Presidential Committee on the SSLs
Report to the President
November 30, 2015

Submitted by Janice Krouse, on behalf of the committee

Members: Janice Krouse (chair)
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Initial Charge to Committee

The committee's task was two-fold. First, the committee agreed to revisit and revise IMSA's Standards of Significant Learning (SSLs), not with a goal to rewrite or construct a major overhaul, but rather to clarify, define and/or refine. The goal was to remain lofty and ensure that they are still relevant, incorporate 21st century skills, and consider how the world has changed in the last 29 years. It was noted that there had been some effort in the past to "assess" students' achievement or progress in the SSLs. This committee was not charged with the task to make them assessable. Questions for consideration included:

- How do the SSLs reflect and generate Decidedly Different Learners?
- How is IMSA's mission seen in the SSLs?
- How do the SSLs foster collaboration over competition?
- How do the SSLs foster pluralism over ethnocentrism?

Second, the committee was to plan professional development for staff to help them embrace, apply, and own the new version of the SSLs. Questions to consider included:

- How will they be introduced?
- What is the revisiting schedule for 2015-16, 2016-17, and beyond?
- What is the orientation plan for new faculty and staff?

Committee meetings and/or work products

The committee met several times during the spring of 2015, starting in April. Janice reached out to several of the original authors, (Dr. Michael Palmisano, Ms. Barbara Taylor, Dr. Stephanie Pace Marshall) to get a sense of the driving forces of the time. Early committee discussions reviewed several versions of the SSLs, including the original, "long" version. These discussions uncovered the need to also revisit and rejuvenate the Core Competencies (for curriculum design) and the Danielson Framework for Teaching/Expectations of IMSA teachers (the delivery of the intended curriculum). The relationship between the SSLs and the Core Competency is critical, as are teacher behaviors.

The committee believes that designing curriculum aligned with the Core Competencies should ensure that learning experiences provide opportunities for the students' development of the SSLs. Teacher behaviors, as seen in the Danielson Framework should ensure that the intended curriculum is delivered in a manner consistent with the intention of the SSLs. The SSLs should distinguish how IMSA is pushing beyond the "Common" Core and other nationwide standards that are written for all students.

Throughout all meetings, there was much discussion about the word "standard." Attempts to rename the SSLs floundered, but there is a real need to address the issue, as today's connotation of the word is too closely held to assessment. There is a desire to stay bigger than the checklist mentality of a list of standards to achieve. Toward this end, the committee

suggested eliminating the outline form of the SSLs, and keeping a more narrative description of each of the five main standards. Conversations rallied around the idea of a condensed version of the SSLs, teamed with the core competencies, into a one-page document for internal and external use. Further development of each of the five SSLs would happen at the team level, as they revised their team standards. Teams would generate lists of proficiencies and observable behaviors for each SSL, which would allow each area to "see" themselves in the standards, incorporate language of the latest national trends and standards in the respective disciplines, and ideally improve ownership by all. Several shortened versions of the SSLs then emerged (See Appendix).

At the beginning of the summer, the committee anticipated the hiring of a new principal, who would join the committee. It also anticipated merging or adopting one version of the one-page SSLs to present to the faculty and staff so that further work at the team level could commence during the 2015-16 academic year.

As the committee reconvened in the fall, further questions emerged. Three committee members drafted yet another version of "shortened" SSLs, from the three versions that the committee had previously generated. This attempt produced another version that fell short of adequately addressing the purpose of the SSL's, and work began to stall as more and more fundamental questions arose, largely concerning IMSA's identity. Perhaps it is time to revisit what it means to be a "learning laboratory." Many sense that IMSA has somewhat lost its identity and this might be an opportunity to redefine itself. What vision is necessary to put IMSA back on the frontier of educational thinking and practice? It was suggested that the existing SSLs no longer serve to do this. Are additional SSLs sufficient, or should we start "from scratch?"

<u>Recommendations for next steps</u>
As a result, various recommendations might be considered:

- Rename the SSLs to eliminate the word "standard"
- Adopt one of the proposed condensed versions of the existing SSLs in principle, teamed with the core competencies, into a one-page document for internal and external use, and move work to the team level to further define observable behaviors and evidence of each SSL
- Craft additional standards to add to the existing five
- Rewrite the SSLs entirely (by whom, by when not determined)
- Reference The Superschool Project as a source of questions to guide thinking toward new, bigger ideas
- Survey faculty and staff to get a sense of appetite for a total rewrite vs. "tweaking" of the SSLs

Appendix

Pages

Understanding the Illinois Mathematics and Science Academy
Dr. Eric Hawker

The purpose of the Illinois Mathematics and Science Academy (IMSA) is to improve the education of students in the State of Illinois. The framework that IMSA uses as it strives to achieve this is based on four components: our Beliefs, our Mission, our Core Competencies, and the Behaviors of Lifelong Learning.

