternative possibilities may develop their capacity to reason and solve problems. This framework of development is called theory theory which follows the same pathway of scientific inquiry to redesigning directive principles: a player plays the game based on the currently held theory of how to win and have fun, then 1. observes results and collect new evidence, 2. uses the new evidence that conflicts with the currently held theory, 3. hypothesizes and revises their understanding of cause and effect relationships, and 4. tests the new theory by trying to win more skillfully while having more fun. This process of theorizing a theory of fun and victory is the process of becoming an expert player. Learning to play a game means to construct directive principles of the game that are more attuned and sophisticated internal models of a truth and value system of the imaginary game world.

Gray and Feldman (2004) conducted empirical research about mixed age playing. The authors reported that young children and adolescents were drawn together by common interests, personal attraction, and a complementary desire to nurture and be nurtured. While young children were motivated to become better players who can solve problems and overcome challenges, adolescents wanted to help the younger children to function at higher levels. When a group of mixed ability players have shared goals and a mutual desire to have fun together, their interactions become a creative and nurturing apprenticeship. Vygotsky wrote, “Play creates a zone of proximal development of the child. In play a child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself” (1978, p. 102). When young children played with adolescents, the young children could solve more complex problems and overcome more difficult challenges with assistance from the adolescents. More precisely, the adolescents explicated the covert rules of behavior for young children to navigate their thinking and acting in imaginary situations of the game. This research showed that novice players’ incoherent and unsophisticated internal models of a truth and value system of the game world need to be edited in order to achieve the shared goals: to increase the chance of winning and to have more fun. Playing a game with experts has a great potential to be an effective learning method because it allows novice students to recognize the world from the experts’ perspectives and edit their directive principles to think and perform beyond their current development levels.

Makiguchi’s Idea on Play and Bakhtin’s Carnival

The significance of the change in students’ identities during Makiguchi’s Hand War description can be illuminated through Bakhtin’s notion of carnival. To show the connection between taking on imaginary identity and carnival, the background of carnival must be explained first. According to Bakhtin (1984), medieval common people were living under the hypocrisy and falsehood of a vulgar feudal ideology. They were forced to obey the strict caste divisions in which they were expected to appear in the full regalia of their ranks that corresponded to their positions. Official festivities, whether feudal or ecclesiastic, reminded them about their social
ranks by consecrating hierarchical inequality. The existing political and religious world order banned equity, freethinking, and free valuing from the official sphere. Bakhtin (1981) wrote:

The healthy “natural” functions of human nature are fulfilled, so to speak, only in ways that are contraband and savage, because the reigning ideology will not sanction them. This introduces falsehood and duplicity into all human life. All ideological forms, that is, institutions, become hypocritical and false, while real life, denied any ideological directives, becomes crude and bestial. (p. 162)

As long as the truth and value of authority is enforced through hierarchical king-subject relations, there is no equal, free, and true human relations for common people. Bakhtin’s description of officialdom reminds me of the current school system and its inherent hierarchical relationship between teachers and students. Children are not able to have healthy natural human relations while their identities are fixed as students who must obey their teachers’ truth and value system. The only way that children can take on an imaginary identity is a carnivalesque feast in which authority and hierarchy are absent.

Carnival is similar to the popular holiday of contemporary Mardi Gras, a celebrated temporary liberation from all hierarchical ranks, privileges, norms, and prohibitions. By suspending the prevailing truth and value of the established order, carnival became people’s second life outside of officialdom. Bakhtin (1984) wrote:

People were, so to speak, reborn for new, purely human relations. These truly human relations were not only a fruit of imagination or abstract thought; they were experienced. The utopian ideal and the realistic merged in this carnival experience, unique of its kind. (p. 10)

One of the significant experiences of taking on an imaginary identity during carnival was its laughter. Laughter was the spirit of the carnival that renounced people’s official positions, liberated people from pious seriousness, and allowed people to engage in pure human relations. Carnival laughter signifies the playful mockery of the prevailing social hierarchy and the opposition to ready-made and immortalized identities. Carnival laughter was the sign of liberation from hierarchy; people were celebrating the feast of becoming, renewal, and ever-changing human relations through laughter.

Another significant aspect of taking on an imaginary identity in carnival is symbolized in its masks. These masks granted “the right not to understand, the right to confuse, to tease, to hyperbolize life; the right to parody others while talking, the right to not be taken literally, not ‘to be oneself’” (Bakhtin, 1981, p. 163). Just as laughter mocked the existing hierarchy, masks also undermined the existing hierarchy too. Cohen (2011) argued that wearing carnivalesque masks represents taking on imaginary identities that live in an alternative world. An imaginary character in an alternative world has permission to believe in internal models of truth and value that are different from the authorities. Holquist (2002) argued that carnival highlights the fact that social roles are culturally made not naturally given. While carnival is sanctioned, people are permitted to embody other identities or even to emulate the predominant truth claims and value of established authorities. Carnival reminds us that identity is relational, socially constructed, can
be developed or redesigned. Most importantly, one person has multiple identities and which identity to embody is determined by the person’s relations to others. The absence of the already existing hierarchical relationship is essential for people to embody an identity of an imagined other and to live their second life according to the imagined other’s internal model of a truth and value system.

Bakhtin’s notion of carnival describes an ideal condition for children to take on imaginary identities and act value-creatively in their imaginary situations. The absence of authority among the Hand War playing students and children taking on imaginary identities were the sign of carnival. Therefore, it is my conviction that carnivalesque play and value-creative pedagogy can facilitate learning foreign language, specifically the social language of affinity groups. Foreign language can be learn value-creatively when children playfully engage in their learning tasks while taking on imagined others’ identities.

Conclusion

Value-creating pedagogy is a principle for contemporary foreign language educators to design curricula and daily lessons that cultivate their students’ knowledge of the target foreign language and corresponding sociocultural activities. Unlike transmitted knowledge, cultivated knowledge enables children to be contributive members of the target society who know how words are situated to the context, what sorts of things and actions are considered to be valuable by the other members, and how to act value-creatively with other members. All these actions require students to construct directive principles through direct observation of knowledge and its value as well as apperceiving observed value into their own value-creating system. When learning is as cognitive as it is social and playful, it becomes meaningful, applicable, and the most importantly, children will feel happy by being contributive members of the target society. Makiguchi clarified the meaning of knowledge by mapping out the course of cultivating knowledge, and suggested play as one of the methods for children to cultivate knowledge. It is up to us to implement such methods based on the knowledge cultivation model and become technicians of value-creating pedagogy in our classrooms.
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The Foreign Aid Myth and a Need for Humanistic Education to Open a Better Way Forward

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Abstract
There is a problem in the way that the Western world has approached development in Africa – that is, our belief in the myth that the solution to Africa’s development challenges lies in foreign aid. Well-intentioned rich countries cannot solve development challenges from afar without considering the unique history, values, and people of each developing country. Born from the lessons I learned as a Peace Corps volunteer in Lesotho, this paper aims to uncover why aid is not working and suggests finding a solution through the implementation of the humanistic values of Soka Education to serve as the foundation for current and aspiring development workers.
If someone had asked me two years ago, if I believed that the US should increase foreign aid to developing countries in Africa, I would have instinctively said yes. Rich countries offering funds for development assistance to poor countries seemed, to me, like a moral thing to do. With Western media’s portrayal of children in Africa looking unhappy and starving, wouldn’t aid “help” the community? How could donations to provide a hungry child with food end up doing more harm than good? But what I learned throughout my two years as a Peace Corps volunteer in Lesotho is that the effects that rich countries have in poor nations like Lesotho are certainly life-changing, just not in the positive way one might imagine. Well-known aid critics such as Dambisa Moyo and William Easterly argue that more than US $1 trillion of development-related aid in Africa has created aid dependency, making “the poor poorer, and growth slower” (Moyo xix).

How have so much money and well-intentioned development plans gone astray? And if evidence leads to the conclusion that large foreign aid has been unable to fulfill its goals, why do we allow it to persist? Is there a better way? In my pursuit to answer these questions, I reflected on my two years in Lesotho and my education at Soka University of America where I learned that solutions to complex problems require critical thinking and a deep understanding of history and human relationships. I was also reminded again of Soka Education’s founder, Tsunesaburo Makiguchi’s fundamental value-creation theory in which he states that the purpose of education is to create value in society. He writes:

Human life is a process of creating value, and education should guide us toward that end.
Thus educational practices should serve to promote value creation. The point is of profound importance, and the more we reflect on it in social context, the more meaningful the conceptual clarification of value becomes (54).

Most development planners and advisors enter the field with an array of exceptional educational backgrounds—with knowledge from economic analysis to best practices in agriculture to medicine and public health. However, without the deep understanding of value creation, development projects often become a strategic method to increase the numbers in household income, crops yielded, and/or patients seen. It is necessary to shift the focus of development aid from one that has failed us—focusing on achieving standard quantifiable results through blueprint programs across the board, to one that is focused on quality and value creation catered to each county’s unique history, culture, and situation.

One of Dambisa Moyo’s main objectives is to crush the myth that the Western world has held onto for decades, the myth that “aid is the answer”. She begins her book with this introduction:

We live in a culture of aid. We live in a culture in which those who are better off subscribe—both mentally and financially—to the notation that giving alms to the poor is the right thing to do… We are made to believe that this is what we ought to be doing. We are accosted on the streets and goaded with pleas on aeroplane journeys; letters flow through our mail boxes and countless television appeals remind us that we have a moral
... imperative to give more to those who have less... The notion that aid can alleviate systemic poverty, and has done so, is a myth (xviii-xix).

Putting aside critical relief aid which requires immediate action in the wake of emergencies such as natural disasters and violent conflict, one of the fundamental problems with development-related aid comes from the popular Western perspective of what constitutes “good,” and therefore helpful or even valuable to a community. Why did I so strongly believe in, even before I set foot in Lesotho, that aid was a good thing that could solve development challenges? Perhaps it was because of the statistics I saw about child-mortality rates or the average household income in some African countries which paled in comparison to the norms in the United States. Perhaps it was the newspaper headlines and the images of hunger and illness that made me feel empathy and the desire to do something to change the situation. Or perhaps it was an idea that has been constructed into our societies throughout time.

Foreign assistance on a large-scale has existed since as far back as the nineteenth century, but the idea of development assistance became even more popular after World War II (Moyo). The success of development aid in helping a war torn Western Europe “get back on its feet” through the Marshall Plan, became a template for the rest of the world. Moyo explains, “It was widely assumed that poor countries lacked the financial capital to spur development. In the wake of the Marshall Plan success, it became a widely accepted view that investment capital was critical for economic growth” (13). But the success in Western Europe was under much different conditions than those in Africa. For one, countries in Africa did not have the previously existing physical, legal and social infrastructure that Western Europe had had prior to the destruction caused by the war. Thus, even with the inflow of capital investments through loans or grants, money sent to Africa did not have a clear system in place where money was supposed to be channeled (Moyo 35). Secondly, the history, cultures and customs in Africa were very different from the Western world. Perhaps money was the solution to the problems in Europe, but money was not the solution for African countries:

Africa’s failure to generate any meaningful or sustainable long-term growth must, ostensibly, be a confluence of factors: geographical, historical, cultural, tribal and institutional. Indeed, it would be naive to discount outright any of the [these] arguments as contributing to Africa’s poor growth history. However, it is also fair to say that no factor should condemn Africa to a permanent failure to grow. This is an indictment Africa does not deserve. While each of these factors may be part of the explanation in differing degrees, in different countries, for the most part African countries have one thing in common—they all depend on aid (Moyo 35).

It would be impossible to look back at history and isolate any one cause that has slowed down the growth of African countries. There may be many causes. But the fact that aid has been a source of dependency in all of these countries is a significant factor to examine.

The original objective of foreign aid was to help others in countries where resources were scarce or depleted, but even in the early periods, aid was also about political control. I cannot delve into the politics behind aid distribution, but I find it necessary to mention here because
political interests still determine which countries receive more aid depending on the interests that the donor has in the beneficiary’s country. It also acknowledges that foreign aid is not purely well-intentioned based on morals, as there are other interests besides “helping others” that motivates countries to donate money or provide loans. However, for the purposes of this paper, I will remain focused on the general effects of government aid that have already been granted, rather than on the criteria involved in aid distribution. According to author James Ferguson, Lesotho does not seem to have especially significant economic or strategic importance, yet a massive and persistent existence of development-related aid continues to exist. In his paper published in 1994, Ferguson wrote:

In the past two decades, Lesotho—a small landlocked nation of about 1.8 million people surrounded by South Africa… has received “development assistance” from 26 different countries, ranging from Australia, Cyprus and Ireland to Switzerland and Taiwan. Seventy-two international agencies and non-and-quasi governmental organizations, including CARE, Ford Foundation, the African Development Bank, the European Economic Community, the Overseas Development Institute, the International Labour Organization and the United Nations Development Programme, have also been actively involved in promoting a range of “development” programmes. In 1979, the country received some $64 million in “official” development “assistance” –about $49 for every man, woman, and child in the country… As in most other countries, the history of “development” projects in Lesotho is one of “almost unremitting failure to achieve their objectives (176).

Today, after two more decades of similar funds and programs, development organizations are still very present in the everyday lives of the Basotho (people of Lesotho). Most clinics, hospitals, and schools that perhaps should have been funded by the government of Lesotho are funded, at least in part, by foreign aid such as the government of Japan, Irish Aid, and the US Millennium Challenge Corporation. Private organizations, NGOs, and intergovernmental organizations have hired numerous field workers in every town, all trying to “help” the most vulnerable people in the hardest to reach, rural areas. If 40 plus years of that much foreign aid in one country has not attained its objectives, we have to recognize that something in the aid approach is not working. We must shatter the myth that aid is the only solution.

So what exactly have been the effects of development-related aid? From the myth that “aid is effective” derives a much broader, related myth: the ideology that rich countries have solutions to the problems of the poor. The people, whether rich or poor, who are directly affected by their problems, understand their situation, their needs, and their values, the most. Solutions come from this understanding, the desire to change, and the necessary resources to start that change. Both the rich and the poor can be involved in the solution, but it cannot be top down.