The Academy Believes that…

All people have equal intrinsic worth.
All people have choices and are responsible for their actions.
Belonging to a community requires commitment to the common good.
Diverse perspectives enrich understanding and inspire discovery and creativity.
Honesty, trust and respect are vital for any relationship to thrive.
Learning never ends.
Meaning is constructed by the learner.
No one's path in life is predetermined.
The ability to discern and create connections is the essence of understanding.
We are all stewards of our planet.

The Mission that we aspire to accomplish is based on these beliefs…
The mission of IMSA, the world's leading teaching and learning laboratory for imagination and inquiry, is to ignite and nurture creative, ethical, scientific minds that advance the human condition, through a system distinguished by profound questions, collaborative relationships, personalized experiential learning, global networking, generative use of technology and pioneering outreach.

IMSA believes that learning experiences should be constructed and implemented with a focus on….

- **Competency-driven learning** experiences are those which enable students (1) to acquire strong bases of disciplinary content knowledge and skills, key ideas of the disciplines, and connections among these ideas; (2) to use the ideas, processes, and tools of the disciplines for acquisition and generation of new knowledge; and (3) to apply knowledge when addressing issues and solving real world problems.
- **Inquiry-based learning** experiences are those which promote analytic thinking, knowledge generation and application, and construction of meaning through mindful investigation driven by compelling questions that have engaged, or have the potential for engaging, the learner's curiosity.
- **Problem-centered learning** experiences are those in which learners grapple with complex, meaningful and open-ended problems, and work toward their resolution.
- **Integrative learning** experiences are those which forge meaningful connections of concepts, constructs, and principles within and across academic subjects and real-world situations.

IMSA believes people should continue to learn, improve themselves, and contribute to society for their entire lives. In order to do this we believe people should be continually using and improving these abilities and behaviors…

Learning how to think about the world

A person who spends their entire life learning will develop methods and processes of thought throughout their life. These methods and processes will enable the person to create questions and connections which aid in the construction of meaning and understanding about the world around them. This person will be able to create mathematical or conceptual models and use appropriate technologies to aid in the understanding of complicated systems. As they gain new knowledge about the world they will develop methods to evaluate the soundness and relevance of this new knowledge and how it relates to their existing understanding and knowledge.

Learning how to think about one's self

A person who spends their entire life learning will develop an awareness and control over their own processes of thought. This person will be aware how emotions, personal bias, and assumptions can affect thinking, and from this awareness they will be able to more clearly construct an understanding of complicated concepts and topics. This person will be able to change how they think about a concept or topic after acquiring new knowledge or after understanding the misconceptions or ambiguities about a concept or topic.

Learning how to explore and create

A person who spends their entire life learning will be inquisitive not just for knowledge but also for experiences. These people will continue to explore and create throughout their lives. They will not only learn from their mistakes, but also learn how to take risks. These people will be mindful of details and accurately observe their experiences. They will be able to communicate with others about their knowledge, experiences, and thinking. Through these experiences they will develop their creativity and their own sense of aesthetic beauty.

Learning how to become a better person and citizen

A person who spends their entire life learning will develop an understanding of the importance of inclusion and diversity in a community. As a member of a community they will exercise their rights and responsibilities mandated by their inclusion in the community. Through study they will develop a personal understanding of ethics and will base their actions on that understanding. These people will learn how their actions and the environment they live and work in affect their physical and mental health, and so they will establish and commit to a personal wellness lifestyle.

It is these abilities and behaviors of lifelong learners that the Illinois Mathematics and Science Academy seeks to develop in students. The staff and faculty at IMSA believe that it is these abilities and behaviors, more than just rote knowledge, that will enable students to learn, adapt, innovate, and create for the rest of their lives to improve themselves, their community, and all of humankind.

Goals for Significant Learning (GSLs)
Dr. Lee Eysturlid

These are my effort to create a place from which we can discuss what the SSLs look like. I expect for them to be a starting point, please feel free to change away/criticize or whatever. First, I advocate that we change the name. Second, Michael was correct, the old ones where essentially a museum piece, a relic. I am sure that there can be more general language that speaks to mathematics and science. I have them segmented here so that people can comment away, and see them as each. Should there be another one or two? Maybe a GSL for teachers at IMSA? (and the teaching of teachers?).

The idea had been this would be the pre-amble to be followed by each department's GSLs. Perhaps 4-5 far more specific items (maybe the ideal of one team SL for to speak to each GSL?) that could then be brought forward for actual assessment, but would be informed by these new GSLs. It could be the "end-of-year" activity for teams, and therefore get them to look at the GSLs. Just a thought. I will grab some H/SS Standards and put them at the end as an example (not binding).