One aid critic, William Easterly, explains that the approach to development can be divided into two mentalities –those who tackle problems as “planners” and those who tackle them as “searchers.” He explains that the traditional approach which has persisted throughout the
years is the mentality of “planners”. Planners believe that they already know and have the ability to implement solutions even before they gain knowledge from the grassroots level. They often make big goals and announce their good intentions, but do not follow through to ensure that anyone carries out these goals. They make a plan based on their own perceptions, but do not take responsibility to make sure those plans get implemented (Easterly 5-6). On the other hand, searchers know they must seek solutions and accept responsibility for their actions. Before they begin planning, they do extensive research to figure out what is in demand and adapt to local conditions (Easterly 5-6). More recently, the approach to development has leaned towards the approach of the searchers, but the effects of the mentality of planners is still evident in large scale projects where the common people have little to no say in the changes imposed in their communities.

I would need to do much more extensive research to understand the economic and social effects of aid, but even without scientific data, I noticed an over-arching belief that had been established by the influx of past and current development workers. Naturally, over the course of many years of development workers coming in and out of the country, locals saw and judged foreigners by their behavior and possessions. Although not rich by American standards, we owned and could afford more things than the average Mosotho (a person from Lesotho). We could also connect them to resources, grants, and funding for development projects since that was one of our main roles. In the eyes of a Mosotho, a foreigner was there to solve their problems, and in the most immediate and obvious way, through offering finance.

Even with the mentality of a searcher, it can be impossible to disregard all forms of the “savior” mentality. I was 1 of 21 Peace Corps Community Health and Economic Development volunteers to arrive in Lesotho for the very first time in June 2012. None of us had ever been to Lesotho, but we all went with high hopes and an eagerness to use our “knowledge, skills, and abilities” to create a positive impact, very much well-intentioned. Upon arrival in our training village, local children, adults, and elders came out to welcome us. They were told that we would be arriving to help their country. At the time I had high expectations for myself, as did many of the people I encountered—strangers and friends alike believed that somehow I had the answers or resources for their problems… an impossible task that neither I, nor any foreigner, could fulfill. Easterly writes:

The fallacy is to assume that because I have studied and lived in a society that somehow wound up with prosperity and peace, I know enough to plan for other societies to have prosperity and peace… this is like thinking [that] racehorses can be put in charge of building the racetrack (26).

I admit that I was not prepared for many of the challenges I faced during my service. This is not to say that I could not or did not deal with them in my own unique way, but I learned and accepted as a foreigner hoping to create positive change, that no “savior”, no matter how well-intentioned, could come up with an easy solution to some of the most deeply rooted development challenges. As development volunteers in Lesotho, my colleagues and I often struggled with our strong desire to “do something” to change lives for the better. But we viewed the conditions
under which locals lived through the standards that we held. Therefore, we saw problems and planned solutions through our own lens. Large scale organizations that fund and implement development projects are even more prone to problem solving with their own perspectives as the policy makers do not spend as much time living every day in rural villages with the limited resources that locals live with on a daily basis.

Although much has changed since the first development organizations arrived in Lesotho, the sentiment is still a difficult one to change. More organizations are emphasizing trainings and capacity-building of local people, but years of helping and implementing projects is difficult to undo. It is much easier for many to agree with the development coordinators who have the funds and means to implement projects and receive to stipends, rather than to disagree and fight for what is really needed in the community.

According to author Shleifer, supporters of foreign aid like Nicholas Stern, argue that, “Rich countries are much richer than people in the poor ones, and therefore foreign aid is their moral obligation” (380). But if evidence shows that poor countries suffer, not benefit from, the effects of foreign aid, the moral obligation becomes quite a paradox that must be challenged.

Despite some aid money going astray or having negative impacts, aid supporters highlight the success stories of individual projects on small scales; gather testimonials from people at the grassroots level being helped, and announce the numbers of lives saved through project efforts. Collier writes that he believes development aid has prevented countries from falling apart rather than achieved sustainability (100). Many also argue that in order to get the poorest out of the poverty trap and move towards economic growth and development, more aid is necessary –that as of now, we are not donating enough to achieve stability. However, from an economist’s perspective, Collier, who agrees that aid has done more good than harm, doubts whether increasing the amount aid will have the necessary impact to achieve growth. He says:

If by doubling [aid] you could add another percentage point to growth, the effect, while not dramatic would at least gradually cumulate to substantially higher incomes. I think that with the right complementary changes this might happen, but as things currently stand, additional aid will not have such promising results. The statistical evidence generally suggest that aid is subject to what is called “diminishing returns.” That is, as you keep on increasing aid, you get less and less bang for the buck: the first million dollars is more productive than the second, and so on (100).

In the end, despite their disagreement about the effectiveness or ineffectiveness of foreign aid, both supporters and critics of foreign aid reach the same conclusion: Aid alone is not enough. Collier writes:

Aid… is not the only answer to the problems of the bottom billion. In recent years it has probably been overemphasized, partly because it is the easiest thing for the Western world to do and partly because it fits so comfortably into a moral universe organized around the principles of sin and expiation. That overemphasis, which comes from the left, has produced a predictable backlash from the right. Aid does have serious problems, and more especially serious limitations. Alone it will not be sufficient to turn thee societies of
the bottom billion around. But it is part of the solution rather than part of the problem. The challenge is to complement it with other actions (123).

So what changes are necessary if not in adding or decreasing the amount of aid? As I have explained above, the main problem in the way the Western world has approached development in Africa derives from the fundamental idea that development aid from rich countries can solve development problems. This concept infiltrates into all aspects of development-related projects from the distribution of funds to the implementation of blueprint plans. Therefore, the success of foreign aid in the development of Africa has been minimal, and sometimes detrimental. Therefore, it is necessary to understand that the solution to development challenges cannot come from outside. Although we have been progressing towards a more “ground up” approach to development in the 21st century, there is still much work to be done. We cannot afford to continue holding on to old, ineffective methods. We must move forward with a new approach.

For those of us who live in the United States and other developed countries, one of the greatest benefits we have is the opportunity to study at some of the world’s most incredible universities. Nowadays, and most likely since the early establishment of aid programs in developing countries, the importance of education is frequently stressed. However, many tough barriers prevent students in rural areas from being able to pursue a formal education. Some of these challenges include social factors, the inability to pay for school fees, the lack of infrastructure in school buildings and the lack of qualified teachers. Finding the means and funds to even complete a secondary or high school education may be a huge challenge. Of those who complete high school, even fewer are able to continue on to pursue higher education.

The founder of Soka University of America, Daisaku Ikeda, says, “I believe that humanity’s peace and prosperity for the coming centuries can be built only upon the foundation of education” (Ikeda xiv). Those who are able to continue in their pursuit of education must not take these opportunities for granted. However, it is not just any education that will allow us to envision and work together with others towards a better world. Soka education is founded on a humanistic philosophy that does not view knowledge as the end, but rather to use the knowledge we gain through education as a means to impact individual lives. Ikeda writes, “The ultimate goal of Soka, or value-creating, education is to foster people of character who continuously strive for the greatest good –that of peace –who are committed to protecting the sanctity of life and who are capable of creating value under even the most difficult circumstances” (115). This may sound broad, but it is a crucial starting point for any humanistic endeavor, and extremely relevant to the necessary shift in the perspective with which to approach development work.

I stated at the beginning of this paper that many people with differing educational backgrounds contribute to the field of international development. Extremely qualified professionals with many years of education, research, and experience become advisors and development coordinators. I do not in any way intend to discredit their work. But the inclusion of a humanistic education as the foundation of development pursuits, along with the technical skills and experience for current and aspiring development professionals, can make all the difference to
create a better system. Again, one of the fundamental problems with the Western world’s current approach to foreign aid has stemmed from our strong belief in the myth that foreign aid is "good". Tsunesaburo Makiguchi’s value creation education theory, I believe, is the key to moving towards a more effective development approach.

In explaining his value-creation theory, Makiguchi first finds it crucial to recognize that there is a difference between the meaning of “truth” and “value”. He writes:

In seeking to discover a truth, we isolate some commonality or universal property from among the myriad objects of the universe. With value, however, we attempt to determine the particular or uniquely characteristic way in which some object differs from all others in its relationship to our own lives and to the life of the community. Thus an expression of things as they are is recognized to be a fact or truth, whereas an expression of the relation between self and object is value (55).

In development terms, this would mean to recognize that universal facts of life exist, but that it is not the same as the different values that people hold dear. We don’t need to rely on science to prove that all human beings need basic things to survive –food, water, shelter, etc. Actual evidence has proven that lack of these life necessities makes it very difficult to attain sustainability, and ultimately results in countless lives lost. This leads to the necessity for emergency relief efforts in times of critical and immediate need, not just in developing countries, but everywhere. But in developing countries where the goal of aid efforts are to promote sustainability, we must recognize that in order for people to thrive, these basic life necessities cannot be provided from the outside forever.

Relying on the “goodness” of donors or government aid can cause communities to be in constantly stressful situations where people do not have much choice or control over their own lives. This would not result in a society where people feel they are able to attain what they value. They are merely surviving. This is one example of the “aid dependency” effect that Moyo and other aid critics point out. Thus, providing a hungry family with food every month is a “band-aid” solution that fails to create long-term value for people affected by, in this example, the lack of food resources. Like Collier stated, these solutions only manage to hold communities from falling apart, but does not help them much in moving forward.

Because values are placed on different things related to the individual and community’s needs and wants, all life necessities develop certain levels of value are prone to change. At different times, communities will need different things, and aid cannot serve to fulfill all of these needs. Makiguchi provides an example:

For example, water in and of itself has no value. It often goes unregarded. Nonetheless, as soon as someone wants a drink of water, it has bearing. Then water is seen to possess the capacity to quench thirst, just as the person is able to be satisfied with water. At other times, water means nothing but disaster to people, as when a flood strikes. The values is not inherent in the subject (person) nor in the object (water) but is manifest in the attracting or repelling force between them (72).
If current and aspiring development workers hope to create more good than harm in foreign countries, they must understand the theory of value creation. They must also recognize that values are not universal across all cultures or even individuals, and they can change over time. Development projects cannot be set on a universal blueprint used across all different countries. What works for some countries may not work for others. It is necessary for development workers to have the ability to assess these things through the perspective of local nationals who deal with their life challenges on a daily basis. It is ultimately the local nationals who will be responsible for finding their own values and working in their own ways to achieve those values:

Humans take no heed of things that have no bearing on them. They often go without noticing that such things even exist. It is only those things with some effect upon us that demand distinct awareness and acquire a sense of personal immediacy. And the more critical these things are to our life, the less we can afford to ignore them (55).

It is difficult for someone, who has not been exposed to the history and society of a certain place, to truly understand the problems existing in that place from afar. They can empathize and speculate, based on knowledge and opinions, about what may or may not help the community with challenges. However, the people who can truly understand what things are valued at a certain time and to what extent, are the very people who live there and will continue to live there. It seems an obvious point that local communities be involved in the solutions, but the large foreign aid model does not allow for the participation of local members in decision-making. The Peace Corps gave me an opportunity to spend two years experiencing in a developing country, and that experience was something I could never have gained through knowledge or opinions of others alone. But as much change as I wanted to make, I came back with a deep understanding that true, sustainable change, will take a lot of time, understanding, and wise and persistent efforts on the part of everyone involved. As we are limited as individuals to learn everything through our own experience alone, we must work together and learn from one another:

What we do not learn from our own trial and error, we learn from those things of significance that others before us, through cognitive analysis and synthesis, have seen fit to weed out from inconsequentials. Either way we must admit that learning plays an integral role in our daily lives. A life without learning is a life groping in the dark. At the same time, learning divorced from life is empty theory. We must check our knowledge against our own experience, especially if we ourselves are not the source of the knowledge. Somewhere we must make the intuitive leap, shifting our eyes from scant details of immediate familiarity to a more comprehensive picture… We must keep ourselves open to new explanations and new experience if we are truly to live and learn (Makiguchi 68).

As long as development workers continue learning from past errors and successes, maintaining an open mind to new ideas and solutions towards progress, there is definitely a way
forward that can involve the contributions of people from both developed and developing countries. But it all begins at the individual level:

In order to be able to evaluate our personal values correctly, we need self-awareness and other-awareness working in unison. This self-realization is not merely the self-recognition that one exists, nor is it the sense of individuality stressed through comparing one’s own qualities with those of others. Rather, it is the personal value of oneself as a whole engaged in the greater whole of society that matters here (Makiguchi 86).

The more we know ourselves, the more we are able to know others. Fundamentally, despite all of our differences, we are connected as human beings. We may value different things as individuals from our neighbors, we may have different values from other societies, however, we are connected by our humanity. With the rise of globalization through the rapid growth of technology, social media, and the ability to travel, more than ever, our world is becoming interconnected. The problems of other countries are no longer problems of “others”. It is necessary to view the challenges that countries face with the understanding that we are all connected. Ikeda emphasizes the importance of “global citizenship” stemming from the ability to see others problems as our own. He writes:

I am confident that the following are essential elements of global citizenship.

- The wisdom to perceive the interconnectedness of all life and living.
- The courage not to fear or deny difference, but to respect and strive to understand people of different cultures and to grow from encounters with them.
- The compassion to maintain an imaginative empathy that reaches beyond one’s immediate surroundings and extends to those suffering in distant places (Ikeda 101).

For development workers trying to create change in a foreign land, the challenges are numerous: language and cultural barriers, the need for the open-mindedness to understand a different history and set of traditions, and the ability to be flexible in changing circumstances. What I saw often was a lack of understanding and communication between aid projects and what the communities truly needed and wanted in order to develop. We need people who are knowledgeable, but people who can also listen to the people and understand their struggles.

The problems of AIDS, malaria or food insecurity are not grand problems of cosmic uncertainty. They are not the great mysteries of the universe. They are the mysteries of our inattention. The inability to solve this problem does not rest with our technologies. It lies squarely with us and with our understanding. As I have looked at these shocking realizations, what has amazed me is our incapacity to understand and to act with the power we have (Sachs).