I. Developing Tools for Thinking

Students, who have mastered essential procedural knowledge, thereby gaining relative automaticity, are free to explore on higher cognitive levels. They question and probe effectively and become masters of their own learning constructing questions which further understanding, forge connections, and deepen meaning. They look and really see; they capture accurate measures and descriptions of the physical world; weighing the worth of information before accepting it as valid. These students are prepared for more complex levels of inquiry.

II. Metacognition

Students will advance from the cognitive to the metacognitive in that they will develop what they know so that it can be actively used in a strategic manner to ensure that a goal is met. Recognition of weaknesses or filters that limit their knowledge can be transcended to allow the student to examine their world from multiple perspectives and address the ambiguities inherent within any set of textual, social, physical, or theoretical circumstances.

III. Collaborative and Inter-disciplinary Learning

The integral propensity for open inquiry will develop through a connected approach to teaching and learning. Grounded in a rational model of a disciplined organization of thinking students will recognize, pursue, and explain substantive connections within and across areas of knowledge. The integration of the areas of study, through faculty and student work, will create beautiful conceptions that give coherence to structures of thought. Students will be habituated to think big and to take intellectual risks.

IV. From Experience to Expression

Ideas are tested through critical examination or experience, with answers constructed and supported by judgments built on available evidence. However to facilitate this development ideas must be communicated when they are understood and be evaluated by others. It is here that the leaner works to identify and characterize the composing elements of dynamic and organic entireties, structures, and systems. Expression in all forms, and especially media and technology fluency, will be central to each students' educational end process.

V. Global Citizen

As adolescents, students can, with effective facilitation, learn about the dimensions of ethical being: as individuals, as learners, as community members, as citizens, and as leaders. Here the development of the values of equity, diversity, and inclusion will be articulated in the rewards of inclusive learning. The interplay of these facets of a student's character will see the learner develop as a responsible global citizen and a successful, fulfilled individual.

IMSA's Core Competency

Competency-driven learning experiences are those which enable students (1) to acquire strong bases of disciplinary content knowledge and skills, key ideas of the disciplines, and connections among these ideas; (2) to use the ideas, processes, and tools of the disciplines for acquisition and generation of new knowledge; and (3) to apply knowledge when addressing issues and solving real world problems.

Inquiry-based learning experiences are those which promote analytic thinking, knowledge generation and application, and construction of meaning through mindful investigation driven by compelling questions that have engaged, or have the potential for engaging, the learner's curiosity.

Problem-centered learning experiences are those in which learners grapple with complex, meaningful and open-ended problems, and work toward their resolution.

Integrative learning experiences are those which forge meaningful connections of concepts, constructs, and principles within and across academic subjects and real-world situations.

History/SS
H/SS 1. Analyze the origins, application and justification of power in different cultural settings.
H/SS 2. Analyze and compare Western and non-Western idea systems.
H/SS 3. Analyze the evolution of post-World War II global economic and cultural structures.
H/SS 4. Skills common to all courses on an iterative basis:

1. Reading for Meaning
2. Expository Writing
3. Oral Communication
4. Research
5. Appropriate Technology Use

H/SS 5. Habits of Mind: *Recognize the existence of multiple perspectives
*Construct graceful generalizations
*Engage in public discourse in an atmosphere of ethical pluralism and mutual respect

Standards for Significant Learning
Dr. Janice Krouse

This document is a working document that will evolve with use as a curriculum driver and as an identifier of valued learner outcomes. The Core Competency describes how we intend to educate our learners and promote the SSLs. Each numbered habit of mind (SSL) is intended to appeal to all learning areas in the ideal. Proficiencies within each grouping are depicted within the narrative, but this is by no means exhaustive. To further clarify what each construct will look like within the realm of a particular discipline-based, integrative, or residential life experience, teams will describe evidence of each in the language and ideas of their learning area. (See team standards and purposes.)

Standards of Significant Learning (SSLs) represent the habits of mind which contribute to integrative ways of knowing. We expect these ways of knowing to broaden and deepen over time. The SSLs are interconnected and synergetic in practice and instruction. In order to promote students' growth in these habits of mind, we design learning experiences according to our Core Competency.

The Standards of Significant Learning (SSLs)

I. Developing Tools of Thought

The foundation for future academic achievement and success lie in this realm. Students who have mastered essential procedural knowledge to the level of automaticity are freed to explore on higher cognitive levels. They question and probe effectively and become masters of their own learning, constructing questions which further understanding, forge connections, and deepen meaning. Students who look and really see, who capture accurate measures and descriptions of the physical world, and who weigh the worth of information before accepting it as valid are prepared for more complex levels of inquiry.