The complex challenges in development take time and ongoing communication, a discussion, between people from different backgrounds. In order for development workers to be effective in their work, there must be a shift in the way the developed world approaches development. There must be a newfound commitment to understand people as the foundation for tackling challenges abroad… because although the challenges are abroad, they are universal
human challenges that affect all of us. Makiguchi, Toda, and Ikeda have continuously stressed the importance of the human individual, which is a philosophy that can be applied in any development project and which is missing from large foreign aid policies that fail to achieve its intended results. If the values of Soka education can serve as a foundation for current and aspiring development workers, I believe that the future of large foreign aid policies will see many positive and conscientious changes that are still lacking today.
Works Cited


Children Playing with Squares:
Creating Value from Abstract Mathematics

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Abstract
We examine similarities between Makiguchi’s ideas for education and the pedagogical practices of Math Circles, with specific examples from our own experience running such a program. A Math Circle is a type of mathematical enrichment program that encourages school-age students in pursuing interesting mathematics beyond the classroom, whether by examining interesting mathematical puzzles, patterns and connections, or by exploring the kinds of mathematical topics that lie outside the school curricula. Coming originally from Eastern Europe, such programs have been growing in popularity in the US in the past two decades. We focus on a particular approach to Math Circles that strives to promote maximal agency in students as they formulate and explore a mathematical question.
The urge to recognize and explore patterns is quintessentially a human endeavor. Abstract mathematics is at its essence a study of patterns, and what distinguishes it from other such endeavors is that one has full control in defining the objects of one’s study, though no control over the logical consequences of those definitions. Abstract mathematics is the mental playground which allows for unambiguous interplay between evaluation and cognition: defining the objects of interest, identifying interesting patterns, creating worthwhile conjectures, and testing them against undeniable facts. The distinction and the interplay of cognition and evaluation—understanding facts and forming value judgments regarding those facts—lies at the heart of Tsunesaburo Makiguchi’s idea of value-creating pedagogy. Makiguchi did not advocate teaching pure mathematics; if anything, applied mathematics better suit the ideas of exploration of a child’s social and natural environment that Makiguchi advocated as the backbone of education in his Community Studies. However, his ideas for pedagogy that promotes learning through active exploration of one’s environment extend beyond any one implementation, and can apply equally well to mental environments as to physical ones, once the child reaches appropriate developmental stage. We will explore an application of the ideals of Soka pedagogy to learning abstract mathematics, one that is actually practiced in math enrichment programs called Math Circles.

Most people, in recalling their math classes, are more likely to identify their experience as a mental boot-camp rather than a mental playground. Mathematics education, for the most part, is utilitarian in nature, with the utility determined by someone other than the students. The students learn procedures and concepts that have been developed for them, because those procedures and concepts are considered to be useful later in life, and not so much because the students find them applicable, interesting, or beautiful. Mathematics education remains firmly subject-matter oriented, a collection of known facts to be learned and methods to be mastered. It’s a rare class that would allow for a student-led exploration of an abstract mathematical idea, making time for getting stuck or following a meandering route of inquiry. Yet mathematics can provide an ideal setting to sharpen the habits of abstract reasoning—identifying and organizing examples, following up possible routes of inquiry, generalizing, testing, and proving or disproving one’s hypotheses. Such explorations take time and a lot of initiative from the students, so it is not surprising when they are more readily implemented in extracurricular programs that cater to interested students.

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1 Hayashi, Ryan, Masui, Takako, Rita, Ritsuko, and Ueno, Satomi. Makiguchi Translation: Research into Community Studies as the Integrating Focus of Instruction. Soka Education Student Research Project (SESRP), 2012. Further thanks to Satomi Ueno and Ritsuko Rita for further translations of Makiguchi’s work that enabled us to have a working knowledge of the contents of the work that has not been otherwise translated.

2 It’s natural to ask, “considered by whom, and useful for what?” Any attempt to answer that question leads to complexities way beyond the scope of this manuscript.

3 Tradition has it that the phrase “Let no one ignorant of geometry enter” was engraved on the door of Plato’s Academy.
For the past few semesters, I have been running a free weekly math enrichment program called a Math Circle for a small group of interested children in 6th-7th grades, with the help of Elyse Watson in the Fall of 2014. The majority of these children are homeschooled. I introduce the children to an easily approachable mathematical idea or a pattern, and facilitate their exploration of it. The pedagogy I apply come from the ideas of Robert and Ellen Kaplan, who have been running the Boston Math Circles in Massachusetts since 1994.

In general, mathematics enrichment programs—those programs that don’t focus on developing math skills—can be characterized along two axes: (1) whether the subject matter is student-developed or teacher-developed, and (2) whether the program seeks to stress competition or cooperation among the students. In general, Math Circle pedagogies can range anywhere on those two axes, though the Boston Math Circle’s philosophy is to have the bulk of the subject matter be student-developed, stressing the cooperative nature of mathematical exploration, and eschewing competition. An ideal implementation of this philosophy may be the closest a study in abstract mathematics can come to the ideals of value-creating student-centered education. In this essay, we will focus on presenting the pedagogical ideas of the Boston Math Circle, compare them to the ideas of Soka pedagogy, and give examples of our attempts to implement them.

A brief overview of Math Circles

There are many forms of math enrichment programs. Some are focused on developing and enhancing math skills that are taught in school, some are laying the groundwork for more advanced math in college. Some prepare students for SATs. Others focus more on training for mathematical competitions, such as the International Mathematical Olympiad, or the American Mathematics Competitions.

Math Circles are mathematical enrichment programs that connect mathematics students with mathematics practitioners, and aim to develop an interest in and appreciation of mathematics. Math Circles have been a staple in the mathematics community in Bulgaria for over a century, and in the former Soviet Union since 1930. It was primarily a form of informal mentorship: working mathematicians (typically University professors) would lead meetings on topics on advanced mathematics to high-school age students who have shown interest and aptitude for such studies.

In the Soviet Union, at least, Math Circles were also a way for those in the mathematical community to strengthen social and professional connections. The informal setup of a Math Circle typically ensured that only the children of people already connected within the intelligentsia community would have access to one. Strong social connections, together with the sharpened abilities in mathematics, helped ensure access to university education, a scarce resource for which competition was fierce, especially for the few top universities with world-

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4 For the sake of readability, the text is written from the perspective of Anna Varvak, the Math Circle leader.
class education. One of the methods of screening for academic qualifications of university applicants was through competitive entrance exams, which included both written and oral portions in various standard subjects. For children with experience in Math Circles, the ubiquitous entrance exam in mathematics was a blessing, since it was one of the few academic subjects that were almost free of politics, and most difficult for those who have not been properly trained. (Though even in mathematics and the sciences, the top universities discriminated heavily against Jewish applicants, and stellar performance on the competitive entrance exams were no guarantee of acceptance). The mathematics exam involved complex problems and proofs. Those students lucky enough to have participated in a Math Circle were more likely to have the kind of strong preparation required to succeed in such exams.

Both Bulgaria and the Soviet Union also have almost a century-long history of prestigious mathematical competitions, in particular the Mathematical Olympiads. The Olympiad-style competition involves solving complex problems or proofs, and one’s score depends on just on proving a correct solution, but also successfully defending it with a proof or a demonstration. The Math Circles in both countries have long associations with these competitions, so much so that preparations for the math competitions have come to be regarded as being at the heart of Math Circles in Eastern Europe.

The pedagogy of the Math Circles in USSR and Bulgaria rested on the assumption that the students already possessed a strong background in level mathematics; they would also assume that the students were familiar with seminar style approach that required a student to present and defend her ideas orally and on a blackboard against on-the-spot critiques, since such oral examinations were typical at public schools. When paired with preparation for a mathematical Olympiad, such setup typically created an atmosphere of collegial competition among the participants.

The history of Math Circles in the USA is much shorter. The Boston Math Circle is the longest-running such program in the US. It was started in 1994 by two American mathematicians Robert and Ellen Kaplan, who did not experience the Math Circles of Eastern Europe themselves, but who have heard of the ideas and have developed them in their own way. From the start, they insisted on promoting cooperation rather than competition in mathematical exploration, and have never supported preparations for mathematical competitions or Olympiads. In contrast, the second-longest running Math Circle is the Berkeley Math Circle in the San

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7 Szpiro, George G. "Bella Abramovna Subbotovskaya and the “Jewish People’s University”." Notices of the AMS 54.10 (2007).
Francisco area, which was started in 1997 by a Bulgarian mathematician Zvezdelina Stankova, who herself had participated in Math Circles in Bulgaria since an early age, and participated in International Mathematical Olympiads as a young woman. The Berkeley Math Circle retained the prominence of mathematical competitions.

The past two decades have seen the rise of hundreds of Math Circles across the United States, with target participants ranging from high-school to elementary schools, and some geared specifically for teachers. To get a sense of pedagogical approaches, Elyse has collected data from all programs listed in the National Association of Math Circles\(^\text{10}\), whose website provides Math Circle programs the opportunity to publicize themselves by providing a brief description of the program and including contact information and links. Such self-post database has obvious limitations—of the 190 total listings for Math Circles, 51 had broken links, and 14 provided no information beyond their name and location. Nevertheless, the information gives a glimpse into who is organizing such programs, for whom, and whether they stress competition or cooperation in their pedagogy.

More than a third (37%) of the Math Circles are connected to a university. The most typical target students are middle-school (58%) and high-school (57%), though a third cater to elementary school students (33%). Math Circles for teachers are not unusual either: 29% of the listed Math Circles had programs specifically for teachers.

Almost half (48%) have indicated stressing\(^\text{11}\) competition or cooperation in their pedagogical approach, with slight preference towards cooperation (30%) than competition (22%), though seven (4%) of the programs have indicated that they use both. When we considered which age groups participated in the Math Circle programs, it seems that the programs geared towards older students tend to incorporate competition more than cooperation, with the notable exception of those geared towards teachers: fully half (51%) of all the programs with teacher participants stressed cooperation, with only one mentioning competition of any sort, and that program includes other age groups (see Figure 1).

\(^{10}\) http://www.mathcircles.org/

\(^{11}\) A caveat: while in this article, we are exploring the prevalence of using cooperation versus competition in Math Circle pedagogy, on the whole there isn’t much of a debate on the matter within the Math Circle community. While some (like the Kaplans) have strong opinions on the matter, on the whole the agreement is that anything that gets people excited about mathematics is a plus, and all approaches for mathematical enrichment programs are respected.
Figure 1. The graph shows what percentage of the Math Circle programs found on the National Association of Math Circles mention either competition or cooperation. Out of a total of 190 listed programs, 55 include elementary school groups, 98 middle school, 97 high school, and 49 include teacher groups.

For the larger programs that cater to several age groups, it may be cooperation is stressed for one age group, while competition is used in another age group. Thus we considered the smaller Math Circle programs catering to only a single age group, and found a more pronounced pattern (see Figure 2). High-school groups in particular rely much more on competition than cooperation to motivate their participants, while teacher groups welcome cooperative learning and eschew competition.

Math Circles in general form a loose association, and are very independent one from another in their style of pedagogy and their target participants, with only a general desire to nurture and cultivate interest in mathematics beyond the classroom. Here, we present more in-depth pedagogical ideas12 from the Boston Math Circle, which in many ways exemplifies a student-centered pedagogy.

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12 For the pedagogical ideas expressed by Robert and Ellen Kaplan, I rely not only on their book “Out of the Labyrinth” in which they share their ideas regarding Math Circles, but also from what I learned in participating in their Summer Math Circle Institute in the summers of 2012 and 2014.
Figure 2. The graph shows what percentage of the Math Circle programs that have a single age group mention either competition or cooperation. Out of a total of 84 such programs, 10 focus on elementary school age, 15 on middle school, 21 on high school, and 38 focus on teachers.

The main goal for a Boston Math Circle is to create the environment where the students to create and explore their own mathematics, with the Math Circle leader providing initial inspiration and direction and guiding the exploration. For the initial inspiration, the leader provides an “accessible mystery”: a mathematical pattern or a puzzle that is easy enough to convey but that can lead to deeper mathematical ideas, and initial exploration doesn’t require more than what the students already have. Ideally, the leader would convey the “accessible mystery” in a rather vague way, so the students can explore how different interpretations would change the problem. For example, suppose the leader wants to present a challenge that, in a mathematical textbook, might appear as follows: “How many separate regions result in a plane bisected by \( N \) straight lines?” The leader could instead start with a question, “How many pieces of paper do you get when you make a hundred cuts?” The answer to this question is vastly different depending on what kind of cuts we allow—can we take several pieces of paper and cut them all at once with one cut? Does a cut have to be all the way through? What if you can’t pick up the paper at all, and rather slice it all the way through with a straight line, like a pizza? In either case, the students are unlikely to be able to answer what would happen after making a hundred cuts, and they would need to consider simpler cases: one cut, two cuts, and so on. Ultimately, the students decide on how to make the question more precise. After some initial exploration, the students come up with other lines of inquiry: What’s the largest number of pieces that you can get with a particular number of cuts? Is there a pattern to the largest number of pieces, as we increase the number of cuts?
Examples from our Math Circle

The “accessible mystery” can be even less direct, such as the one I recently used: “What’s interesting about square numbers?” In a more typical school setting, the teacher or the book would provide the definition of square numbers. However, there is great value in letting the students arrive at a definition for themselves. For one thing, it underscores that in mathematics, we have full control in specifying the features of the objects that we study, and naming conventions are there for the purpose of communication, not because they are forced onto us by the implacable laws of logic.

In fact, the question of what makes for a “square” number is non-trivial, and we came back to this question again and again. Here are the definitions that the children have given for it over time:

1. It’s a number of dots that can be arranged in a square
2. It’s an area of a square
3. If you take a number and multiply it by itself, the result is a square number
4. $N$ is a square number if there is a number $R$ such that $N/R = R$
5. $N$ is a square if there is a number $R$ such that $N = R^2$

Each of the above definitions work to describe numbers like 4, 9, and 16, which all the students agreed are square numbers, but an important difference emerged when someone asked whether 1 or 0 were square numbers. You can have a square whose area is one square-inch, but can we arrange one dot as a square? And what does it even mean to have a square with no area, or to take no dots and arrange them in a square? Considering a square number as an area of a square, the students also had to consider whether to allow fractions and decimals as square numbers. Ultimately, the students decided on the following:

Definition: A square number is a result of multiplying a whole counting number by itself.