II. Thinking About Thinking

The art of reflective thought about one's own thinking is necessary to optimize intellectual understanding and exploration. Students must identify their unexamined cultural, historical, and personal assumptions and misconceptions that impede and skew inquiry. Recognizing and transcending these filters which limit intellectual growth can allow students to examine their world from multiple perspectives and address the ambiguities inherent within any set of textual, social, physical, or theoretical circumstances.

III. Extending and Integrating Thought

Students' integral propensity for open inquiry and enhanced understanding are nurtured through a connected approach to teaching and learning. With a foundation of a disciplined organization of information, students will push to recognize, pursue, and explain substantive connections within and across areas of knowledge. Students will transcend the ordered knowledge bases with the integration of the areas of study, extensions of the mind enhanced or made possible by technology, and learning experiences that encourage students to recreate the "beautiful conceptions" that give coherence to structures of thought. At the fringes of prior learning, students take intellectual risks as they encounter the complexities that excite and fuel integrative thought.

IV. Expressing and Evaluating Constructs

New discoveries and innovations are lost forever if they are never tested and communicated. Through critical examination or experience, students test ideas, with judgments constructed and supported by evidence. Students must communicate these ideas with power, economy, and

elegance to insure that they are best understood and appreciated by others. Students further gain communicative power in the exploratory process of extending their fluency in emerging technologies. Students must move beyond "information attained" to "an education," where knowledge and skills are highly valued, integrated and utilized. In so doing, the learner works to identify and characterize the composing elements of dynamic and organic entireties, structures, and systems, while developing an aesthetic awareness and capability.

V. Thinking Globally and Inclusively

Student learning that affirms, appreciates and is inclusive of diverse cultures, as well as a multiplicity of perspectives, is critical in developing the whole student. As adolescents, students are learning about their dimensions of being: as individuals, as learners, as community members, as citizens, as leaders. They work to identify, understand and accept the rights and responsibilities of belonging to a diverse community by examining diverse and global issues through the lens of understanding personal bias and pre-conceptions. Young leaders learn to make reasoned decisions which reflect ethical human interactions and behaviors, and act in accordance with those decisions. Further, students' development of the whole self insists on a commitment to a personal wellness lifestyle. The integration of these dimensions contributes to the development of responsible global leaders and personally fulfilled individuals who value the ideals of equity, diversity and inclusion.

In order to promote students' growth in these habits of mind, we design learning experiences according to our Core Competency:

The Core Competency

Learning experiences at IMSA are designed to be:

- Competency-driven learning experiences: those which enable students to
  - acquire strong bases of disciplinary content knowledge and skills, key ideas of the disciplines, and connections among these ideas;
  - use the ideas, processes, and tools of the disciplines for acquisition and generation of new knowledge;
  - apply knowledge when addressing issues and solving real world problems.

- Inquiry-based learning experiences: those which promote analytic thinking, knowledge generation and application, and construction of meaning through mindful investigation driven by compelling questions that have engaged, or have the potential for engaging, the learner's curiosity.

- Problem-centered learning experiences: those in which learners grapple with complex, meaningful and open-ended problems, and work toward their resolution.

- Integrative learning experiences: those which forge meaningful connections of concepts, constructs, and principles within and across academic subjects and real-world situations.

Standards of Significant Learning Revisions
Dr. Marie Dahleh, Dr. Michael Hancock, Dr. Nicole Ross

I. **Developing Tools of Thought [Learning the Basics]**

Students master and routinely apply fundamental concepts, skills, and processes. They can accurately measure and describe phenomena and construct questions that further understanding, forge connections, and deepen meaning.

II. **Thinking about Thinking [Seeing Your Intellectual Blind Spots]**

Students identify biases, assumptions, and misconceptions that impede and skew inquiry. They are able to examine the world from multiple perspectives and to address the ambiguities within any set of circumstances.

III. **Extending and Integrating Thought [Synthesizing]**

Students identify and characterize the composing elements of dynamic and organic wholes, structures, and systems. They move beyond disciplinary bases as they recognize, pursue, and explain substantive connections within and across areas of knowledge.

IV. **Expressing and Evaluating Constructs [Evaluating and Communicating Ideas]**

Students test ideas and construct judgments supported by evidence. They use appropriate technologies and diverse media to foster intellectual risk-taking, problem-solving, self-expression, and communication of their emerging understanding.

V. **Thinking and Acting with Others [Becoming a Global Citizen]**

Students develop as global citizens and personally fulfilled individuals. They understand their rights and responsibilities as members of an equitable, diverse, and inclusive community and make reasoned decisions for the good of themselves and others.