They have agreed that 1 is the smallest square number, and understood how the other proposed definitions are similar.

To see what’s interesting about square numbers, we generated a lot of examples of them. Some questions that got raised were: How far away are square numbers from each other? Can any number be a distance between two square numbers? This last question is the one we decided to pursue.

At first, the students would come up with an example (e.g., 16-4=12), and immediately jump to a hypothesis: “Maybe all multiples of 3 are distances between two squares!” I would prompt them to get a few more examples, which tended to burst many an idea almost

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For example, 0.01, which is $0.1 \times 0.1$. We did briefly have a discussion of this possibility, and the students came to the conclusion that no negative number can be a square number. We did not, however, establish whether all positive numbers are square numbers under this definition.

Flexibility in thought between a concept and a process it represents has been linked to successful performance in mathematics. See, for example: Gray, Eddie, and David Tall. "Duality, ambiguity and flexibility in successful mathematical thinking." 1991.
immediately. Generating hypotheses is almost too easy; generating reasonable hypotheses based on enough evidence takes practice.

Only after half an hour of such ad hoc examples and hypotheses did one of the students to suggest a more orderly approach: first, write down square numbers in order, then write down the differences between squares. This kind of systematic investigation doesn’t come naturally without practice, but it’s so essential for identifying mathematical patterns that a trained mathematician takes this practice for granted.

Once we had the first ten squares up on the board, the students very quickly noticed that the differences between two adjacent squares kept increasing by 2. They were quite excited by this pattern, so much so that they did not consider differences other than those of the adjacent squares. I asked whether this pattern helps characterize which numbers are the differences of two squares, and after some discussion we had a claim: any number that can be written in the form \( 1 + 2 + 2 + \cdots + 2 \) (or \( 1 + 2n \), for some whole number \( n \)) is a difference of two square numbers. After a short while, someone realized that those describe all odd numbers greater than 1. Thus we had:

**Conjecture:** Any odd number greater than 1 is a difference of two consecutive square numbers.

A conjecture is something that we think is true, but we haven’t yet demonstrated that it must true. So I asked the students to prove it to me.

Makiguchi draws a clear distinction between truth and value, between cognition and evaluation. In his philosophy, truth lies outside of human values; truth is not created, it just is. Value, on the other hand, is what people create, and contradictory values may coexist to some extent, though contradictory truths cannot. He writes,

“Truth demands proof. No matter how eloquent or profuse the explanations, without actual evidence the truth of the matter must remain in question. Furthermore, the correctness of a proposition is to be ascertained through careful, rational consideration, not how we feel about it.”

Such Platonic view on truth is not currently popular. In the fields of social and behavioral science, there is a general consensus that our understanding of truth is colored by the values we currently hold, and even the sciences may not be entirely free of the sway of the prevalent paradigms. However, Makiguchi’s views on truth and value are completely justified in the field of mathematics. Deciding which objects of study would be interesting, how to define such objects in an unambiguous manner, which patterns appear interesting—all such considerations are a matter of evaluation, of making judgments as to the values such ideas hold in relation to one’s interests and pursuits. However, once the objects of interest are unambiguously defined, and a conjecture is clearly stated, the truth of that conjecture is not up to evaluation—it is either true or false, and which one it has nothing to do with one’s desires and hopes.

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In our case, defining the square numbers has been a matter of evaluation. The group’s
decision, for example, to discount 0 as a square number is not a matter of truth, it is a matter of
value—it was based on the student’s ideas of what the “square” in the square numbers means to
them. The focus on the pattern of differences in consecutive square numbers, a recognition that
it’s interesting that these differences always seem to increase by exactly 2, that is also a matter of
evaluation and not of truth. The excitement in discovering a connection between odd numbers
and square numbers, that again is not a matter of truth, but of value. However, now that we had
a clearly stated conjecture and an unambiguous definition of square numbers, the conjecture is
either true or not, and that truth has nothing to do with how beautiful or useful one finds this
conjecture.

On the other hand, Makiguchi writes: “Contrary to the widely accepted notion that it is
human nature to strive for truth, pure truth would be of no value to people.”\textsuperscript{17} The students
wanted to demonstrate the truth of their conjecture, not for the sake of showing that there is this
lovely connection between odd numbers and square number, but because in a very real sense the
conjecture was theirs: they have discovered it. It would be a different matter if a student faced
the same conjecture as a statement to prove on a homework set or an exam. Makiguchi
classifies value into three categories: good, benefit, and beauty. “Good” refers to the social
value that bears on the wellbeing of the collective group, and can thus be termed moral value; “benefit”
refers to personal values in relation to oneself, and can be termed economic value; and “beauty”
refers to aesthetic values. In a classroom, a student’s motivation to do well is more likely to rely
on considerations of benefit to oneself, whether the motivation is extrinsic (e.g., desire for good
grades) or intrinsic (e.g., desire to master the material). In a Math Circle, grades play no role,
and there is no set material to master; yet consideration of benefit cannot be altogether dismissed
since part of the reason a student chooses to attend a Math Circle is for social reasons: they like
the other students with whom they share the intellectual challenges. Nevertheless, a part of the
student’s motivation that drives mathematical explorations is aesthetic, an emotional satisfaction
in recognizing patterns and connections that one hasn’t expected to see. Makiguchi places
intellectual satisfaction squarely in aesthetic value: “humans are subject to the same order of
appreciative feelings towards actions, occurrences, and ideas as they are towards things.”\textsuperscript{18} Math
Circle pedagogy responds to concerns that Lockhart made\textsuperscript{19}, likening typical experience of
learning mathematics to studying music through copious exercises of musical notation, without
ever hearing any piece played.

Getting the conjecture, then, involved an interplay of evaluation and cognition, amassing
multiple examples that illustrated the conjecture along the way. But examples are insufficient to
prove a statement that claims to be true for an infinite multitude of square numbers. What
constitutes sufficient proof, in such a case? The idea of mathematical proof can be quite tough.

\textsuperscript{17} Makiguchi, Tsunesaburo and Bethel, Dayle. \textit{Education for Creative Living: Ideas and Proposals of Tsunesaburo
\textsuperscript{18} Ibid, p. 82.
Normally, when we are trying to convince someone of a veracity of an idea, we present examples that demonstrate it. That’s what the students did as well: they wrote out five more squares, and showed me that the pattern in the differences continued. But why should I believe that the next five squares will hold the same pattern? And the next five after that? The students wrote out more squares, becoming more exasperated with my unreasonable standards of proof.

In a sense, they were right to get exasperated. A mathematical standard of proof is far more exacting than anywhere else. In a different context, suggesting that there is a pattern based on examining one set of data, and then proceeding to demonstrate the exact same pattern on a different, previously unexamined set of data, would constitute strong evidence if favor of the pattern. In mathematics, however, we have nearly absolute standards of proof precisely because these can actually be obtained. Since we have full control in defining the objects that we study, we can logically examine their properties in such generalities unheard-of in other disciplines.

What was needed in this case is an abstract, universal presentation of the difference between two adjacent square numbers, rather than empirical gathering of examples.

Makiguchi points to abstraction as an essential part of the reasoning process which follows intuition. He writes,

Reasoning takes intuition as the preliminary step and source of experiential phenomena, then systematically proceeds to exclude extraneous details towards abstracting a general truth. With intuition, only the specific resultant truth is accessible to conscious examination, whereas reasoning lays its entire doings out in open view.20

Though their examples, the students have developed an intuition that odd numbers are the differences of two adjacent squares, by recognizing the pattern. An ultimate level of abstraction would demonstrate that, by their very nature, two adjacent square numbers differ by an odd number.

Abstraction requires considering a generic square number that relies on the definition of square numbers, and thus represents all square numbers, an idea that the students found confusing. Since we had the square numbers written up in order, from the smallest onward, I asked: what is the $n$-th square on the list, where $n$ stands for some number. It was obviously a very confusing idea; the students kept giving guesses using concrete numerical examples: is the $n$-th square on the list 81? Is it 64? To bridge the gap between the abstract and the concrete, I took out a piece of paper, and told the students that on that piece of paper I will write down a number, and I will not tell them the number, but I will call it $n$. Their task was to tell me what square number I will find on the list of square numbers, if I go to the $n$-th place on the list. I hoped that this mixture of concrete and abstract would ease the understanding of the abstract “$n$-th square number”. To discourage the guessing, I made a show of scribbling a very large number on my piece of paper, before folding it and placing the paper in my pocket.

For a while, it was quiet, but only because some of the students were busy multiplying two large numbers together, numbers that they guessed I wrote on the paper. After a bit, the

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20 *Education for Creative Living*, pp. 69-70.
guesses of large specific square numbers poured in: Is it a million? Is it 15,129 (square of 123)? I pointed out that it may be better if they tell me what to do with my number, rather than guessing my number and doing the computations themselves. Thus we got that the \( n \)-th square on the list is \( n \times n \).

Such abstraction is nontrivial, and even though we just had this ordeal of figuring out the \( n \)-th square number, and even though I thought that this notion was now clear, apparently that wasn’t so. The students were once again stumped when I asked, what is the square number right after the \( n \)-th square on the list? Only in our next meeting did they suggest that it is \((n + 1) \times (n + 1)\).

Such abstraction is essential to a mathematical proof, because it gives a handle on a claim about an infinite number of cases. With our abstraction, the conjecture becomes:

\[
\text{Any odd number greater than 1 can be expressed}
\]
\[
as (n + 1) \times (n + 1) - n \times n, \text{ for some whole number } n.
\]

Rather than tackling this statement directly, the students decided to first show that the difference between two adjacent squares always increases by 2. Once they demonstrated that claim, they can show that any odd number greater than 1 must be a difference of two adjacent squares: 3 is the difference of the first two square numbers, and every larger odd number can be obtained by adding enough 2s to 3. After a long struggle with abstraction, we could describe this claim algebraically:

\[
\text{For any whole number } n \text{ bigger than 1,}
\]
\[
(n + 1) \times (n + 1) - n \times n = 2 + n \times n - (n - 1) \times (n - 1).
\]

Each part of this algebraic statement has a concrete meaning: \( n \times n \) is the \( n \)-th square on the list, \((n + 1) \times (n + 1)\) is the square after it, \((n - 1) \times (n - 1)\) is the square before it. So the left hand side of the equation is the difference between the \( n \)-th square and the one after it, and the right hand side is 2 more than the difference of \( n \)-th square and the one before it. The whole number \( n \) must be bigger than 1, since the first square number doesn’t have a square number before it.

The proof of the conjecture now boils down to demonstrating that the equation is actually true for any whole number \( n \) bigger than 1, meaning that the left-hand-side is actually equal to the right-hand-side. For someone who is proficient with algebra, this task would be quite easy. Since the students were not yet proficient with algebra, we spent a session devoted to figuring out how to simplify the expression, but in the end the students demonstrated unequivocally that the expression reduced to \( 2 = 2 \) for any value of \( n \). The conjecture was thus proved, and the connection between square numbers and odd numbers firmly established. Overall, this process took us four weekly one-hour sessions.

\textit{Room for improvement}

The algebraic method of proof is not the most intuitive method for understanding square numbers or their differences. A visual method where square numbers are represented as dots...
arranged in a square would not only be more accessible, but also immediately allow the students to see why the difference between two adjacent squares must be an odd number.

Even the students’ own algebraic proof could be made more clear and straightforward, if I asked them afterwards to simplify \((n+1)(n+1) - n\cdot n\). The resulting expression is \(2n+1\), which is practically the definition of an odd number.

The biggest challenge, however, is to avoid topic burnout. After our triumph with showing the connection between odd numbers and square numbers, I pushed to go deeper into the topic the following semester. However, we had a new mix of students, some of whom were with us the previous semester and some of whom weren’t, and it became apparent after a few sessions that the topic simply wasn’t working for the group. The topic might have worked if the group composition remained the same, or if the attendance was more regular, but feedback from other Math Circle leaders indicates that there is no guarantee that every topic will work with any group, and one of the challenges is to be sensitive to such topic burnout. Although typically students who attend the Boston Math Circle sessions spend months exploring the same topic, other Math Circles change topics regularly, sometimes several topics in the same afternoon for younger students. The exploration of square numbers was the longest that I attempted, and my experience suggests that shorter explorations are easier and overall more satisfying for middle-school age groups.

**Role of Math Circle pedagogy in US mathematics education**

In the United States math education, there is an over-emphasis in demonstrating procedural knowledge, and an under-emphasis in demonstrating conceptual knowledge. Typical math exercises involve drills with one or two steps, and it is very rare for a student to encounter a challenging mathematical problem that would require multiple stages. However, with 43 states adopting the Common Core standards, there is an impetus for change. The Common Core standards for math tend to put off learning a general procedure for a year or two, requiring that the students develop and have time to discuss and compare their own procedures. For example, whereas it was typical to teach the general multiplication procedure to students by third grade, the California Common Core standards for third grade call for “developing understanding of multiplication and division and strategies for multiplication and division within 100.” In fourth grade, students “apply their understanding of models for multiplication … as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers.” The kind of mathematical learning being called for has a lot in common with a Math Circle approach, which places students squarely in the role of investigators. Teachers may consider incorporating a shorter Math Circle-type investigation as a math activity. Perhaps a more important reason to incorporate a Math Circle-type activity into regular math sessions is that it is a way to give students agency and pique their interest. According to a

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recent poll\textsuperscript{22}, about 4 out of 10 US adults say that they hate math. Many factors contribute to this prevalence of negative attitude, but partly it stems from the perception that mathematics has no room for creativity or agency—that there is only one right answer to any question, and only one right way to get it. According to such perception, mathematics rests only on cognition, not evaluation. In Makiguchi’s philosophy, evaluation—and creation of value in general—is the quintessential human activity; no wonder, then, that so many people see mathematics as soulless. As Math Circles show, it need not be so.

\textsuperscript{22} AP-AOL News Poll (of 1,000 adults, conducted August 9-11, 2005) http://www.ams.org/news/math-in-the-media/mathdigest-md-200508-toc#sthash.PdeOyc2.dpuf
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